# GROWTH BAD

## UQ/Sustainability

### Collapse Inev/Unsustainable

The collapse of growth is inevitable -- biocapacity is insufficient for continued expansion.

Korowicz 11–, physicist and human systems ecologist, the director of The Risk/Resilience Network in Ireland, a board member of FEASTA, The Foundation for the Economics of Sustainability. (David “In the world, at the limits to growth,” 5/14/11, <http://www.feasta.org/2011/05/14/in-the-world-at-the-limits-to-growth/>)//AP

It’s been part of the background noise for over half a century, warnings about resource scarcity, biodiversity loss, soil erosion or climate change. But impacts were always on the imaginative horizon. Sometime, far enough into the future to be re-assuring to a species that evolved with a clear preference for the short-term. Or on the hinterland between our safe European home and the barbarian other, where starvation, environmental disasters, angry mobs and crazy despots have always demanded our attention, at least while on TV. Yes we can! Yes we can! - chanted the posse of teenagers following Al Gore through a pavilion in Poznan, Poland for the annual gathering of climate policy acronyms. When not distracted by the ever-present, we’ve responded to these warnings with treaties and laws, technology and exhortation. Of course, every ecological indicator kept getting worse. And we kept on about treaties and laws, and break-through technologies. Our mythic world-views gave us the shared faith that we may not be there yet, but we could, once a brilliant scheme is in place, a climate law passed, technologies adopted, evil bankers restrained, or once people just realised our predicament. Yes We Can! Yes We Can! Indeed, we could transcend our grubby selfishness and short-termism so we tied together the belief that we could will ecological sustainability and global equity. Still, our resource and environmental sink demands keep increasing, ecological indicators decline and inequality rises. The reality is that we are locked into an economy adapted to growth, and that means rising energy and resource flows and waste.By lock-in, we mean that our ability to change major systems we depend upon is limited by the complexity of interdependencies, and the risk that the change will undermine other systems upon which we depend. So we might wish to change the banking or monetary system, but if the real and dynamic consequences lead to a major bank freeze lasting more than a couple of days we will have major food security risks, massive drops in economic production, and risks to infrastructure. And if we want to make our food production and distribution more resilient to such shocks, production will fall and food prices will need to be higher, which will in the short-to-medium term drive up unemployment, lead to greater poverty, and pose even greater risks to the banking system. It is an oxymoron to say we can do something unsustainable forever. How would you know if we were approaching a limit, the end of growth? By warnings? Listen. By the great and the good, standing shoulder-to-shoulder, saying “Ladies & gentleman we have a really big problem!”? Politicians and civil servants, the IMF and the OECD, all missed the credit crisis of 2007, despite having expertise in the area and an abundant historical literature about asset bubbles. They embody the dogmatism of the age, they are a pivot point about which are world-views are confirmed. They mirror the authority of the court of Pope Urban VIII, stuffed with astronomer-astrologers, the economists of their age, confirming the earth centric universe against Galileo and Copernicus before him. What the Galileos of today are saying is that we are at or near the peak of global oil production now. That as affordable oil declines, the global economy must contract. That we do not have the time, nor resources to keep the economy growing by substituting for oil with efficiency measures, renewable or nuclear energy, or technology. That talk of an electric car future, advanced IT-renewable energy convergent infrastructure, and global super-grids is a fancy. The most obvious problem with focusing on this vision at the horizon is that you don’t see that the ground is opening up beneath your feet. We will not get to that horizon because all the things you need to get there- monetary and financial systems, purchasing power and economies of scale, production systems, infrastructure and global trust networks-will be undermined by the convergence of a peak of global oil production, a peak of food production, and a giant credit bubble. The ground will open up, we will fall, and our visions will fall further and further from our grasp.

#### Production and consumption are fundamentally unsustainable at current levels -- tech and innovations won’t be able to keep up -- only de-development solves.

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Our way of life is grossly unsustainable. Our levels of production and consumption are far too high. We can only achieve them because we few in rich countries are grabbing most of the resources produced and therefore depriving most of the world's people of a fair share, and because we are depleting stocks faster than they can regenerate. Because we consume so much we are rapidly using up resources and causing huge ecological damage. It would be impossible for all the world's people to rise to our rich world per capita levels of consumption. Most people have no idea how far we are beyond sustainable levels. Although present levels of production, consumption, resource use and environmental impact are unsustainable we are obsessed with economic growth, i.e., with increasing production and consumption, as much as possible and without limit! Most of the major global problems we face, especially environment, Third World poverty, conflict and social breakdown  are primarily due to this limits problem; i.e., to over-consumption.  (This does not mean over-population is not a serious problem.) Following are some of the main facts and arguments that support the limits to growth position. ·      Rich countries, with about one-fifth of the world's people, are consuming about three quarters of the world's resource production. Our per capita consumption is about 15-20 times that of the poorest half of the world's people. ·      World population will probably stabilise around 9 billion, somewhere after 2060. If all those people were to have present Australian per capita resource consumption, then rates of production of resources would have to be 5 to 10 times as great as they are now. If we tried to rise to those levels of resource output we would completely exhaust all probably recoverable resources of coal, oil, natural gas, tar sand oil, shale oil and uranium (assuming the present "burner" reactors) well before 2050. We would also have exhausted potentially recoverable resources for one third of the mineral items by then. ·      Petroleum is especially limited.  World oil supply will probably peak between 2005 and 2010. ·      If all 9 billion people were to use timber at the rich world per capita rate we would need 3.5 times the world's present forest area. ·      If all 9 billion were to have a US diet, which takes about .5 ha of land to produce, we would need 4.5 billion ha of food producing land. But there is only 1.4 billion ha of cropland in use today and this is likely to decrease. ·      Recent "Footprint" analysis estimates that it takes about 8 ha of productive land to provide water, energy settlement area and food for one person living in an Australian world city.  So if 9 billion people were to live as we do in rich world cities we would need about 72 billion ha of productive land. But that is 10 times all the productive land on the planet. (Note that a number of other factors could be added to the footprint calculation, such as the land needed to absorb pollution.)  Even though only one-fifth of the world’s people are resource-affluent, we are using resources at  rate that would take 1.4 planet earths to provide sustainably, (because we are consuming stocks such as forests faster than they can reproduce.) ·      The biological diversity and resilience of the planet is deteriorating alarmingly.   There are serious problems of water, food scarcity, forest and soil loss, decline of fish stocks, loss or coral reefs and tropical forests and mangroves and grasslands.  We are heading into an era of massive species extinction.  The cause of these problems is the fact that humans are taking so much from nature and dumping so many wastes back into nature. ·      It will probably soon be generally accepted that we must totally eliminate all CO2 emissions to the atmosphere by 2050. (Hansen, 2008, Meinshausen et al, 2009.)  There is a strong case that it will not be possible to do this while maintaining consumer-capitalist society.  Firstly it will not be possible to burn coal and sequester the resulting CO2 because only 80-90% of it can be captured for storage, and because the 50% of emissions from non-stationary sources cannot be captured.  Secondly there is a strong case that it will not be possible to substitute alternative energy sources for carbon emitting fuels on the scale required.  (Trainer, 2008.) These are some of the main limits to growth arguments which lead to the conclusion that there is no possibility of all people rising to the living standards we take for granted today in rich countries. We can only live like this because we are taking and using up most of the world’s scarce resources, preventing most of the world's people from having anything like a fair share, and depleting the planet’s ecological capital. Therefore we cannot morally endorse our affluent way of life. We must accept the need to move to far simpler and less resource-expensive ways. To this we must now add the absurdly impossible implications of our commitment to economic growth and increasing "living standards." If we in rich countries have 3% p. a. economic growth, by 2070 our "living standards" will be 8 times as high as they are now. If all the people likely to live on earth then were to have risen to the living standards we would have in 2070, total world economic output would be 60 times as great as it is today!! The present levels of production and consumption are grossly unsustainable yet we are blindly obsessed with increasing them towards multiples that are absurdly impossible. There is therefore an extremely powerful case for the limits to growth position. The magnitude of the overshoot is far too great for technical advance and more conservation and recycling effort to solve the problems, i.e., to reduce resource and ecological impacts to sustainable levels while we go on committed to affluent living standards and economic growth. The fundamental conclusion is that consumer-capitalist society cannot be fixed.  It cannot solve the problems its basic structures and commitments generate.    It has to be largely replaced by a society that will allow us to live well on a small fraction of the present levels of consumption.  The Simpler Way vision is  that such a society must involve simpler lifestyles, mostly small and local economies under local participatory control and not determined by market forces, no economic growth, and the abandonment of competitive, individualistic and acquisitive values.  The coming era of scarcity will push us in the required direction, which the Ecovillage and Transition Towns movements are more or less pioneering. The best way to contribute to this transition is to work in local community gardens and co-ops towards local control of local affairs, stressing the need for vast and radical system change (e.g., to a zero-growth economy that is not driven by profit or the market but is run by us to maximise the quality of life of all people..)

#### Limitless growth is impossible -- too many constraints.

Heinberg 10 – Economist and energy expert, Senior Fellow-in-Residence at Post Carbon Insitute (Richard, “Beyond the Limits to Growth”, The Post Carbon Reader Series: Foundation Concepts, 2010, http://files.uniteddiversity.com/Measuring\_Progress\_and\_Eco\_Footprinting/PCReader-Heinberg-Beyond-the-Limits-to-Growth.pdf)//PN

It is unpleasant and unprofitable to talk about limits to the human enterprise. Yet in principle, the argument for eventual limits to growth is comprehensible by nearly anyone. Simple arithmetic growth is easy to understand. Imagine starting with $100 in a piggy bank and adding to it $10 every year—that’s arithmetic growth. By the end of 50 years you will have $600. A debt or a problem that grows arithmetically is much simpler to deal with than one that grows exponentially—that’s where the quantity expands by a certain percentage per unit of time. Start again with $100 in a piggy bank, but let it somehow magically grow by 10 percent per year, compounded, and the results are quite different: At the end of 50 years, you will have nearly $12,000, or over 20 times as much as yielded by arithmetic growth (figure 1.1). When discussing investments, exponential growth sounds like a very good thing, but when debts or problems grow in this way, calamity has a way of sneaking up on us. If any quantity grows steadily by a certain fixed percentage per year, this implies that it will double in size every so many years; the higher the percentage growth rate, the quicker the doubling. A rough method of figuring doubling times is known as the rule of 70: Dividing the percentage growth rate into 70 gives the approximate time required for the initial quantity to double. If a quantity is growing at 1 percent per year, it will double in 70 years; at growth of 2 percent per year, it will double in 35 years; at 5 percent growth, it will double in only 14 years; and so on. If you want to be more precise, you can use the Y^x button on your calculator, but the rule of 70 works fine for most purposes. Here’s a real-world example: Over the past two centuries, human population has grown at rates ranging from less than 1 percent to more than 2 percent per year. In 1800, world population stood at about 1 billion; by 1930 it had doubled to 2 billion. Only 40 years later (in 1975) it had doubled again to 4 billion; currently we are on track to achieve a third doubling, to 8 billion humans, around 2025. No one seriously expects human population to continue growing for centuries into the future. In nature, growth always slams up against nonnegotiable constraints sooner or later. If a species finds that its food source has expanded, its numbers will increase to take advantage of those surplus calories—but then its food source will become depleted as more mouths consume it, and its predators will likewise become more numerous (more tasty meals for them!). Population “blooms” (that is, periods of rapid growth) are always followed by crashes and die-offs. Always. Here is another real-world example. In recent years China’s economy has been growing at 8 percent or more per year; that means it is more than doubling in size about every 9 years. Indeed, China consumes more than twice as much coal as it did a decade ago—the same with iron ore and oil. The nation now has four times as many highways as it did, and almost five times as many cars. How long can this go on? How many more doublings can occur before China has used up its key resources—or has simply decided that enough is enough and has stopped growing?

#### Growth is unsustainable -- biology, physics, and diminishing returns.

Heinberg 10 – Economist and energy expert, Senior Fellow-in-Residence at Post Carbon Insitute (Richard, “Beyond the Limits to Growth”, The Post Carbon Reader Series: Foundation Concepts, 2010, http://files.uniteddiversity.com/Measuring\_Progress\_and\_Eco\_Footprinting/PCReader-Heinberg-Beyond-the-Limits-to-Growth.pdf)//PN

It makes sense that economies should follow rules analogous to those that govern biological systems. Plants and animals tend to grow quickly when they are young, but then they reach a more or less stable mature size. Beyond a certain point, growth becomes more of a problem than an advantage. But economists generally don’t see things this way. That is probably because most current economic theories were formulated during an anomalous historical period of sustained growth. Economists are merely generalizing from their experience: They can point to decades of steady growth in the recent past, and they simply project that experience into the future. Moreover, they have ways to explain why modern market economies are immune to the kinds of limits that constrain natural systems; the two main ones concern substitution and efficiency. If a useful resource becomes scarce its price will rise, and this creates an incentive for users of the resource to find a substitute. For example, if oil gets expensive enough, energy companies might start making liquid fuels from coal. Or they might develop other energy sources undreamed of today. Economists theorize that this process of substitution can go on forever. It’s part of the magic of the free market. Increasing efficiency means doing more with less. In the United States, the number of inflation-adjusted dollars generated in the economy for every unit of energy consumed has increased steadily over recent decades.3 That’s one kind of economic efficiency. Another has to do with locating the cheapest sources of materials and the places where workers will be most productive and work for the lowest wages. As we increase efficiency, we use less—of resources, labor, or money—to do more. That enables more growth. Increasing efficiency and finding substitutes for depleting resources are undeniably effective adaptive strategies of market economies. Nevertheless, the question remains open as to how long these strategies can continue to work in the real world—which is governed less by economic theories than by the laws of physics. In the real world, some things don’t have substitutes, or the substitutes are too expensive, or don’t work as well, or can’t be produced fast enough. And efficiency follows a law of diminishing returns: The first gains in efficiency are usually cheap, but every further incremental gain tends to cost more, until further gains become prohibitively expensive. Unlike economists, most physical scientists recognize that growth within any functioning, bounded system has to stop sometime. But this discussion of limits has very real implications, because “the economy” is not just an abstract concept; it is what determines whether we live in luxury or poverty, whether we eat or starve. If economic growth ends, everyone will be impacted, and it will take society years to adapt to this new condition. Therefore it is important to be able to forecast whether that moment is close or distant in time. Hence the Limits to Growth study and book. Its authors fed in data for world population growth, consumption trends, and the abundance of various important resources, ran their computer program, and concluded that the end of growth would probably arrive between 2010 and 2050. Industrial output and food production would then fall, leading to a decline in population.4

#### Historical trends of civilization collapse prove -- a huge cultural shift away from consumerism is key.

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History can be seen in terms of the damage that the drive to gain eventually does. Often a civilization emerges and for a while has considerable equity, but in time some become more wealthy and powerful, and develop into a class with increasing power and privileges and then dominate the rest. Their desire to gain drives a quest for more and more land, opulence, slaves...and foreign sources of wealth. An imperial phase begins. The wealth of other regions is plundered. Because there is no concept of enough, before long there is over-reach; it becomes impossible to maintain the empire, and the civilization self destructs. At present the West is passing through the over-reach phase into decline, while China is rising past us, driven by the same old single-minded obsession with getting richer and more powerful. This sorry story will not cease until humans learn to be content with enough. This is a core theme in “The Simpler Way” analysis -- this society cannot be fixed; its major elements must be scrapped and replaced. (Trainer 2010b) Most obviously, you cannot reform a growth economy to be a zero-growth economy, and you cannot remove the growth element from the economy while leaving the rest of it as it was; you have to build a completely different economy. Above all, you will not solve the many problems the quest for growth is causing without scrapping core structures in our culture, that is until people in general come to be content with what is sufficient and design and run economies that are about subsistence, gift and reciprocity.

#### Economic meltdown is inevitable -- policy changes aren’t sufficient to change it.

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Yes, they predicted doomsday three years ago. Listen: “Over the last 30 years, we have built a financial system that threatens to topple our global economic order,” wrote Simon Johnson and Peter Boone. “We have let an unsustainable and crazy ‘doomsday cycle’ infiltrate our economic system.” This doomsday “cycle will not run forever … The destructive power of the down cycle will overwhelm the restorative ability of the government, just like it did in 1929-31.” In 2008 “we came remarkably close to another Great Depression. Next time, we may not be so lucky.” That was 2009. Since then Johnson, former IMF chief economist, co-wrote last year’s bestseller “13 Bankers: The Wall Street Takeover and the Next Financial Meltdown” and the new “White House Burning.” Other new books echo the same doomsday warning: Peter Schiff’s “The Real Crash: America’s Coming Bankruptcy” … Paul Krugman’s “End This Depression Now” … James Rickards’s “Currency Wars” … Philip Coogan’s “Paper Promises” … Joseph Stiglitz, “The Price of Inequity” … Ian Bremmer, “Every Nation For Itself,” and other reminders of doomsday. Folks, the “next time” is here. Our luck is running out. And unfortunately, our leaders in both parties are blinded by an obsession to win an election. Ergo, they will fail to act in time. Hot news: Global economic meltdown, a rapidly spreading virus Today’s headlines are flashing like neon signs on the Vegas Strip … The Economist: “Playing With Fire” … Wall Street Journal: “Threat Spreads Across Europe” … L.A. Times: “Fiscal Cliff may Threaten U.S. Recovery. … Time, “The Jobless Generation: How to Get Them Jobs Before…They Erupt in Fury.” … Foreign Policy: “12 Signs of the Europocalypse” … Newsweek: “The Gathering Eurostorm Could Come to American Shores” … Gary Shilling’s Insight: “Semi-Annual U.S. Economic Report: So Far, So Bad.” And into this accelerating meltdown mess, USA Today added these sobering facts, “Families’ Wealth Dives 39%, Richest Gained 2%.” But we all know neither party will fix these core economic issues driving the Doomsday Cycle. Not this summer. Not after the elections. And we all know why. America’s leaders on both sides are so psychologically blinded by personal ambition they’ve lost all touch with reality, no longer see what’s best for all Americans. Yes, “an unsustainable and crazy Doomsday Cycle has infiltrated our economic system,” Johnson and Boone wrote in their 2009 article in “CentrePiece,” a publication of the London School of Economics. Worse, it’s been accelerating since 2008. And by failing to act in a timely way, politicians in both parties will let the “destructive power of the down cycle overwhelm the restorative ability of the government, just like it did in 1929-31, very much like a Second Great Depression.” Politics? Irrelevant. Who wins? Irrelevant. Money rules America Seriously, folks, the elections are relevant. Totally. Oh, both sides pretend it matters. But it no longer matters who’s president. Or who’s in Congress. Money runs America. And when it comes to the public interest, money is not just greedy, but myopic, narcissistic and deaf. Money from Wall Street bankers, Corporate CEOs, the Super Rich and their army of 261,000 highly paid mercenary lobbyists. They hedge, place bets on both sides. Democracy is dead.

#### Growth is unsustainable -- financial, environmental, and social distresses prove.

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The events of the last year have made clear the scale of the challenges we face – we really do need to get this right and start doing so soon. Most visibly, the banking meltdown triggered the most severe economic crisis since the Great Depression. But this is by no means the only one. Greenhouse gas concentrations are reaching levels where runaway climate change becomes more and more difficult to avoid. Peak oil may be far closer than we think and there is little preparedness for the energy crisis that lurks just around the corner. Inequality between countries, as well as within countries, is reaching new highs. On top of all this, life satisfaction even in the most developed countries is at best stagnant, and even declining in some. It is hard to conclude anything other than that the current model of pursuing economic growth at all costs – environmental and social – just isn’t working.

#### Global growth is unsustainable -- resource scarcity and environmental destruction.

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Over the past 30 years a formidable case has accumulated in support of the claim that the living standards and levels of production and consumption characteristic of rich countries are grossly unsustainable for resource and environmental reasons. This conclusion can be arrived at via any one of a number of lines or argument .8 For example estimated potentially recoverable resources for fossil fuels and minerals indicate that if we were to try to increase production to the point where all people expected on the planet by 2070, perhaps 10 billion, were each to have the present rich world per capita consumption, then all fuels and one-third of the mineral items would be totally exhausted by about 2040. Renewable energy sources are very unlikely to be able to fill the gap.9 This means that there is no possibility of all people rising to the per capita resource consumption typical of the rich countries today. The greenhouse problem provides a similar argument. If the carbon content of the atmosphere were to be prevented from increasing any further, world energy use for 10 billion people would have to be reduced to a per capita average that is just 6% of the present rich world average. Most people have little understanding of the magnitude of the reduction s required for sustainability. ‘Footprint analysis ’ indicates that to provide for one person living in a rich world city requires at least 4.5 ha of productive land. If 10 billion people were to live that way the amount of productive land required would be around eight times all the productive land on the planet .10 Figures of these kinds indicate that present rich world levels of production and consumption are far beyond sustainability. Yet the supreme commitment in rich and poor countries is to economic growth, i.e. to constantly increasing level s of production and consumption without limit. The absurdly impossible implication s are made clear by asking what increase there would be in Gross World Product if by 2070 the expected 10 billion people were to have risen to the living standards people in rich countries would have, given 3% growth until then. The answer is an approximately 100-fol d increase in present Gross World Product. (If a 4% average growth rate is assumed the multiple is 200.) These sorts of figures should leave no doubt that there is no possibility of all people rising to anything like the living standard s we in rich countries have, let alone those we aspire to. A sustainable society must therefore be denied in terms that extend well beyond taking social control over the market. It must focus on notions of simplicity, co-operation and self-sufficiency and a long period of negative economic growth culminating in a steady-stat e economy, notions which many on the left find distasteful.

#### Growth unsustainable -- resource scarcity.

Duncan 93 - chief author of the [Olduvai theory](http://en.wikipedia.org/wiki/Olduvai_theory), a prediction of rapidly declining world energy production. He has an MS in Electrical Engineering (1969) and a PhD in Systems Engineering (1973) from the [University of Washington](http://en.wikipedia.org/wiki/University_of_Washington), (Richard C., “The Life-Expectancy of Industrial Civilization: The Decline to Global Equilibrium”, Institute on Energy and Man, March 1993, Volume 14, Number 4, http://www.springerlink.com.proxy.lib.umich.edu/content/g03835431333tr43/fulltext.pdf)//PN

Measured in terms of industrial output per capita, the "standard run" simulation in Meadows et al. (1972; reproduced in Pestel, 1989, p. 167) indicated a life-expectancy of only about 90 years, and as I recall, the behavior of the Forrester (1971) and Mesarovic and Pestel (1974) models was similar. In the mid-1970s, physicist Gerald O'Neill realized that, due to the limited size of the earth, the options for industrial civilization were closing. Until very recently, though, we had some hope that averaging over the ups and downs the human race as a whole was struggling toward more decent living conditions, better education, and more freedom .... a slow development averaging toward the better. But while we remain limited to the surface of a gradually depleted Earth, we face a new kind of threat: even our success becomes failure (O'Neill, 1976, pp. 42-43). 349 RICHARD C. DUNCAN Paleoanthropologist Richard Leakey and biochemist Roger Lewin (1977) predicted that, because the material affluence enjoyed by techno- logically advanced nations was so destructive of the planet's natural re- sources, even the 1977 global population of four billion could not be sustained longer than one-hundred years. Using a biological approach to cultural evolution, anthropologist Marvin Harris concluded: All rapidly intensifying systems of production, whether they be socialist, capitalist, hydraulic, neolithic, or paleolithic, face a common dilemma. The increment in energy invested per unit time in production will inevitably overburden the self-renewing, self-cleansing, self-generating capacities of the ecosystem... The bubble-like nature of [the industrial] mode of production can be seen from the fact that if the rest of the world were suddenly to adopt the energy ratios characteristic of U.S. agriculture, all known reserves of petroleum would be exhausted in eleven years. Or to put it in a slightly different form: the faster the underdeveloped world industrializes, the sooner the industrial world must develop a new mode of production. How fast and how low standards of living in the industrial nations will fall depends on how long conversion to alternative energy sources is delayed. The possibility of deep impoverishment should not be dismissed (Harris, 1977, pp. 271, 283, 284).

#### **Loss of ecological dominance makes industrial society unsustainable.**

Duncan 93 - chief author of the [Olduvai theory](http://en.wikipedia.org/wiki/Olduvai_theory), a prediction of rapidly declining world energy production. He has an MS in Electrical Engineering (1969) and a PhD in Systems Engineering (1973) from the [University of Washington](http://en.wikipedia.org/wiki/University_of_Washington), (Richard C., “The Life-Expectancy of Industrial Civilization: The Decline to Global Equilibrium”, Institute on Energy and Man, March 1993, Volume 14, Number 4, http://www.springerlink.com.proxy.lib.umich.edu/content/g03835431333tr43/fulltext.pdf)//PN

There are several reasons, I believe, why the end of the second phase is likely to occur within the next few decades. The first reason is the result of some simple calculations tempered by judgement, as follows. Recall that the e-curve for energy-use per person per year, Figure 1, remained 351 RICHARD C. DUNCAN relatively flat for millions of years, such that the rate of change of energy- use per person per year was essentially zero: i.e., de/dt~0. Then abruptly during the late nineteenth century, the de/dt-curve shot up and peaked in about 1915, and thereafter plunged into the depths of the Great Depression in 1935, as shown in Figure 4. Next, the de/dt-curve took off again in about 1940 and rocketed skyward to an Everest-like summit in 1960. Then suddenly it went into a dizzying free-fall that continued through 1990, the latest year for which data was available. Presently, the world population is soaring (doubling-time-~40 years), and no new primary energy source is in sight. Thus it appears that the forces of population growth will continue to dominate (i.e., Inequality (8), (AP)/P > (AE)/E will hold) and the lagging 1/e point (point J in Figure 1) will occur before 2030 AD. The second reason relates to the lack of control we human beings have over our own life-support system. This situation was discussed in the previous section in terms of a four-sector feedback model and ten fundamental requirements for system control. Here, two brief quotes conclude the topic. To return to the point at issue, who then is in the driver's seat? If not governments, if not scientists, who? Nobody. We are traveling in a vehicle that guides itself, just as our species has arisen from an evolutionary process that guided itself throughout past ages. It is my belief that nothing has changed, we are still in the grip of natural processes, we are not in charge of our own destiny (Hoyle, 1964, p. 61). The idea of a special human destiny has never been true--now it is no longer adaptive either. Simply put, we are losing our ecological dominance. The environments we have created are becoming uninhabitable, and we may not be able to control them any longer (Johanson & Shreeve, 1989, p. 290).

#### Growth unsustainable – adaptive drives.

Duncan 93 - chief author of the [Olduvai theory](http://en.wikipedia.org/wiki/Olduvai_theory), a prediction of rapidly declining world energy production. He has an MS in Electrical Engineering (1969) and a PhD in Systems Engineering (1973) from the [University of Washington](http://en.wikipedia.org/wiki/University_of_Washington), (Richard C., “The Life-Expectancy of Industrial Civilization: The Decline to Global Equilibrium”, Institute on Energy and Man, March 1993, Volume 14, Number 4, http://www.springerlink.com.proxy.lib.umich.edu/content/g03835431333tr43/fulltext.pdf)//PN

The third reason is both personal and universal. It derives from the basic motives I sense in myself: the innermost forces that drive my behavior such as self-centeredness, immediacy, self-deception, growth-orientation, and factiousness (Duncan, 1989). Here I refer to the powerful gene- based behavioral patterns (represented by arrow x in Figure 5) that simply overpower the weak and inconsistent culturally-based behavioral patterns (arrow y). I believe these deep and universal (and once adaptive) drives, fixed in the human genome by natural selection over thousands of Pleistocene generations, virtually ensure the end of industrial civilization by 2030 AD. The fourth reason stems from what I have seen of the people and 352 POPULATION AND ENVIRONMENT conditions in some fifty diverse countries over the past forty years. Mixed with cherished memories of the still great beauty of the natural world, are piteous scenes of utter squalor and destitution among the vast and growing populations in what are patronizingly called "the developing countries." This leads me to conclude there is a vanishingly small chance that the downward trend of energy-use per person can be halted or reversed before the value falls to 37% of the 1980 peak value. Anybody who has seriously observed the plight of burgeoning masses in countries such as Peru, Equador, Brazil, Sudan, Ethiopia, Tanzania, Pakistan, India, Bangladesh, Indonesia and China will agree with this conclusion, or be obliged to explain how the decline in per capita energy-use can be halted or reversed in less than two generations.

#### **Growth unsustainable -- energy consumption.**

Duncan 93 - chief author of the [Olduvai theory](http://en.wikipedia.org/wiki/Olduvai_theory), a prediction of rapidly declining world energy production. He has an MS in Electrical Engineering (1969) and a PhD in Systems Engineering (1973) from the [University of Washington](http://en.wikipedia.org/wiki/University_of_Washington), (Richard C., “The Life-Expectancy of Industrial Civilization: The Decline to Global Equilibrium”, Institute on Energy and Man, March 1993, Volume 14, Number 4, http://www.springerlink.com.proxy.lib.umich.edu/content/g03835431333tr43/fulltext.pdf)//PN

The fifth reason is revealed by a careful reading of the general version of White's law. Specifically, the general version contains two important factors that were left out of the simplified version: namely, the environmental and sociopolitical impacts of energy exploitation and use. Because these factors appear in the denominator of the expression, and the adverse impacts have been increasing at an alarming rate in recent decades, the tandem juggernaut of global industrialization coupled to global population growth means that the actual rate of decline in industrial civilization is likely to be even more precipitous than that revealed by Equation (3), and graphed in Figure 4. The sixth reason why industrial collapse may be cruelly sudden can be explained by inspecting the values for the average annual change in world total energy-use, i.e., dE/dt, for the years 1850 through 1990, as listed below, where the units of dE/dt are Joules x 1016 per year 2. Year dE/dt Year d~dt 1850 15.8 1930 46.7 1870 19.4 1950 441.6 1890 56.7 1970 1,158.5 1910 133.6 1990 519.8 The above table shows that the value of dE/dt decreased by 55% be- tween 1970 and 1990. If the same rate of decline was to continue indefinitely beyond 1990, then global dE/dt would "go negative," i.e., dE/ dt < 0, in the year 2006. Assuming that total world population continues to increase, i.e., dP/dt > 0, then after 2006 AD both of the terms in Equation (3) will cause energy-use per person per year, i.e., the value of e(t), to plummet. As measured by all commercially traded fuels, this condition 353 RICHARD C. DUNCAN already occurred between 1989 and 1990 in some industrial nations, including Canada, Belgium and Luxembourg, Denmark, Finland, Germany, Sweden, Turkey, USSR, and the countries of central Europe (British Petroleum, 1991, p. 33).

#### Environmental limitations are inevitable -- makes a transition away from growth economies key.

Batterbury 96 – Associate Professor of Political Ecology of Natural Resources at University of Melbourne (Simon PJ, “Ted Trainer and the ‘Conserver Society’”, Environmental Studies, 1996, http://simonbatterbury.net/pubs/trainerbatterbury.pdf)//PN

Ted Trainer - Social Work, University of NSW

The last section of the book (chapters IS-19), is more reflective in tone, and makes the interesting point that for us to make the transitions proposed in the text is “entirely an educational problem” (~210) since only if public awareness be raised sufficiently will the necessity for new lifestyles appear attractive and urgent, and the changes be set in motion. Trainer believes radical structural change in the economy and the geography of consumer society will only come about through persuasion and education, not, in his view, by limited numbers of people adopting greener lifestyles or throwing their weight behind single- interest pressure groups. But, for me, the visible destruction of the environment must surely gain supporters for the environmental cause, as do the actions of the new, more outspoken, environmentalists such as the Sritish 8 *Simon PJ Batterbury* anti-roads lobby, Earth First, the anti-nuclear coalitions, and campaigners for human and animal rights across the world. Trainer, however, attacks some of these institutions, as well as green political lobbies and the enlightened environmental agencies, for ‘band-aiding’ the problems generated by a greedy society, through their campaigns or political actions. It is easy to let people think that “saving the whale. traffic-calming, or recycling” are righting environmental wrongs and will make things better. Thus, the public continue to embrace affluence when they are able to, without seeing that economic growth will continue to bring wave upon wave of environmental problems for future generations (p2 13). Here, Trainer is careful to distance his peaceful anarchism from classical socialist thought. A socialist analysis, he feels, rightly exposes the inevitable contradictions of capitalism and the inevitability of change (Trainer, 1995b), but has tended in the past to be dismissive of ‘limits to growth’ arguments and ecological questions more generally. This point has been made many times, and is contested in journals such as Society *and Nature, Capitalism Nature Socialism* and *Rethinking Marxism.* A ‘limits to growth’ perspective suggests that we need to de-develop, not throw affluence at poverty without regard for resource limitations and environmental consequences. This underlying contradiction is often the source of acrimony between Reds and Greens, and frustrates meaningful dialogue and social change (Atkinson, 1991; Redclift, 1984, Pepper 1996). Trainer tries to sideline these red-green differences by proposing a concrete strategy to promote conserver values, which is again anarchist in approach. He suggests the need to educate, but also to-simply *ignore* capitalist ways in everyday life. Eventually this would paralyse consumer society, if sufficient numbers make the shift away from materialism in their values and lifestyle. As recent planning decisions by the Department of the Environment in the UK have shown, however, communities ‘opting out’ of modem society and attempting to produce their own food and goods are guaranteed to receive a hard time from governments, and will tax the patience of large corporations and the commercial marketing machine who are unable to profit from them. In fact, it is generally admitted that the targe corporations could easily scupper the emerging conserver society by closing down essential services and fms before local co-operatives are ready to replace them; Trainer is not naive enough to ignore this obvious point, although his arguments will be hotly disputed.

#### **Global inequality makes growth unsustainable.**

Batterbury 96 – Associate Professor of Political Ecology of Natural Resources at University of Melbourne (Simon PJ, “Ted Trainer and the ‘Conserver Society’”, Environmental Studies, 1996, http://simonbatterbury.net/pubs/trainerbatterbury.pdf)//PN

Ted Trainer - Social Work, University of NSW

Trainer is uncompromising in his assertion that “the present consumer way of life we take for granted in rich countries is totally unsustainable” (~2). Echoing the central message of *Abandon AfJluence* (Trainer, 1983, he embraces ‘ecocentric’ views, which necessarily involve a commitment to a simpler (but still diverse) lifestyle. Western values and social relations involve what De Walt (1988, ~114) calls the “tilt towards gratification”: rampant consumerism, as well as unsustainable economic growth, and unworkable geographies. Growth, and social values which underpin it (the profit motive, materialism and the enterprise culture), lie at the very heart of global inequality and environmental problems. The rich nations are existing on per capita levels of resource consumption which cannot continue, and are selling the ideology of economic development to developing nations. This will only exacerbate poverty, spatial inequalities and resource depletion. As proponents of zero-growth economics such as Daly (1992) have argued, the third world will never be able to attain western levels of industrialisation and living *Ted Trainer and the* ***‘conserver society’*** ***3*** standards, since environmental resources are finite and insufficient to allow affluence for all of us. The motto of a more just and humane society must therefore be “... the rich must live more simply so that the poor may simply live”. Some of the easy ways to create greener and sustainable forms of urban living discussed in the book will already be familiar, for example, the need to install community allotments. Ponds and food gardens could replace much unproductive parkland, lawns and derelict sites, bringing the production of more food closer to the point of consumption in urban areas. Trainer is a fan of zero input, high yield permaculture systems where climates permit (p29), tailored by local populations to their particular soil and water regimes and requiring low iabour inputs. Durable housing, which recycles all wastes for energy and fertiliser (p38), may be built cheaply using mud brick, recycled materials, and renewable energy sources wherever possible. Yet, for me, there are intractable problems in the development of sustainable communities along these lines where existing urban areas suffer decaying infrastructure, poor design, low levels of home ownership and insecure tenure, and where transport and pollutionproblems are severe. It is not clear, for example, how blocks of inner city’ apartments could be made self-sufficient in water, electricity and sewerage in the ways Trainer suggests for his self-built housing projects and eco-villages. Dense existing settlements may have to retain ‘interim’ non-sustainable systems such as local small power stations, and rely heavily on small allotments and roof-spaces for limited food supply (Trainer, . 1995b).

#### More ev -- diminishing returns.

Trainer 10- Social Work, University of NSW, Kensington 2052 (Ted F.E., “THE SIMPLER WAY:WORKING FOR TRANSITION FROM CONSUMER SOCIETY TO

 A SIMPLER, MORE COOPERATIVE, JUST AND ECOLOGICALLY SUSTAINABLE SOCIETY,” 2010, http://socialsciences.arts.unsw.edu.au/tsw/)//PN

The foregoing numbers show that rich world per capita rates of resource use and environmental impact are probably 10 times higher than all people expected on the planet could have sustainably. NOW ADD THE ABSURDLY IMPOSSIBLE IMPLICATIONS OF ECONOMIC GROWTH The foregoing argument has been that the present levels of production and consumption are quite unsustainable. They are too high to be kept going for long or to be extended to all people. But that does not represent the magnitude of the problem.   Consumer-capitalist society is determined to increase present living standards and levels of output and consumption, as much as possible and without any end in sight. In other words our supreme goal is economic growth. Few people seem to recognise the absurdly impossible consequences of pursuing economic growth. If we have a 3% p.a. increase in output, by 2060 we will be producing 8 times as much every year. (For 4% growth the multiple is 16.) If by 200 all the world's people had risen to the living standards we in Australia would have then given 3% growth, the total world economic output would be more than 30 times what it is today!   Yet the present level is unsustainable. It is difficult to imagine how anyone could disagree with this “limits to growth” case.  Yet it is ignored by the mainstream, by governments, economists, media and people in general.  The inescapable implication is that we must work out how to live well on a small fraction of present per capita levels of production and consumption, and with no desire to increase these over time. DIMINISHING RETURNS We are running into problems of diminishing returns.  As society becomes more complex, more resources and time and dollars have to go into maintaining systems and the net benefit per unit of input declines.  Tainter (1988) saw this as the key effect in the decline and fall of empires.  For instance Rome reached the stage where most of the effort had to go into maintaining the borders and territories previously conquered, leaving none for expanding any further.  Imagine using gravel to make more roads.  As the system increases more of the gravel has to be used to repair roads, until eventually all of the supply is going into maintaining existing roads and there can be no further extension of the system The diminishing returns effect is evident in the expense we go to where roads cross.  In a village there is no problem, but in a modern freeway system an intersection can involve construction of multi-million dollar flyovers etc. Water has to be pumped to high levels in buildings. We now have to make special provision for child minding, care of aged people, dealing with pollution, recycling water, and especially for patching up all the social damage being caused, the depression, stress, homelessness, crime suicide…  Tribes need no lawyers, prisons, welfare workers.  They have law but one person can remember it all.  Our law would occupy metres of shelf space and we have billion-dollar institutions making more laws every day.  At the global level vast sums have to be spent on arms to maintain access to the markets and resources rich societies must now get.  Patents per dollar spent on research are falling.  (Tainter).  We are now having to consider vastly expensive schemes to bury the CO2 from fossil fuel use.  Daly argues that we are well past the point where producing adds more to costs to be met than to welfare to be enjoyed. Tainter also points out that systems are becoming more inter-connected and therefore prone to total system breakdown when one component fails. Spare parts for devices all around the world might come from one factory.  Most spectacularly, the integrated global financial system all went down in 2008, whereas in earlier times your region would have been dependent only on the local banks which would not have been affected if banks in other countries failed.   Similarly world trade is highly interconnected; the failure of a harvest in one major country can starve millions everywhere.  These are instances of loss of resilience in our systems.

### Yes – Peak Coal

#### Peak coal by 2025 -- causes energy insecurity, global collapse.

Simms 10**-**Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

A scenario seldom discussed is the peaking of coal production. Global consumption of coal is growing rapidly. From 2000 to 2007, world coal extraction grew by a rate of 4.5 per cent compared to 1.06 per cent for oil (oil production actually fell by 0.2 per cent between 2006 and 2007).279 This is opposite to the trend observed over the past two decades. In particular, as China rapidly industrialises, the use of coal is increasing dramatically. In 2005, China was responsible for 36.1 per cent of world coal consumption, the USA 9.6 per cent, and India 7.3 per cent.280 Global coal production is expected to peak around 2025 at 30 per cent above present production in the best-case scenarios. Geographically, coal reserves are concentrated in just a handful of nations. Approximately 85 per cent of global coal reserves are concentrated in six countries (in descending order of reserves): USA, Russia, India, China, Australia, and South Africa. Furthermore, coal consumption generally takes place in the country of extraction – around 85 per cent of coal is used domestically, with around 15 per cent exported.281 Again, the concentration of coal in a small number of nations increases energy insecurity. Coal’s contribution to the economy Currently, coal provides over 25 per cent of the world’s primary energy and generates around 40 per cent of electricity. For a number of reasons – including the cost of mining, transport and the lower energy density of coal, and the more inefficient process of electricity generation – its primary energy yield is only around one-third of the economic productivity of the primary energy in oil.282 While coal may be able to provide some buffer to Peak Oil and Gas, it is one of the most environmentally damaging fossil fuels. For example, while it produces a quarter of the world’s energy, it is responsible for almost 40 per cent of the greenhouse gases. Since 1750, the burning of coal has released around 150 gigatonnes of carbon into the atmosphere.283

### Yes – Peak Gas

#### Peak gas has been reached -- offsets improvements and collapses multiple industries.

Simms 10**-**Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

Overall, any carbon emissions savings made through fuel switching from coal or oil to gas will be undermined by the onset of Peak Gas. Equally, our assumptions about how gas will be able to carry us through to a low carbon economy are seriously flawed. For example, in 2006, carbon emissions from British industry covered by the EU ETS (Emissions Trading System) rose by 3.5 per cent during 2006.275 These rising emissions were due to power generators switching from gas to coal in response to high gas prices during 2006. The rise in emissions from these power stations cancelled out all improvements across those sectors that actually reduced their emissions. Natural gas is also important for many plastics, fabrics, even plastic bags. It provides the heat necessary for cement production, and is also indispensable for making synthetic oils from tar sands (see previous section on Peak Oil).276 Additionally, natural gas is ‘absolutely indispensable’ for the production of industrial fertiliser.277

### Yes – Peak Oil

#### Peak oil is inevitable -- devastates growth -- their ev relies on biased/distorted statistics about reserves.

Simms 10**-**Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

The actual global peak year will only be known when it has passed, but most estimates suggest that we are either at, or very close to this point. At most it is one or, less likely, two decades away. Against a background of rising demand, ‘peaking’ will result in a major shock to the global economy. But, even before then, an opening gap between production and demand is already driving prices up. The recent review published by UKERC warned that, almost unequivocally, peak production will occur before 2030, with a significant risk that this will occur before 2020.237 Estimates of the precise onset of Peak Oil range from 2006 to 2030 (Table 6). The higher-end estimates are by and large due to exaggeration of technical reserves. A constant flow of new studies and industry leaks, however, point towards a downward revision of potential reserves. Actual technical reserves of oil are often very different from published reserves, the former rarely changing and the latter being related to political circumstance (often overestimated because of poor data, to bolster financial investment, political and institutional self interest, and other complicating factors). But, despite the variety of different estimates, many credible analysts have recently become much more pessimistic about the possibility of finding the huge new reserves needed to meet growing world demand, and even the most optimistic forecasts suggest that world oil peaking will occur in less than 25 years.

#### It guarantees economic collapse.

Simms 10-Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

The global economy is still heavily dependent on fossil fuels. Oil remains the world’s most important fuel largely because of its role in transport and agriculture and the ease with which it can be moved around. The historical pattern has been for industrial societies to move from low-quality fuels (coal contains around 14–32.5MJ per kg) to higher quality fuels (41.9 MJ/kg for oil and 53.6 MJ per kg), and from a solid fuel easily transported and therefore well suited to a system of global trade in energy resources.224 Now, almost all aspects of our economy are dependent on a constant and growing supply of cheap oil, from transport to farming, to manufacturing and trade. In the majority world, where too many people live close to, or below the breadline, the long tail of green revolution agriculture depends on pesticides and fertilisers that need large amounts of fossil fuels. The implication of any interruption to that supply, either in terms of price or simple availability, means a significant shock to the global economy. Everyone will be affected, but some more than others. The world oil crises in the 1970s provide some idea of how the effects of Peak Oil may ricochet through the economy. The two world oil crises in the 1970s (the most significant occasions when demand exceeded supply due to politically caused interruptions) caused widespread panic that the economy would fall into a global depression. During the first oil embargo in 1973, oil supplies only fell by 9 per cent. The second oil crisis caused by the Iranian oil cut-off resulted in a fall in oil production by 4 per cent.225 Both world oil crises were followed by recession, resulting in economic hardship, unemployment and social unrest around the world.226

### Exts – Peak Oil Kills Econ

#### Peak oil by 2025 -- global collapse inevitable.

Dr. Hirsch et al. 05**-**PhD, Engineering and Physics, University of Illinois(Robert L., “PEAKING OF WORLD OIL PRODUCTION:

IMPACTS, MITIGATION, & RISK MANAGEMENT”, MISI, February 2005, <http://www.netl.doe.gov/publications/others/pdf/Oil_Peaking_NETL.pdf)//sjl>

Important observations and conclusions from this study are as follows: 1. When world oil peaking will occur is not known with certainty. A fundamental problem in predicting oil peaking is the poor quality of and possible political biases in world oil reserves data. Some experts believe peaking may occur soon. This study indicates that “soon” is within 20 years. 2. The problems associated with world oil production peaking will not be temporary, and past “energy crisis” experience will provide relatively little guidance. The challenge of oil peaking deserves immediate, serious attention, if risks are to be fully understood and mitigation begun on a timely basis. 3. Oil peaking will create a severe liquid fuels problem for the transportation sector, not an “energy crisis” in the usual sense that term has been used. 4. Peaking will result in dramatically higher oil prices, which will cause protracted economic hardship in the United States and the world. However, the problems are not insoluble. Timely, aggressive mitigation initiatives addressing both the supply and the demand sides of the issue will be required. 5. In the developed nations, the problems will be especially serious. In the developing nations peaking problems have the potential to be much worse. 6. Mitigation will require a minimum of a decade of intense, expensive effort, because the scale of liquid fuels mitigation is inherently extremely large. 7. While greater end-use efficiency is essential, increased efficiency alone will be neither sufficient nor timely enough to solve the problem. Production of large amounts of substitute liquid fuels will be required. A number of commercial or near-commercial substitute fuel production technologies are currently available for deployment, so the production of vast amounts of substitute liquid fuels is feasible with existing technology.

### A2 Saudi Arabia Solves

#### Saudi Arabia doesn’t have the oil.

Simms 10-Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

Since UK North Sea production peaked around 1999, hopeful eyes have been focused on the major producers like Saudi Arabia to keep the economy’s arteries full of oil.248 But, looking ahead, Saudi Arabia appears to have other ideas. Over the next 12 years it intends to spend around $600 billion (about the same staggering figure that the USA earmarked for propping up its financial system) on a massive domestic infrastructure programme, including power stations, industrial cities, aluminium smelters and chemical plants. And, while doubts persist that its reserves are a lot less than publicly stated, guess what: all these new developments will be powered with Saudi oil. The rest of the world should not hold its breath waiting to be rescued.249

### Peak Oil Bad – Warming

#### Peak oil is inevitable -- magnifies the impact of climate change, and alternative sources won’t be developed in time.

Simms 10-Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

Projections for oil and gas production were obtained from Colin Campbell and the Association for the Study of Peak Oil (ASPO).208 Given the constraints in building and developing alternative sources of energy, such as nuclear or hydroelectric power stations, we have assumed that the energy requirements left unfilled because of the shortage of oil and gas will be filled by replacing those fuels with coal – a phenomenon that appears to be occurring already.209� This has significant effects on the carbon intensity of energy. While the rate of supply side efficiency improvements to the energy intensity of the economy are also dependent on the fuel mix, this substitution serves as a first order estimate of the effects of Peak Oil on anthropogenic greenhouse gas emissions.

### A2 Econ Self-Correcting

#### Self-correcting markets are a myth -- the recession disproves effectiveness -- the economy, biosphere and society are all facing imminent collapse.

Spratt et al. 10-Stephen holds a BA from the University of East Anglia, an MSc from the School of Oriental and African Studies (SOAS), University of London, and a DPhil from the Institute of Development Studies, University of Sussex.(Stephen, “The Great Transition”, NEF, June 2010, http://neweconomics.org/sites/neweconomics.org/files/Great\_Transition\_0.pdf)//sjl

An economic model that failed on its own terms, and for people and the planet The neoliberal economic model has failed spectacularly. What started as a run on banks and saw major financial institutions, most symbolically Lehmann Brothers, collapse, turned into the most severe global recession since the 1930s. If the theories of self-correcting and efficient markets had been right, the events of the last 18 months could never have occurred. But they clearly did. What we have seen is not just a temporary malfunctioning of the neoliberal model but its failure on its own terms. Instead of endless, stable growth and high and rising incomes equitably shared, we have had inequity, volatility and crises. These are not anomalies, but a natural and increasingly severe expression of the ‘normal’ functioning of the system. As even Alan Greenspan, former Chair of the US Federal Bank, was forced to admit, there was ‘a flaw … in the model that defines how the world works’.27 But the economic model has not just failed on its own terms. It has also failed people and the planet. The environmental and economic crises are not separate but interconnected events. It is the high levels of debt-fuelled consumption in developed countries that have landed us with dangerously high concentrations of CO2 and put pressure on ecosystem resources. Astonishingly, this is precisely the path that politicians are trying to return us to. Many of the measures hastily put in place at the start of the recession – VAT reductions and the car scrappage scheme, for example – were specifically designed to kick-start consumption.

### A2 Tech Solves Sustainability

#### Tech doesn’t solve -- resource overshoot is too large.

Trainer 10 – University of New South Wales, Australia (Ted F.E., “The Radical Implications of a Zero Growth Economy”, Real-World Economics Review, 2010, Issue Number 57, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf)//PN

We come now to the crucial assumption most people make, i.e., that there is no need to even think about questioning growth, let alone reducing consumption or economic output, let alone cutting GDP by a factor of 5 to 10. The generally assumed view is, “We will all be able to go on buying lots of goods, living in gigantic houses, driving long distances, going away for holidays, jetting around the world, having elaborate wardrobes etc., and increasing our consumption of those things every year – because our wizard technologists will find ways of producing goods and running cars etc. without causing significant problems. Indeed the technologies already exist; it’s just that our dull-witted politicians have failed to implement them.” However, the overshoot is far too great for any plausible technical advances to be able to reduce the problems to tolerable proportions. Perhaps the best known "technical fix" optimist, Amory Lovins, claims that we could at least double global output while halving the resource and environmental impacts, i.e., we could achieve a "Factor Four" reduction. (Von Weisacher and Lovins, 1997. More recently a Factor Five reduction is argued.) But this would be nowhere near enough to solve the problems. Let us assume that present global resource and ecological impacts must be halved. It has been explained that if we in rich countries average 3% growth, and 9 billion rose to the living standards we would then have by 2050, total world output would be almost 20 times as great as it is today. It is highly implausible that technical advance will make it possible to multiply total world economic output by 20 while halving impacts, i.e., to enable a Factor 40 reduction?

#### **Biocapacity is hugely insufficient -- technology can’t keep up or solve all of the problems created by growth -- only de-development creates real solutions.**

Trainer 10- Social Work, University of NSW, Kensington 2052 (Ted F.E., “THE SIMPLER WAY:WORKING FOR TRANSITION FROM CONSUMER SOCIETY TO

 A SIMPLER, MORE COOPERATIVE, JUST AND ECOLOGICALLY SUSTAINABLE SOCIETY,” 2010, http://socialsciences.arts.unsw.edu.au/tsw/)//PN

The “limits to growth” analysis argues that the pursuit of affluent lifestyles and economic growth are the basic causes of the many alarming global problems we are running into.  We have environmental destruction, resource depletion, an impoverished Third World, problems of armed conflict and deteriorating cohesion and quality of life in even the richest countries...essentially because the levels of producing and consuming going on are far too high.  There is no possibility of these levels being maintained, let alone spread to all the world’s people. The counter argument most commonly raised against the limits case is that the development of better technology will solve the problems.  Almost everyone seems to hold this belief. It is not surprising that this claim is regarded as plausible, because technology does constantly achieve miraculous breakthroughs, and publicity is frequently given to schemes that are claimed could be developed to solve this or that problem.  However there is a weighty case that technical advance will not be able to solve our  global problems.   The Simpler Way view is that technical advances cannot solve the big global problems and therefore we must change to lifestyles and social systems which do not generate those problems.  The Simpler Way argument is that this could easily be done, and it would actually enable a much higher quality of life than most of us have now in consumer society, but it would involve abandoning the quest for affluent lifestyles and limitless economic growth...so it is not at all likely that this path will be taken. The problems are already far too big for technical advance to solve. Most people have little idea how serious the main problems are, or how far beyond sustainable levels we are. ·      The 2007 IPCC Report said that if greenhouse gas emissions are to be kept to a “safe” level they must be cut by 50-80% by 2050, and more after that.  (Now, even bigger reductions are generally thought to be required.)  The 50% figure would mean that the average American or Australian would have to go down to under 5% of their present per capita emission rate.   ·      By 2050 the amount of productive land on the planet per capita will be .8 ha (assuming we will cease destroying land.)  The present amount required to give each Australian their lifestyle is 8 ha.  We are 10 times over a sustainable amount, and there is not the slightest possibility of all the world’s people ever rising to anywhere near our level.   ·      Australians use about 280 GJ of energy per capita p.a.  We are heading for 500 GJ/person/y by 2050.  If all the world’s expected 9 billion people were to live as we live world energy supply would have to be around 4,500 EJ/y...which is 9 times the present world energy production and consumption.   ·      Many of the world’s ecosystems are in alarmingly rapid decline.  This is essentially  because humans are taking so much of the planet’s area,  and 40% of the biological productivity of the lands.  We are causing a biodiversity die-off holocaust mainly because we are taking the habitats other species need.  Of about 8 billion ha of productive land we have taken 1.4 billion ha for cropland, and about 3.5 billion ha for grazing.  We are depleting most of the fisheries.  We are destroying around 15 million ha of tropical forest every year.  And if all 9 billion people expected are going to live as we do now, resource demands will be about 10 times as intense as they are now.   There are many other environmental impacts that are either past the limits biologists think are tolerable, or approaching them, including the rate of nitrogen release, ozone destruction and atmospheric aerosol loads. (Rockstrom, 2009.)

#### **Technology advancements does not solve negative aspects of growth -- transition is key.**

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Consumer-capitalist society is grossly unsustainable and unjust.  We are far beyond levels of production and consumption that can be kept up or spread to all.  In addition consumer-capitalist society provides a few with high “living standards” by delivering to them far more than their fair share of world resources.  Technical advance cannot solve the problems; they cannot be fixed in or by consumer-capitalist society. There must be dramatic reductions in levels of economic output, and therefore there must be radical and extreme system change. ([For the detail](http://socialsciences.arts.unsw.edu.au/tsw/TSWmain.html) see...) The Solution. There must be transition to The Simpler Way, involving simpler lifestyles, high levels of local economic self-sufficiency, highly cooperative and participatory arrangements, an almost totally new economic system (one that is not driven  by market forces or profit, and has no growth), and fundamental value change. Many realise a sustainable and just society must be mostly made up of small local economies in which people participate collectively to run their economies to meet needs using local resources, and in which the goal is a high quality of life and not monetary wealth.  This is a largely Anarchist vision and the coming conditions of scarcity will give us no choice about this.  Big, centralised authoritarian systems will not work.   (For more detail see Part 2 of the account at the above site.)

### A2 Trickle Down Solves

#### Trickle down effect fails -- depletes resources and increases the rich/poor gap.

Trainer 11- Conjoint Lecturer in the School of Social Sciences, University of New South Wales, (Ted, “The radical implications of a zero growth economy”, Real-World Economics Review, issue no. 57, 2011, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf) //RI

“But look at China!” Yes there are places in the global economy where some people are winning spectacularly, and where significant benefits are going to poorer people. There is strong evidence that the ‘living standards” of large numbers of people in the Third World are indeed rising significantly. (See for instance Rosling, 2009.) However this does not mean the Trickle Down approach is acceptable or that it could solve the basic problems. Firstly the booming export markets the Chinese now enjoy have been taken from many in poor countries who once had them but now can’t earn from exporting the things they used to sell. Also it is easy to overlook the fact that 800 million Chinese are not sharing in the new wealth. (Hutton, 2007) Market based systems mostly benefit the middle class and the rich, and create limited opportunities for some to rise to the middle class. Ask 500 million in Africa, or most people in Haiti and Tuvalu about the miracles of growth and trickle down. Most of them are probably enjoying declining GDP per capita. (...which of course just means they need to work harder, cut their export prices, log more forest...) Very little ever trickles down to the poorest, and globalisation has increased the rate at which the resources of the very poorest are transferred to the rich. (For extensive documentation see Note 2.) Even for those poor classes benefiting from the growth and trickle down approach to development, the rates evident show that it would take hundreds of years for them to rise to rich world “living standards”. Meanwhile the rich countries would have risen to stratospheric levels...and the ecosystems of the planet would have collapsed long ago.

### A2 Experts/Economic Predictions Fail

#### Economic predictions are flawed and don’t have any capacity for accurately understanding the world -- relying on assumptions of perpetual growth guarantees failure.

Dr. Farrell 6-12-12- UVirginia Law, Cornell, Carnegie Institute of Technology B.Arch., M.R.P., J.D., Ph.D(Paul B., “Myth of Perpetual Growth is killing America Commentary: Everything you know about economics is wrong”, Wall Street Journal, June 12, 2012, http://www.marketwatch.com/story/myth-of-perpetual-growth-is-killing-america-2012-06-12)//sjl

Yes, everything you know about economics is wrong. Dead wrong. Everything. The conclusions of economists are based on a fiction that distorts everything else. As a result economics is as real as one of the summer blockbusters like “Battleship,” “The Avenger” or “Prometheus.” The difference is that the economic profession is a genuine threat, not entertainment. Economics dogma is on track to destroy the world with a misleading ideology. Why? Because all economics is based on the absurd Myth of Perpetual Growth. Yes, all theories and business plans based on growth are mythological. Economists are master illusionists who rely on a set of fictions, fantasies and forecasts that emanate from a core magical mantra of Perpetual Growth that goes untested year after year. And yet it’s used to manipulate the public into a set of policies and decisions that are leading the American and the world economy down a path of unsustainable globalization and GDP growth assumptions that will self-destruct the planet. Denial? We’re all addicted to the Myth of Perpetual Growth Yes, economists are addicted to this ideology. Trapped deep in their denial, can’t see the problem, or admit it, or if they do, they are unable to stop themselves, see past their own myopic world view. They’re mercenaries working for capitalists who pay their salaries, and expect them to support the capitalist’s bizarre Myth of Perpetual Growth. Worse, the public also bought into the myth. Yes, you believe everything you learned in college about economic theories, all the textbooks, everything you read in the daily press, the government reports, all those Wall Street analysts’ predictions relying on studies prepared by economists with credentials. But everything you think you know about economics … is wrong. Dead wrong. And until economics acknowledge this, the discipline is on a self-destruct path. Why? The science of economics is not science. Yes, it looks scientific with all the fancy math algorithms and computer models that economists use, but all that’s just window dressing to make the economist look scientific and rational. They’re not. Their conclusions are pre-ordained, fabricated, based on their biases, personal ideologies and whatever their employer wants to prove to manipulate consumers, voters or investors to buy what they’re selling. ‘What do you call an economist with a prediction? Wrong’ Don’t believe me? Go look at USA Today’s quarterly surveys of 50 economists projections of GDP growth. Invariably off by a large margin. And Barron’s Big Money poll? In past reviews we’ve seen a wide gap in forecasts by the bulls and bears. Bottom line: Whether it’s Roubini or Roach, Kudlow or Krugman, you can’t trust the predictions of any economist. Ever. Best warning: That famous BusinessWeek editorial several years ago headlined: “What Do You Call an Economist with a Prediction? Wrong.”

## Impacts

### 1NC – Delay Disad

#### Growth devastates the environment -- collapse is inevitable, but now is key to protect the ecosystem and prevent extinction.

Dr. Barry 8-(Glen, President and Founder of Ecological Internet, "Economic Collapse And Global Ecology" 1/14/8, <http://www.countercurrents.org/barry140108.htm>)//AP

Humanity and the Earth are faced with an enormous conundrum -- sufficient climate policies enjoy political support only in times of rapid economic growth. Yet this growth is the primary factor driving greenhouse gas emissions and other environmental ills. The growth machine has pushed the planet well beyond its ecological carrying capacity, and unless constrained, can only lead to human extinction and an end to complex life. With every economic downturn, like the one now looming in the United States, it becomes more difficult and less likely that policy sufficient to ensure global ecological sustainability will be embraced. This essay explores the possibility that from a biocentric viewpoint of needs for long-term global ecological, economic and social sustainability; it would be better for the economic collapse to come now rather than later. Economic growth is a deadly disease upon the Earth, with capitalism as its most virulent strain. Throw-away consumption and explosive population growth are made possible by using up fossil fuels and destroying ecosystems. Holiday shopping numbers are covered by media in the same breath as Arctic ice melt, ignoring their deep connection. Exponential economic growth destroys ecosystems and pushes the biosphere closer to failure. Humanity has proven itself unwilling and unable to address climate change and other environmental threats with necessary haste and ambition. Action on coal, forests, population, renewable energy and emission reductions could be taken now at net benefit to the economy. Yet, the losers -- primarily fossil fuel industries and their bought oligarchy -- successfully resist futures not dependent upon their deadly products. Perpetual economic growth, and necessary climate and other ecological policies, are fundamentally incompatible. Global ecological sustainability depends critically upon establishing a steady state economy, whereby production is right-sized to not diminish natural capital. Whole industries like coal and natural forest logging will be eliminated even as new opportunities emerge in solar energy and environmental restoration. This critical transition to both economic and ecological sustainability is simply not happening on any scale. The challenge is how to carry out necessary environmental policies even as economic growth ends and consumption plunges. The natural response is going to be liquidation of even more life-giving ecosystems, and jettisoning of climate policies, to vainly try to maintain high growth and personal consumption. We know that humanity must reduce greenhouse gas emissions by at least 80% over coming decades. How will this and other necessary climate mitigation strategies be maintained during years of economic downturns, resource wars, reasonable demands for equitable consumption, and frankly, the weather being more pleasant in some places? If efforts to reduce emissions and move to a steady state economy fail; the collapse of ecological, economic and social systems is assured. Bright greens take the continued existence of a habitable Earth with viable, sustainable populations of all species including humans as the ultimate truth and the meaning of life. Whether this is possible in a time of economic collapse is crucially dependent upon whether enough ecosystems and resources remain post collapse to allow humanity to recover and reconstitute sustainable, relocalized societies. It may be better for the Earth and humanity's future that economic collapse comes sooner rather than later, while more ecosystems and opportunities to return to nature's fold exist. Economic collapse will be deeply wrenching -- part Great Depression, part African famine. There will be starvation and civil strife, and a long period of suffering and turmoil. Many will be killed as balance returns to the Earth. Most people have forgotten how to grow food and that their identity is more than what they own. Yet there is some justice, in that those who have lived most lightly upon the land will have an easier time of it, even as those super-consumers living in massive cities finally learn where their food comes from and that ecology is the meaning of life. Economic collapse now means humanity and the Earth ultimately survive to prosper again. Human suffering -- already the norm for many, but hitting the currently materially affluent -- is inevitable given the degree to which the planet's carrying capacity has been exceeded. We are a couple decades at most away from societal strife of a much greater magnitude as the Earth's biosphere fails. Humanity can take the bitter medicine now, and recover while emerging better for it; or our total collapse can be a final, fatal death swoon. A successful revolutionary response to imminent global ecosystem collapse would focus upon bringing down the Earth's industrial economy now. As society continues to fail miserably to implement necessary changes to allow creation to continue, maybe the best strategy to achieve global ecological sustainability is economic sabotage to hasten the day. It is more fragile than it looks.

### Exts – Delay Disad

#### It’s linear -- the longer we wait, the worse it will be.

#### Barry, ‘10

[Glen, R President and Founder of Ecological Internet. Ph.D. in "Land Resources" from the University of Wisconsin-Madison, a Masters of Science in "Conservation Biology and Sustainable Development" also from Madison, and a Bachelor of Arts in "Political Science" from Marquette University, “Resisting Global Ecological Change,” 5 January 2010)

The human family faces imminent and (Copenhagen would suggest) inevitable collapse of the biosphere – the thin layer of life upon an otherwise lifeless planet – that makes Earth habitable. Marshes and rivers and forests and fish are far more than resources – they and all natural ecosystems are a necessity for humanity’s existence upon Earth. A few centuries of historically unprecedented explosion in human numbers and surging, albeit inequitable, consumption and resultant resource use, ecosystem destruction and pollution; is needlessly destroying being for all living things. Revolutionary action such as ending coal use, reforming industrial agriculture and protecting and restoring old forests and other natural ecosystems, is a requirement for the continuation of shared human being. Earth is threatened by far more than a changing atmosphere causing climate change. Cumulative ecosystem destruction – not only in climate, but also water, forests, oceans, farmland, soils and toxics -- in the name of “progress” and “development” -- threatens each of us, our families and communities, as well as the Earth System in total and all her creatures. Any chance of achieving global ecological sustainability depends urgently upon shifting concerns regarding climate change to more sufficiently transform ourselves and society to more broadly resist global ecological change. Global ecological, social and economic collapse may be inevitable, but its severity, duration and likelihood of recovery are being determined by us now. It does not look good as the environmental movement has been lacking in its overall vision, ambition and implementation. The growing numbers of ecologically literate global citizens must come forward to together start considering ecologically sufficient emergency measures to protect and restore global ecosystems. We need a plan that allows humans and as many other species as possible to survive the coming great ecological collapse, even as we work to soften the collapse, and to restore to the extent practicable the Earth’s ecosystems. This mandates full protection for all remaining large natural ecosystems and working to reconnect and enlarge biologically rich smaller remnants that still exist. It is time for a hard radical turn back to a fully functioning and restored natural Earth which will require again regaining our bond with land (and air, water and oceans), powering down our energy profligacy, and taking whatever measures are necessary to once again bring society into balance with ecosystems. This may mean taking all measures necessary to stop those known to be destroying ecosystems for profit. As governments dither and the elite profit, it has become dreadfully apparent that the political, economic and social structures necessary to stop human ecocide of our and all life’s habitats does not yet exist. The three hundred year old hyper-capitalistic and nationalistic growth machine eating ecosystems is not going to willingly stop growing. But unless it does, human and most or all other life will suffer a slow and excruciating apocalyptic death. Actions can be taken now to soften ecological collapse while maximizing the likelihood that a humane and ecologically whole Earth remains to be renewed.

### Growth Bad – Laundry List

#### Growth is unsustainable -- continuing along the current path makes multiple extinction scenarios inevitable.

Trainer 11- Conjoint Lecturer in the School of Social Sciences, University of New South Wales, (Ted, “The radical implications of a zero growth economy”, Real-World Economics Review, issue no. 57, 2011, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf) //RI

The planet is now racing into many massive problems, any one of which could bring about the collapse of civilization before long. The most serious are the destruction of the environment, the deprivation of the Third World, resource depletion, conflict and war, and the breakdown of social cohesion. The main cause of all these problems is over-production and over-consumption– people are trying to live at levels of affluence that are far too high to be sustained or for all to share. Our society is grossly unsustainable – the levels of consumption, resource use and ecological impact we have in rich countries like Australia are far beyond levels that could be kept up for long or extended to all people. Yet almost everyone’s supreme goal is to *increase* material living standards and the GDP and production and consumption, investment, trade, etc., as fast as possible and without any limit in sight. There is no element in our suicidal condition that is more important than this mindless obsession with accelerating the main factor causing the condition. The following points drive home the magnitude of the overshoot. • If the 9 billion people we will have on earth within about 50 years were to use resources at the per capita rate of the rich countries, annual resource production would have to be about 8 times as great as it is now. • If 9 billion people were to have a North American diet we would need about 4.5 billion ha of cropland, but there are only 1.4 billion ha of cropland on the planet. • Water resources are scarce and dwindling. What will the situation be if 9 billion people try to use water as we in rich countries do, while the greenhouse problem reduces water resources. • The world’s fisheries are in serious trouble now, most of them overfished and in decline. What happens if 9 billion people try to eat fish at the rate Australian’s do now? • Several mineral and other resources are likely to be very scarce soon, including gallium, indium, helium, and there are worries about copper, zinc, silver and phosphorous. • Oil and gas are likely to be in decline soon, and largely unavailable in the second half of the century. If 9 billion were to consume oil at the Australian per capita rate, world demand would be about 5 times as great as it is now. The seriousness of this is extreme, given the heavy dependence of our society on liquid fuels. • Recent "Footprint" analysis indicates that it takes 8 ha of productive land to provide water, energy, settlement area and food for one person living in Australia. (World Wildlife Fund, 2009.) So if 9 billion people were to live as we do about 72 billion ha of productive land would be needed. But that is about 10 times all the available productive land on the planet. • The most disturbing argument is to do with the greenhouse problem. It is very likely that in order to stop the carbon content of the atmosphere rising to dangerous levels CO2 emissions will have to be totally eliminated by 2050 (Hansen says 2030). (Hansen, 2009, Meinschausen et al., 2009.) Geo- sequestration can’t enable this, if only because it can only capture about 85% of the 50% of emissions that come from stationary sources like power stations. These kinds of figures make it abundantly clear that rich world material “living standards” are grossly unsustainable. We are living in ways that it is impossible for all to share. We are not just a little beyond sustainable levels of resource consumption -- we have overshot by a factor of 5 to 10. Few seem to realise the magnitude of the overshoot, nor therefore about the enormous reductions that must be made. Now add the implications of growth The above figures refer to the present situation, but that does not define the problem we face. The problem is what will the situation be in future given the determination to increase production and consumption continuously and without limit? At least 3% p.a. economic growth is demanded and usually achieved in this society. If Australia had 3% p.a. increase in output to 2050 and by then all 9 billion people expected had risen to the material living standards Australians would have, the world would be producing almost 20 times as much as it does today. Yet the present level is alarmingly unsustainable.

### Exts – Growth Bad (Laundry List)

#### Unsustainable growth is the root cause of resource depletion, environmental collapse, and Third World poverty, and global military conflict.

Trainer 11- Conjoint Lecturer in the School of Social Sciences, University of New South Wales, (Ted, “The radical implications of a zero growth economy”, Real-World Economics Review, issue no. 57, 2011, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf) //RI

Thus growth is a major cause of global problems. This “limits to growth” analysis is crucial if one is to understand the nature of the environmental problem, the Third World problem, resource depletion and armed conflict in the world. Although there may also be other causal factors at work, all these problems are directly and primarily due to the fact that there is far too much producing and consuming going on. For instance, we have an environment problem because far too many resources are being drawn out of nature and far too many wastes dumped back in, at rates technical advance cannot cut to sustainable levels. We have an impoverished and underdeveloped Third World because people in rich countries insist on taking most of the resources, including those in the Third World that should be being used by Third World people to meet their own needs. And how likely is it that we will ever have peace in the world if resources are very scarce and all cannot use them at the rate a few do now, yet all insist on getting richer and richer all the time without limit? If you insist on remaining affluent then you should arm yourselves heavily, you will need arms if you want to continue to take far more than your fair share.

### Growth Bad – Democracy

#### Globalization undermines democracy.

Deriu 3/31- Department of Political and Social Studies, University of Parma, Borgo Carissimi (Marco, “Democracies with a future: Degrowth and the democratic tradition”, Elsevier, 2012, http://dx.doi.org/10.1016/j.futures.2012.03.016) //RI

It is a fact that the development of democratic regimes, the construction of democratic consensus, is intertwined with the history of growth and the market, of access to and the promotion of consumption. The same imaginary that forms the basis of democratic consensus is historically based on the promise of growth. Social consensus in post second world war liberal democratic societies was founded on the centrality of productive work, an ethic of sacrifice and the promise of ‘‘collective upward mobility’’ [5]. At the same time, the compromise of welfare state which bridled the most problematic effects of free market and assured a strong social integration, made the democratic system more and more dependent on the capitalistic economy through taxation. Nevertheless the fact of having thought of personal and social well-being in principally material terms, and the fact of having confided the realisation of that objective to the market, has had heavy consequences. In fact economic growth has been set above (and conceived as a pre-condition of) any policy of justice and redistribution. But the fact of directing all the efforts and resources of politics towards the objective of economic growth has meant to assign more and more power to the most relevant economic actors. From this point of view, the present crisis of democracy can be read as the crisis of the centrality of the traditional political sphere and of the prerogatives of the State in its capacity to govern society and economy. We are not in front of differentiated systems, where everyone functions autonomously, but in front of a more and more ambiguous and rampant interpenetration between economic interests and political decisions. In the last decades, we have faced a translatio imperii from the political system to other centers of power, especially economic ones: public centers of power, not necessarily democratically ruled (such as G8, World Bank, IMF, WTO, European Commission, OECD, and ECB), or other private and undemocratic subjects (boards of directors of corporations, directions of big banks, big investors, rating agencies, etc.) and sometimes even occult powers. Many relevant decisions for the fate of our future are taken outside any democratic control. There are different forms of interpenetration of the political sphere by the economic world. First of all, the big economic actors spend hundreds of thousands of Dollars to support the electoral campaign of a candidate or of a political party in order to obtain laws or decisions favourable to their interests. At another level, the action is assigned to professional lobbyists. The lobbyists officially registered in Washington are almost 13,000, with a turnover of around 3.50 billion Dollars per year. The ones operating in Brussels are almost 15,000, with a turnover of around 1 billion Euros per year. Certainly, in a democracy it is allowed to represent all the interests, but it is clear that in such a lobbying activity the ones who can count on the higher economic resources have more (legal and illegal) possibilities to get results. In fact there is a strong asymmetry in the possibility to defend the interests of companies and the ones of citizens. In several countries the entrepreneurs play directly an important and manifest political role. We refer e.g., to the action of people such Rupert Murdoch, owner of a vast business empire, particularly in the area of mass communication, or Silvio Berlusconi, an important entrepreneur who in Italy has successfully applied the traditional sales and marketing strategies to the political sphere, thanks to the control of private and public television system. But they are not isolated cases. With the advent of globalization, an array of tools and faculties characteristic of the nation State are becoming increasingly ineffective and impotent in front of the advancing of a transnational economic logic and of its new actors: multinational corporations, financial markets, international institutions. Multinational corporations and financial and economic elites are increasingly avoiding democratic control and contribution in terms of taxation, compliance with social and environmental laws, protection of workers’ rights and, more generally, respect for citizens and populations.

### Exts – Growth Bad (Democracy)

#### Economic growth distorts democracy and removes power from citizens.

Deriu 3/31- Department of Political and Social Studies, University of Parma, Borgo Carissimi (Marco, “Democracies with a future: Degrowth and the democratic tradition”, Elsevier, 2012, http://dx.doi.org/10.1016/j.futures.2012.03.016) //RI

In the new global context, another repercussion on the democratic process is the ‘‘mandatory nature of the assessments made by global financial markets on national positions’’ [6]. This influence is particularly evident in the present time, as we have seen in summer 2011 with the debt and financial exposure of Greece, Italy and even of the U.S. In this situation, the ministers of economy define their social, economic and financial reforms, having an eye primarily on the possible reactions of financial markets. As Ju ̈ rgen Habermas summed up, ‘‘today they are the states to be incorporated into the markets, rather than national economies to be incorporated into the boundaries of the state’’ [7]; this results in the fact that a single democratic state no longer has the strength to protect citizens from decisions of non-democratic actors and from processes born outside its borders. Even rating agencies like Moody’s, Standard & Poor’s and Fitch have a power which is stronger than ever, even if based on what is formally a simple ‘‘opinion’’. Judging not only the financial solidity of banks and companies, but also that of States and governments, and then having the authority to define the reliability and attractiveness of a country for international investors, they can have a very strong economic and political influence. Most Western democracies – notably Greece, Portugal, Ireland, France, Germany, Spain and even the U.S. – are now heavily indebted with the international financial system and thus they are effectively exposed against the latter. At present, financial markets have become political – albeit impersonal – subjects. Or at least politicians behave as if markets were independent subjects that can express judgments or preferences: condemnation of the policies of public intervention, approval of containment and cutting of the public spending of the privatization policies, etc. But in any case it is true that the attack by the big financial speculators to a country or to an economic area may decide the political fate of a government and at the end the fate of people themselves. In the current scenario, there are therefore a series of ‘‘hybrid figures’’ that move between the economic and the political sphere in a supranational space with a power that rivals that of many state actors and institutions [8]. On the other hand, the political role of guidance and assurance played by the State in the post second war – both as an entrepreneur and as a guarantor of social protection, through the welfare system – is dramatically weakening. The reform and dismantling of the welfare state undermines the modern forms of social solidarity, while the end of full employment and the spread of unemployment and of the precarious work make people more vulnerable to blackmail. Thus, what Americans call ‘‘free market democracy’’ is in fact a regime with a strong power of market actors and a weak citizen power. As Reich [9], who sought to reconstruct and highlight the link between the birth of super-capitalism and the decline of democracy, has noted, the market is ever more suited to satisfy a whole series of needs and desires, to the strangest and most frivolous, yet democracy is becoming progressively less sensitive to our demands as citizens calling for more just rules, a cleaner environment, healthier food, the protection of land, the conservation of artistic or monumental heritage or the defence of common goods. Both the political and economic systems are calibrated towards the demands of the shareholders and consumers, not the citizens. This imbalance, according to Reich, is due to the fact that economic actors are able to aggregate the interests of their shareholders or investors in large blocks of power, while the instruments of representation and protection of citizens are increasingly weakened or unfit to address this level.

#### Only de-development creates true democracy.

Deriu 3/31- Department of Political and Social Studies, University of Parma, Borgo Carissimi (Marco, “Democracies with a future: Degrowth and the democratic tradition”, Elsevier, 2012, http://dx.doi.org/10.1016/j.futures.2012.03.016) //RI

As Serge Latouche writes ‘‘the path of degrowth is the path of free criticism. It is the path of self-limitation not of the unchecked unleashing of sad passions. Degrowth seeks to resume the programme of the political emancipation of modernity, confronting the difficulties brought about by its realisation. The experience of the transcendence of man within the man that permits him to escape the aporia of egalitarianism’’ [15]. If, in the future, democracies were to fail in some way, they would disappear not because of external threats but because they were unable to solve their own fundamental paradox. The paradox of democratic freedom is that of a regime that has no limits outside itself, with respect to which we are called on to use our own freedom to affirm the limits to that very freedom in the most radical way. From this point of view the proposal of degrowth is not a limitation of democracy. On the contrary, it is the way to lead democracy back to its roots, but with an altered sense of self. It would imply a key passage in terms of epistemology and political theory. It is not a matter of reintroducing neither an appeal to something superior and external to democracy (not god, not nature), nor to introduce some voluntary internal limit in terms of ordinary laws or regulations. The task is rather to rethink democracy as something that does not and cannot exist in the abstract and that can only be thought in space and time. In other words, it is to incorporate in the self-perception of democracy the sense of our nature, in a political but also in a social and ecological dimension. Democracy lives, regenerates and is perpetuated only through the recognition and the care of its links with the environment and the past and future generations. A democracy that wishes to respond to social and ecological challenges is obliged to place limits on growth and take responsibility for the future. To rethink democracy with a view to degrowth means affirming that a truly democratic system does not degrade living conditions nor, therefore, deprive future generations the same possibilities of choice and political freedom we have today [16]. Otherwise it would deny itself.

### Growth Bad – Disease

#### Globalization guarantees disease spread -- makes transmission quicker and likelier.

Gannon 10– Chairman of the National Intelligence Council (John C., “The Global Infectious Disease Threat and Its Implications for the United States”, <http://www.fas.org/irp/threat/nie99-17d.htm>) SP

The increase in international air travel, trade, and tourism will dramatically increase the prospects that infectious disease pathogens such as influenza--and vectors such as mosquitoes and rodents--will spread quickly around the globe, often in less time than the incubation period of most diseases. Earlier in the decade, for example, a multidrug resistant strain of Streptococcus pneumoniae originating in Spain spread throughout the world in a matter of weeks, according to the director of WHO's infectious disease division. The cross-border movement of some 2 million people each day, including 1 million between developed and developing countries each week, and surging global trade ensure that travel and commerce will remain key factors in the spread of infectious diseases

### Exts – Growth Bad (Disease)

#### Globalization causes disease.

Gannon 10– Chairman of the National Intelligence Council (John C., “The Global Infectious Disease Threat and Its Implications for the United States”, <http://www.fas.org/irp/threat/nie99-17d.htm>) SP

The following are a few prominent methods of pathogen entry into the United States: International travel. More than 57 million Americans traveled outside the United States for recreational and business purposes in 1998--often to high risk countries--more than double the number just a decade before. In addition, tens of millions of foreign-born travelers enter the United States every year. Travelers on commercial flights can reach most US cities from any part of the world within 36 hours--which is shorter than the incubation periods of many infectious diseases. Immigration. Approximately 1 million immigrants and refugees enter the United States legally each year, often from countries with high infectious disease prevalence, while several hundred thousand enter illegally. The USCDC has the authority to detain, isolate, or provisionally release persons at US ports of entry showing symptoms of any one of seven diseases (yellow fever, cholera, diphtheria, infectious TB, plague, suspected smallpox, and viral hemorrhagic fevers). Although each individual must undergo a medical examination before entering the country, potentially excludable conditions may be in the incubating and therefore less detectable stages. Moreover, US law prohibits the Immigration and Naturalization Service from returning refugees who have credible reasons to fear political persecution, including those refugees afflicted with infectious diseases. Returning US military forces. Although US military populations are immunized against many infectious diseases and are especially sensitized to detecting any symptoms before or after their return to the United States, not all cases are likely to be detected, especially among National Guardsmen and Reservists, who are far more likely to enter the civilian health care system and may not associate a later-developing illness with their overseas travel. The globalization of food supplies. Foodborne illnesses have become more common as the number of food imports has doubled over the past five years, owing to changing consumer preferences and increased trade. At certain times of the year, more than 75 percent of the fruits and vegetables available in grocery stores and restaurants are imported and, therefore, potentially more likely to be infected with pathogenic microorganisms, according to a foodborne disease expert.

### A2 Tech Solves Disease

#### Tech advancements facilitate disease spread -- empirical proof.

Gannon 10– Chairman of the National Intelligence Council (John C., “The Global Infectious Disease Threat and Its Implications for the United States”, <http://www.fas.org/irp/threat/nie99-17d.htm>) SP

Although technological breakthroughs will greatly facilitate the detection, diagnosis, and control of certain infectious and noninfectious illnesses, they also will introduce new dangers, especially in the developed world where they are used extensively. Invasive medical procedures will result in a variety of hospital-acquired infections, such as Staphylococcus aureus. The globalization of the food supply means that nonhygienic food production, preparation, and handling practices in originating countries can introduce pathogens endangering foreign as well as local populations. Disease outbreaks due to Cyclospora spp,Escherichia coli, and Salmonella spp. in several countries, along with the emergence, primarily in Britain, of Bovine Spongiform Encephalopathy, or "mad cow" disease, and the related new variant Creutzfeldt-Jakob disease (nvCJD) affecting humans, result from such food practices.

### Growth Bad – Environment

#### Consumption levels are fundamentally unsustainable and put us in a cycle of positive feedback loops -- guarantees ecosystem collapse and extinction.

Spratt et al. 10**-**Stephen holds a BA from the University of East Anglia, an MSc from the School of Oriental and African Studies (SOAS), University of London, and a DPhil from the Institute of Development Studies, University of Sussex.(Stephen, “The Great Transition”, NEF, June 2010, <http://neweconomics.org/sites/neweconomics.org/files/Great_Transition_0.pdf)//sjl>

Our environmental challenges extend well beyond carbon however; Earth’s life support processes depend on the optimal functioning of ecosystems. Human life is dependent on the regular availability of food, water, shelter, optimal atmospheric conditions and nutrient recycling systems. It is this interaction of biological, physical and chemical elements that guarantees the provision of everything humankind needs to thrive on earth. The natural world is also key to mental and physical well-being – a large body of research from Europe and North America shows that people and in particular children derive significant psychological benefits through exposure to nature and that exercise in a natural environment is more beneficial than in urban environments.19,20 Yet forests, food supplies, water, marine life and many other natural resources are under threat from over-consumption by those in developed countries (Box 1). For everyone to live at the current European average level of consumption, we would need more than double the biocapacity actually available – the equivalent of 2.1 planet Earths – to sustain us. If everyone consumed at the US rate, we would require nearly five. Neither of these is a viable option: consumption in the developed world must be cut back to preserve the ecosystem and enable growth of living standards in the developing world. Of course, the pressures we place on environmental resources through consumption often have what scientists term – without intentional irony – ‘positive feedback’ loops. Consider soya. In 2005, the UK imported 774,623 tonnes of soya into the UK, with around two-thirds coming from Brazil.21 Much of it goes into animal feed to support our relatively new-found habit of having plenty of meat and dairy products in our daily diet. But soya production is one of the key pressures that, along with forest fires, drought, deforestation and climate change, could push the Amazon rainforest over a tipping point where, rather than being a store of carbon dioxide, it begins to release it. With the Amazon estimated to store 120 billion tonnes (± 30 billion) in biomass carbon,24 scientists have said this switch could trigger ‘runaway climate change’.25,26 If the environment is at breaking point, and with time running out, what about the economy?

### Exts – Growth Bad (Environment)

#### Growth guarantees environmental destruction -- no attempts to protect the ecosphere solve without a radical decrease in consumption levels.

Trainer 10- Senior Lecturer in Sociology at the School of Social Work, University of New South Wales. (Ted, "THE LIMITS TO GROWTH PERSPECTIVE: A SUMMARY" 10/20/10,  <http://socialsciences.arts.unsw.edu.au/tsw/Limits.Shrt.html>)//AP

Our way of life is grossly unsustainable. Our levels of production and consumption are far too high. We can only achieve them because we few in rich countries are grabbing most of the resources produced and therefore depriving most of the world's people of a fair share, and because we are depleting stocks faster than they can regenerate. Because we consume so much we are rapidly using up resources and causing huge ecological damage. It would be impossible for all the world's people to rise to our rich world per capita levels of consumption. Most people have no idea how far we are beyond sustainable levels. Although present levels of production, consumption, resource use and environmental impact are unsustainable we are obsessed with economic growth, i.e., with increasing production and consumption, as much as possible and without limit! Most of the major global problems we face, especially environment, Third World poverty, conflict and social breakdown  are primarily due to this limits problem; i.e., to over-consumption.  (This does not mean over-population is not a serious problem.) Following are some of the main facts and arguments that support the limits to growth position. ·      Rich countries, with about one-fifth of the world's people, are consuming about three quarters of the world's resource production. Our per capita consumption is about 15-20 times that of the poorest half of the world's people. ·      World population will probably stabilise around 9 billion, somewhere after 2060. If all those people were to have present Australian per capita resource consumption, then rates of production of resources would have to be 5 to 10 times as great as they are now. If we tried to rise to those levels of resource output we would completely exhaust all probably recoverable resources of coal, oil, natural gas, tar sand oil, shale oil and uranium (assuming the present "burner" reactors) well before 2050. We would also have exhausted potentially recoverable resources for one third of the mineral items by then. ·      Petroleum is especially limited.  World oil supply will probably peak between 2005 and 2010. ·      If all 9 billion people were to use timber at the rich world per capita rate we would need 3.5 times the world's present forest area. ·      If all 9 billion were to have a US diet, which takes about .5 ha of land to produce, we would need 4.5 billion ha of food producing land. But there is only 1.4 billion ha of cropland in use today and this is likely to decrease. ·      Recent "Footprint" analysis estimates that it takes about 8 ha of productive land to provide water, energy settlement area and food for one person living in an Australian world city.  So if 9 billion people were to live as we do in rich world cities we would need about 72 billion ha of productive land. But that is 10 times all the productive land on the planet. (Note that a number of other factors could be added to the footprint calculation, such as the land needed to absorb pollution.)  Even though only one-fifth of the world’s people are resource-affluent, we are using resources at  rate that would take 1.4 planet earths to provide sustainably, (because we are consuming stocks such as forests faster than they can reproduce.) ·      The biological diversity and resilience of the planet is deteriorating alarmingly.   There are serious problems of water, food scarcity, forest and soil loss, decline of fish stocks, loss or coral reefs and tropical forests and mangroves and grasslands.  We are heading into an era of massive species extinction.  The cause of these problems is the fact that humans are taking so much from nature and dumping so many wastes back into nature. ·      It will probably soon be generally accepted that we must totally eliminate all CO2 emissions to the atmosphere by 2050. (Hansen, 2008, Meinshausen et al, 2009.)  There is a strong case that it will not be possible to do this while maintaining consumer-capitalist society.  Firstly it will not be possible to burn coal and sequester the resulting CO2 because only 80-90% of it can be captured for storage, and because the 50% of emissions from non-stationary sources cannot be captured.  Secondly there is a strong case that it will not be possible to substitute alternative energy sources for carbon emitting fuels on the scale required.  (Trainer, 2008.)

#### Consumption isn’t possible -- biocapacity is diminishing too quickly -- the status quo guarantees ecosystem collapse.

Simms 10**-**Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

Four years on from Growth isn’t working, Growth isn’t possible goes one step further and tests that thesis in detail in the context of climate change and energy. It argues that indefinite global economic growth is unsustainable. Just as the laws of thermodynamics constrain the maximum efficiency of a heat engine, economic growth is constrained by the finite nature of our planet’s natural resources (biocapacity). As Daly once commented, he would accept the possibility of infinite growth in the economy on the day that one of his economist colleagues could demonstrate that Earth itself could grow at a commensurate rate.10 The most recent data on human use of biocapacity sends a number of unfortunate signals for believers in the possibility of unrestrained growth. Our global ecological footprint is growing, further overshooting what the biosphere can provide and absorb, and in the process, like two trains heading in opposite directions, we appear to be actually shrinking the available biocapacity on which we depend. Globally we are consuming nature’s services – using resources and creating carbon emissions – 44 per cent faster than nature can regenerate and reabsorb what we consume and the waste we produce. In other words, it takes the Earth almost 18 months to produce the ecological services that humanity uses in one year. The UK’s footprint has grown such that if the whole world wished to consume at the same rate it would require 3.4 planets like Earth.11 Growth forever, as conventionally defined (see Box 1), within fixed, though flexible, limits isn’t possible. Sooner or later we will hit the biosphere’s buffers. This happens for one of two reasons. Either a natural resource becomes over-exploited to the point of exhaustion, or because more waste is dumped into an ecosystem than can be safely absorbed, leading to dysfunction or collapse. Science now seems to be telling us that both are happening, and sooner, rather than later.

#### **Growth destroys global ecosystems -- biodiversity loss and food shortages.**

Trainer 10- Social Work, University of NSW, Kensington 2052 (Ted F.E., “THE SIMPLER WAY:WORKING FOR TRANSITION FROM CONSUMER SOCIETY TO

 A SIMPLER, MORE COOPERATIVE, JUST AND ECOLOGICALLY SUSTAINABLE SOCIETY,” 2010, http://socialsciences.arts.unsw.edu.au/tsw/)//PN

Perhaps the most worrying limits we are encountering are not to do with minerals or energy but concern environmental factors.  The World Wildlife Fund estimates that in recent decades the quality of the planet’s ecosystems had deteriorated 30%.  Water: There are already serious water shortages in about 80 countries. Access to water will probably be the major source of conflict in the world in coming years. About 480 million people are fed by food produced from water pumped from underground. The water tables are falling fast and the petrol to run the pumps might not be available soon. In Australia overuse of water has led to serious problems, e.g., salinity in the Murray.  The greenhouse problem will make these problems worse. By 2050 the volume of water in the Murray-Darling system might be cut by half the present amount. Food and land. Food prices and shortages are already serious problems, causing riots in some countries.  If all people will soon have on earth had an American diet, which takes about .5 ha of cropland alone, we would need 5 billion ha, but there are only 1.4 b ha in use.  That area will decline as ecosystems deteriorate, water supply declines, salinity and erosion continue, pressure to produce increases, land is used to produce bio-fuels, and as global warming has its effects. Timber: If all 9-10 billion people were to use timber at the US per capita rate we would need 4 times the world’s forest area.  Pressures from population growth and corporations is reducing tropical rainforests, where most species live. Fish: Nearly all fisheries are being over-fished and the oceans are being polluted. World fish catch is likely to go down from here on.  The mass of big fish in the oceans, such as shark and tuna, is now only 10% of what it was some decades ago. THE ECOLOGICAL LIMITS. More worrying than the resource limits are the ecological limits, and we have gone far beyond several of these.  We are seriously damaging the life support systems of the planet.  The World Wildlife Fund says that in general the quality of the global ecosystems have deteriorated 30% since about 1970.  The “footprint” measure indicates that we are taking biological resources at a rate that would take 1.5 planets to provide in a sustainable way. Most obvious is the fact that greenhouse gas emissions are at least 2 to 4 times sustainable levels.  We are entering a period of massive loss of species. Most worrying is the deterioration in the capacity of the globe’s ecosystems to renew the conditions that all organisms need, e.g., maintaining the temperature and recycling nutrients. The reason for this massive damage being done to forests, the atmosphere, soils, oceans, grasslands, coral reefs, and biodiversity, is that we are taking so many resources from nature and dumping so many wastes back all the time. One species, humans, is using the biological productivity of 40% of the land.  How much will be left for nature when 9 billion live like Americans?  This shows how implausible the “tech-fix’ faith is.  It will not be possible to eliminate these impacts by continuing to produce as much as we do now but in "more sustainable ways"; the magnitudes are far too great. The sheer volume of production and consumption must be drastically reduced.  Two points make the situation clear.  The Australian per capita “footprint” is already about 10 times as great as will be possible for 9-10 billion people.  Secondly it now seems clear that to cut CO2 emissions to a safe level we would have to totally eliminate fossil fuel use by 2050.  (See Meinshausen et al, 2009.)

#### Maintaining growth is ecological suicide.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

In addition conventional development, which virtually identifies development with growth, isecologically suicidal. Even the richest countries are blindly committed to development without end, i.e., to the continual and limitless increase in production for sale and in GDP. Their supreme goal is in other words economic growth. However, over the past 40 years an overwhelmingly convincing limits to growth analysis has accumulated, making it abundantly clear that rich countries are producing is consuming at rates that are grossly unsustainable. The result is rapid depletion and destruction of resources ecosystems and social bonds.11 Globalisation represents the acceleration and intensification of all of the above, enabled by the elimination of the barriers which previously inhibited the access of corporations and banks to profitable business opportunities. The rules of trade, investment and service provision are being radically altered to remove the capacity of government to preserve and protect the existing jobs, markets, forests, fisheries, water, minerals and public services . It is now becoming illegal for governments to protect their own people from the predatory intent of the corporations. There have already been cases where governments which have tried to block undesirable corporate activity have been charged with "interfering with the freedom of trade" and fined hundreds of millions of dollars. Globalisation is a stunningly brazen and successful grab by the corporate rich for even more of the world’s wealth. The impacts are most devastating on the Third World majority, whose previously protected access to local resources and markets and state assistance is being eliminated as the business is being taken by the corporations. It is no surprise that global inequality and polarisation are rapidly increasing. There is a vast volume of evidence on the devastation globalisation is bringing to the poor majority of the world’s people.12

#### Empirically proven -- recession forestalled environmental damage.

Begley 9­- Honorary Doctorate of Humane Letters for Contributions to the public understanding of science from the University of North Carolina, Author of *Train Your Mind, Change Your Brain* (Sharon, “The Recession’s Green Lining”, Daily Beast, 3/6, http://www.thedailybeast.com/newsweek/2009/03/06/the-recession-s-green-lining.html) //RI

To savvy snowboarders, Baikalsk has long been the beautiful resort where visitors are so few you can feel as though you own the mountain, at least temporarily: for about 5,000 rubles ($175), you can have exclusive use of one of the six long runs for the day and never see another soul as you schuss through forests. Of course, you've had to tolerate a smell that seemed to be a blend of rotten cabbage and New Jersey Turnpike. For in addition to the resort, this town on Siberia's Lake Baikal—the oldest, largest and deepest freshwater lake in the world—is home to the Baikal Pulp and Paper Mill, which has been belching foul-smelling sulfates into the air and chlorides, phenols and other chemicals into the lake since it was built during the Cold War. The pollution killed plants, crabs and fish and threatened the world's only freshwater seal, the earless nerpa. Environmentalists have been trying to shut down the mill since 1964, getting precisely nowhere. But where greens failed, the global recession succeeded all too well. In November, the plant ceased production. "The economic crisis," says Marina Rikhvanova, the head of the environmental group Baikal Wave, worked "like magic."

### Yes – Environment Collapse

#### **Industrialization has pushed the global ecosystem to the brink of collapse -- increases the change of unpredictable, nonlinear events.**

Spratt et al. 10**-**Stephen holds a BA from the University of East Anglia, an MSc from the School of Oriental and African Studies (SOAS), University of London, and a DPhil from the Institute of Development Studies, University of Sussex.(Stephen, “The Great Transition”, NEF, June 2010, <http://neweconomics.org/sites/neweconomics.org/files/Great_Transition_0.pdf)//sjl>

The Millennium Ecosystem Assessment led by the United Nations Environment Programme (UNEP) found that 60 per cent of a group of 24 ecosystem services they examined are being degraded or exploited beyond ecological limits; they also found evidence that these changes increase the chances of non-linear changes in ecosystems. Examples of these include the collapse of fisheries, the spread of disease, loss of water quality, and shifts in regional climate. Key findings are: P More land was converted to cropland in the 30 years after 1950 than in the 150 years between 1700 and 1850. P The world has lost 50 per cent of its wetlands since 1900. P The world has lost 35 per cent of mangrove area since 1980. P 20 per cent of original area of coral reefs has been effectively lost since 1950 and more than 20 per cent are badly degraded or under imminent risk of collapse.23 P There is four times more water in dams now than in 1960 and three to six times as much water is held in reservoirs as in natural rivers. P Agriculture accounts for 70 per cent of worldwide water use. P The current species extinction rate is about 1000 times over background rates over the planet’s history. P Forest area has shrunk by about 40 per cent over the past 300 years. Twenty-five countries have completely lost their forests and 29 countries have less than 10 per cent of their forest cover.

### A2 Growth Good – Environment

#### **Aff args are severely misguided -- no capacity to continue producing in ways that protect the environment.**

Trainer 10 – University of New South Wales, Australia (Ted F.E., “The Radical Implications of a Zero Growth Economy”, Real-World Economics Review, 2010, Issue Number 57, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf)//PN

The quality of life The ultimate paradox is that for decades it has been clear in the literature that increasing the GDP of rich countries does not increase the quality of life. (Eckersley, 1997; Speth, 2001.) In fact we are now probably seeing a falling quality of life in the richest countries. What then is the point of striving for economic growth? 76 real-world economics review, issue no. 57 “But growth will make us so rich we will be able to afford to save the environment.” This statement is characteristic of the conventional economic mind …just create more monetary wealth and we can solve all problems with it. The fatal mistake in the argument is transparent. If we don’t reduce “wealth” production dramatically and quickly the environmental consequences will soon eliminate our capacity to produce any wealth at all. The conclusion? To repeat, the point of the foregoing sketch has been to make clear the magnitude of the problem. The volumes of producing and consuming going on in the world are many times beyond levels that might be sustainable. It is not just a matter of getting to an economy that does not grow any further; the imperative is to reach a steady state economy in which production, consumption, investment, trade and GDP are very small fractions of their present quantities. The following discussion seeks to show that this means that most of the core structures and systems in this society will therefore need to be scrapped.

### A2 Tech Solves Environment

#### Technology is insufficient to solve biodiversity/ecosystem collapse.

**DeSalle 2012** - phD, is a curator in the American Museum of Natural History's Division of Invertebrate Zoology and co-director of its molecular laboratories and a member of CRG's Board of Directors (Rob, “Trivializing Extinction”, GeneWatch, <http://www.councilforresponsiblegenetics.org/GeneWatch/GeneWatchPage.aspx?pageId=416>, SP)

In 1993, the Harvard biologist E.O. Wilson estimated that each year about 30,000 species go extinct. If you do the math, Wilson's estimate in the 1990s meant that three species went extinct every hour. Since this estimate, things have not gotten better but rather worse, and the impact of extinction on biodiversity on our planet can be described as extremely grim. The current rate of extinction is so high that some biologists call it the Sixth Extinction. My colleague Niles Eldredge has written extensively on the subject and points out that the current massive number of extinctions is different than the previous five. The current Sixth Extinction is different in that the source of the extinctions are almost entirely biotic—that is, caused by humans as a result of our changing the landscape, overexploiting wildlife, polluting the environment and challenging pristine environments with introduced species.  The problem begs our attention, and over the past several decades the discipline of conservation biology was birthed and matured. The immediacy of the problem has prompted scientists to call conservation biology a "crisis discipline" like cancer biology or infectious disease research.  Crisis disciplines often work under the "desperate times call for desperate measures" principle. The problem is that most people don't understand just how desperate the times have become, nor what a "desperate measure" really is. Take for example the recent suggestion that cloning (writ large) can be used as a conservation tool. This suggestion fits exactly with our current Western "throwaway" society. The idea garnered a lot of media attention after being suggested a few years ago, and it seemed like every month some critically endangered species was being cloned or a project was being announced that was targeted at an endangered species. Many saw cloning as a drastic measure whose time had come. While I do not want to disparage the intent of scientists who made this suggestion, I think it trivializes what extinction really is and gets us back to the importance of understanding just how intense our desperate times really are. In addition to cloning, a large proportion of conservation biologists would rather be called conservation geneticists. This moniker points to the use of modern genetic technology to assay and screen populations that are threatened and endangered. The use of genetics to understand populations and to characterize variability has also been viewed as a drastic measure by many conservation biologists. It has been challenged by some conservation biologists as unnecessary, even to the point where it is called "conversation genetics" by those who are critical of genetics as a tool in conservation. Nevertheless, these genetic approaches are viewed by the public as drastic measures that, I guess, are soothing with respect to the crisis. It is easy for the public to say, as a result of these technologies being applied to conservation: "Hey, look, we are throwing everything we have at the problem!" But here is where the widespread lack of understanding of the current mass extinction comes back into the story. My colleague Mike Novacek has suggested that much of the problem is on the shoulders of educators who have failed to make clear the role of biodiversity in a healthy planet. The general public's lack of knowledge about what extinction is can be demonstrated by an interesting survey that City College of New York researcher and educator Yael Wyner has conducted. In the survey she asked over 1,500 New York area undergraduate students if the current demise of the panda in China is natural selection. The obvious answer to anyone who has studied evolutionary biology and the process of natural selection is a resounding "No stupid, it's us." However, nearly 50% of the students have answered that it IS natural selection, and a large proportion of those who answer "no" cannot properly explain why. This is yet another way we are trivializing extinction: through the inadequate education of our students and the public in evolutionary biology. The fact that a majority of Republican candidates for President of the United States this year take on a biblical interpretation of diversity on our planet trivializes extinction even more. Another colleague of mine, George Amato, has strongly argued that it all ultimately comes down to funding. When it comes to funding, the study of biodiversity is a weak sister discipline to the more reductionist approaches such as molecular biology and genomics. The piggybacking of biodiversity funding with business (the European Union has initiated a Business@Biodiversity program) or with basic science such as genomics or infectious disease research are examples of funding trends currently in place by government agencies. Two examples of the latter trend are the piggybacking of biodiversity funding with research on emerging zoonotic diseases and the so called "one health" initiatives; and The Barcode of Life program, which piggybacks biodiversity studies with genetic technology. By providing only marginal funding for research that could help to slow the rate of extinction, it is as if governments are trying to put a band-aid on a bullet wound. What can we do? First, we have to resist thinking that technology will solve the problem of large-scale extinction. Technology will help us understand the problem better, but it is not the silver bullet. Second, we need to educate the general public better so that we all understand the immediacy and breadth of extinction. Finally, we need to get governments to focus on the problem. The longer biodiversity is underfunded and piggybacked with other disciplines, the more species appear in the rearview mirror.

### Growth Bad – Imperialism

#### The pursuit of growth generates massive incentives for imperialism -- the end result is widespread repression and violence.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

The living standards we have in rich countries could not be anywhere near as high as they are if the global economy did not function in these ways. We could not have the resources, the products, the comfort or the security from turmoil if we were not getting far more than our fair share of the world’s wealth. It is a zero sum game; if we get the coffee that land cannot grow food for local people. If we get oil to run a ski boat , others get too little to sterilise the contaminated water that kills perhaps 5 million children every year. In most cases market forces are sufficient to keep people in the plantations and sweatshops producing mostly for the benefit of others. People have no choice but to accept work for very low wages. Often the rich countries can get poor countries to accept rules that suit the rich simply by virtue of their superior economic power, for instance by threatening to deny access to rich world markets. However, from time to time people rebel against these conditions and threaten to divert their productive capacity and their local resources to their own benefit, Sometimes they contemplate replacing the coffee trees with corn for themselves. Sometimes they move to nationalise the mines so that most of the earnings can go back to the people, or they attempt to block the export of logs and the destruction of their forests. Sometimes they threaten our access to "our" oilfields. When things like this happen rich countries do not hesitate to support oppressive regimes willing to keep their countries to economic policies that will benefit local elites and rich countries, or to get rid of governments that threaten not to go along with such policies. Usually the rationale is in terms of the need to help a friendly government to put down a rebellion. Until recently this could always be labelled "communist subversion", thereby eliminating any concerns about the legitimacy of the action. However in Colombia it has recently been labelled as a "war on the drug trade", and in general it can now be labelled as a "war on terrorism". On many occasions governments of rich countries have waged ruthless war to install or get rid of regimes, according to whether or not they would facilitate the access of our corporations and the diversion of their resources and productive capacity to purposes that suited us. In other words the rich countries have an elaborate and powerful empire which they protect and extend and control mostly via their economic power and via the supply of military equipment and training to repressive regimes, and via client regimes they support with money and arms, but often via the use of their own military force. Our living standards could not be as high as they are if a great deal of brutal repression was not being used to keep people to the economic policies which enrich us at their expense. As Herman says, there is a "…ruthless imposition of a neo-liberal regime that serves Western transnational corporate interests, along with a willingness to use unlimited force to achieve Western ends. This is genuine imperialism, sometimes using economic coercion alone, sometimes supplementing it with violence."13 Following are some illustrative references taken from the large literature documenting the nature and functioning of the empire. Much of this evidence indicts the US but this is incidental. The core problem is the powerful acquisitive drive in the Western mentality which fuels the insatiable quest for greater personal wealth and higher "living standards", greater corporate wealth, and a rising GDP. Given this, nations will compete for scarce resources and one will emerge as dominant, and run the empire in its own interests. In our era the dominant power just happens to be the US. The fundamental long term task is not to restrain US behaviour but to deal with the underlying motivation that comes from deep within Western culture and that generates imperialism and related problems, such as ecological destruction and resource depletion. In the early 1980s approximately 40,000 people were killed by the ruling class in El Salvador, mostly via "death squads" composed of off duty military officers and police. "The regime which presides over these measures would long since have collapsed were it not for the support of the US. US backed loans in 1981 amounted to $523 million.14 The US ensures "…the maintenance of a violent and undemocratic regime…which without American intervention would clearly fall within the next three months…" 15 Training by US military "…has directly aided the oligarchy to carry out its terror campaign against peasant and worker masses…"16 "The US has unfailingly supplied the tools of terror and repression to the Salvadoran military, as well as training in their use."17 After referring to similar massacres in Guatemala Chomsky says "…this is international terrorism, supported or directly organised in Washington with the assistance of its international network of mercenary states,"18 In Indonesia in 1965 approximately 500,000 "communists" were slaughtered. The US fuelled the climate which led to the bloodbath, supplied names, provided equipment, and above all opted not to take steps to oppose the event it knew was coming.19 "…the US has undeniably launched major terrorist attacks against Cuba…" including attempts to assassinate Castro. CIA trained Cuban exiles bombed a Cuban civilian airliner, killing all 73 aboard…"20 George notes that most of these attacks of terrorism were organised by the Kennedy administration.21 Chomsky says "…the worst single terrorist act of 1985 was a car-bombing in Beirut on March 8 that killed 80 people and wounded 256. According to Woodward the attack "…was arranged by the CIA and its Saudi clients with the assistance of Lebanese intelligence and a British specialist…"22 In 1986 the major single terrorist act was the US bombing of Libya."23 US efforts to crush the Sandinista government in Nicaragua constitutes one of the clearest and most disturbing instances of sustained terrorism. The US. helped to install and then to maintain the Somaza regime for 46 years, (the Somoza family ended up with 30% of the country's farmland.24) As Easterbrook says "…the US launched a war against Nicaragua. That was a terrible war. Tens of thousands of people died. The country was practically destroyed.. The Nicaraguans went to the World Court…the World Court ruled in their favour and ordered the United States to stop its 'unlawful use of force ' (that means international terrorism) and pay substantial reparations….the United States responded by dismissing the court with contempt and escalating the attack. (Chomsky reports that $100m in military aid was immediately granted.25) At that point Nicaragua went to the UN Security council which voted a resolution calling on all states to obey international law. …the United States vetoed it. Nicaragua then went to the General Assembly, which two years in a row passed a similar resolution with only the United States and Israel opposed."26 The Contras were organised by the CIA to attack the Nicaraguan government. "…the documentation of the murder of civilians as standard operating procedure of the Contras was already massive in 1984."27 Former CIA director Stansfield Turner stated to a House subcommittee that US support for the Contras "…would have to be characterised as terrorism…"28 During the 1980s the US assisted South Africa in the wars it initiated against neighbouring states in its effort to defent apartheit. Gervasi and Wong detail the activities that resulted in 1.5 million war related deaths.29 Some people, regions and countries have endured especially horrific consequences of this imperial situation and have abundant reason for violent hatred of the systems and nations that have inflicted intense and chronic suffering and humiliation and indifference on them. This is most obvious in the case of the Palestinians, forced to live in squalid refugee camps for decades subject to periodic harassment and slaughter, while the US gives 40% of its foreign aid to Israel.30 Much of this has been military equipment used to kill Palestinian and other Muslim people. Some 20,000 were killed when Israel invaded Southern Lebanon. Israel has been frequently condemned by the UN for holding territory taken from the Palestinians and building settlements on it. When Iraq invaded Kuwait the US retaliated with military force, killing hundreds of thousands, but the US does not condemn Israel’s invasions and acquisitions. Pilger says "In Palestine the illegal occupation by Israel would have collapsed long ago were it not for US backing…"31 Of course Israel’s behaviour must be seen as a response to a problem of extreme insecurity and the death of many of its own citizens; the point of these illustrations is not to condemn Israel and exonerate the Arabs, it is to insist that the Palestinians like many other groups have abundant reason to be extremely discontented about the way they have been treated by the West and therefore to make events like September 11 somewhat less unintelligible. East Timor provides another of the most disturbing instances of recent Western state behaviour. Rich Western countries did not speak out, let alone condemn, let alone block the Indonesian invasion of East Timor, which they recognised as being in their interests. Instead they sold the Indonesians the weapons used to kill some 200,000 East Timorese people. US presidents Ford and Carter supported the takeover. Budiardjo quotes a US State Department official as saying Indonesia is "…a nation we do a lot of business with...we are more or less condoning the incursion into East Timor."32 Britain "…offered the Indonesian regime continuous and increasing military, financial and diplomatic support."33 "It is well established that the Western powers…had already decided to give Indonesia a free hand."34 In Iran"…the US installed the Shah as an amenable dictator in 1953, trained his secret services in "methods of interrogation" and lauded him as he ran his regime of torture."35 The United States supported Saddam Hussein throughout the 1980s as he carried out his war (with Iran) …and turned a blind eye to his use of chemical weapons…"36 "In Vietnam selected Vietnamese troops were organised into terror squads."37 "…indiscriminate killing of civilians was a central part of a 'counter-insurgency war' in which 20,000 civilians were systematically assassinated under the CIA's Operation Phoenix Program…38" Pilger says this operation was the model for the later terror carried out in Chile and Nicaragua. 39 In the 1960s Kennedy instituted "counterinsurgency, essentially the development of "special forces" trained in the use of terror to prevent peasants from supporting revolutionary groups. For decades the US School of the Americas has provided this training to large numbers of Latin American police and military personnel, including many of the regions worst tyrants and torturers. As Monbiot says, "The US has been training terrorists at a camp in Georgia for years - and it's still at it."40. Training manuals include explicit material on the use of torture and terror. 41 "…torture, 'disappearance', mass killings and political imprisonment became the norm in many of the nations most heavily assisted by the United States…"42 Again, there is an extensive literature documenting these and many other cases.43. Herman and Osullivan present a table showing that in recent decades the overwhelming majority of terrorist actions, measured by death tolls, have been carried out by western states. "State terror has been immense, and the West and it’s clients have been the major agents."44 Any serious student of international relations or US foreign policy will be clearly aware of the general scope and significance of the empire which rich countries operate, and of the human rights violations, the violence and injustice this involves. Rich world "living standards", corporate prosperity, comfort and security could not be sustained at anywhere near current levels without this empire, nor without the oppression, violence and military activity that keep in place conventional investment, trade and development policies.It should therefore be not in the least surprising that several hundred million people more or less hate the rich Western nations. This is the context in which events like those of September 11 must be understood. It is surprising that the huge and chronic injustice, plunder, repression and indifference evident in the global economic system has not generated much greater hostile reaction from the Third World, and more eagerness to hit back with violence. This is partly explained by the fact that it is in the interests of Third World rulers to acquiesce in conventional development strategies.

### Growth Bad – Poverty

#### Growth makes poverty and conflict inevitable -- transitioning away from consumption is a necessary moral action.

Trainer 10- Senior Lecturer in Sociology at the School of Social Work, University of New South Wales. (Ted, "THE LIMITS TO GROWTH PERSPECTIVE: A SUMMARY" 10/20/10,  <http://socialsciences.arts.unsw.edu.au/tsw/Limits.Shrt.html>)//AP

Our way of life is grossly unsustainable. Our levels of production and consumption are far too high. We can only achieve them because we few in rich countries are grabbing most of the resources produced and therefore depriving most of the world's people of a fair share, and because we are depleting stocks faster than they can regenerate. Because we consume so much we are rapidly using up resources and causing huge ecological damage. It would be impossible for all the world's people to rise to our rich world per capita levels of consumption. Most people have no idea how far we are beyond sustainable levels. Although present levels of production, consumption, resource use and environmental impact are unsustainable we are obsessed with economic growth, i.e., with increasing production and consumption, as much as possible and without limit! Most of the major global problems we face, especially environment, Third World poverty, conflict and social breakdown  are primarily due to this limits problem; i.e., to over-consumption.  (This does not mean over-population is not a serious problem.) Following are some of the main facts and arguments that support the limits to growth position. ·      Rich countries, with about one-fifth of the world's people, are consuming about three quarters of the world's resource production. Our per capita consumption is about 15-20 times that of the poorest half of the world's people. ·      World population will probably stabilise around 9 billion, somewhere after 2060. If all those people were to have present Australian per capita resource consumption, then rates of production of resources would have to be 5 to 10 times as great as they are now. If we tried to rise to those levels of resource output we would completely exhaust all probably recoverable resources of coal, oil, natural gas, tar sand oil, shale oil and uranium (assuming the present "burner" reactors) well before 2050. We would also have exhausted potentially recoverable resources for one third of the mineral items by then. ·      Petroleum is especially limited.  World oil supply will probably peak between 2005 and 2010. ·      If all 9 billion people were to use timber at the rich world per capita rate we would need 3.5 times the world's present forest area. ·      If all 9 billion were to have a US diet, which takes about .5 ha of land to produce, we would need 4.5 billion ha of food producing land. But there is only 1.4 billion ha of cropland in use today and this is likely to decrease. ·      Recent "Footprint" analysis estimates that it takes about 8 ha of productive land to provide water, energy settlement area and food for one person living in an Australian world city.  So if 9 billion people were to live as we do in rich world cities we would need about 72 billion ha of productive land. But that is 10 times all the productive land on the planet. (Note that a number of other factors could be added to the footprint calculation, such as the land needed to absorb pollution.)  Even though only one-fifth of the world’s people are resource-affluent, we are using resources at  rate that would take 1.4 planet earths to provide sustainably, (because we are consuming stocks such as forests faster than they can reproduce.) ·      The biological diversity and resilience of the planet is deteriorating alarmingly.   There are serious problems of water, food scarcity, forest and soil loss, decline of fish stocks, loss or coral reefs and tropical forests and mangroves and grasslands.  We are heading into an era of massive species extinction.  The cause of these problems is the fact that humans are taking so much from nature and dumping so many wastes back into nature. ·      It will probably soon be generally accepted that we must totally eliminate all CO2 emissions to the atmosphere by 2050. (Hansen, 2008, Meinshausen et al, 2009.)  There is a strong case that it will not be possible to do this while maintaining consumer-capitalist society.  Firstly it will not be possible to burn coal and sequester the resulting CO2 because only 80-90% of it can be captured for storage, and because the 50% of emissions from non-stationary sources cannot be captured.  Secondly there is a strong case that it will not be possible to substitute alternative energy sources for carbon emitting fuels on the scale required.  (Trainer, 2008.) These are some of the main limits to growth arguments which lead to the conclusion that there is no possibility of all people rising to the living standards we take for granted today in rich countries. We can only live like this because we are taking and using up most of the world’s scarce resources, preventing most of the world's people from having anything like a fair share, and depleting the planet’s ecological capital. Therefore we cannot morally endorse our affluent way of life. We must accept the need to move to far simpler and less resource-expensive ways.

### Exts – Growth Bad (Poverty)

#### Growth forces unequal resource distributions and relegates billions to poverty -- makes huge systemic impacts inevitable.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

This response derives from the dominant view of the way the global economy works. This view assumes a world market economy in which a nation’s fate is rightly determined primarily by its capacity to compete according to the rules of the impartial and efficient global market place. Rich nations are assumed to have achieved far higher living standards because they are further down the path to modernity, a path which all can and will follow, although many Third World countries are severely handicapped by corruption, difficult environments and lack of resources. Rich countries are taken to assist poor countries in their struggle to develop, giving aid and loans and bringing foreign investment. Because development is essentially seen in terms of increasing the volume of production for sale it is understood that the more poor countries facilitate market forces, trade and investment, financial transfers with rich countries the faster development will occur. The problems poor countries experience are seen to be either due to difficult circumstances beyond their control, such as poor soils, overpopulation, or corruption, or their technical and social backwardness. The relationship is therefore regarded as being based on mutual benefit, and more commonly as noble in that rich countries are helping poor countries to develop. This dominant, taken for granted view of the situation is almost entirely invalid. Following are some of the core elements in a more accurate representation of the way the world works. Rich countries are taking most of the world’s resource production. Their per capita resource consumption is about 20 times the average of the poorest half of the world’s people. That they are consuming far more than their fair share is evident in many measures; for example, to provide a North American lifestyle requires approximately 12 ha of productive land, but the per capital average amount of productive land on the planet is only 1.2 ha. The rich squander resources on affluent living standards and frivolous luxuries while billions live in poverty. Many of these resources are drawn from the Third World. Much of the productive capacity of the Third World has been allocated to the production of commodities and manufactured goods for the benefit of the corporations and banks in the rich countries, who own the plantations and factories, and of the people who shop in rich world supermarkets. Very little of the benefit goes to the poor majority in the Third World. Shirt makers in Bangladesh are paid 15 cents an hour.2 In other words, the development that has taken place is almost totally inappropriate to the needs of most Third World people. It has been development in the interests of the rich. The crucial point about "development" is to do with options foregone. It is easy to imagine forms of development that are far more likely to meet the needs of people, their society and their ecosystems but these are prohibited by conventional/capitalist development. Needs would be most effectively met if people were able to apply their available resources of land, forest, fisheries, labour, skill and capital to the production of basic items such as food and shelter. This is precisely what normal conventional/capitalist development prevents, because it ensures that the available resources and the productive capacity are drawn into the most profitable ventures, which means mostly into producing relatively luxurious items for export to richer people. Compare the capacity of a worker to feed his family on the 15c an hour wage earned in a shirt factory, spent on food imported from a rich country, with the approximately four hours per week required by a home gardener to produce all the vegetables a family requires.3 The global economy is therefore an imperial system, one in which there is a net flow of resources and wealth from the poor to the rich and the resources the poor majority of people once had have been taken from them and now produce mostly for the benefit of the rich few. These unjust distributions and the inappropriate development are primarily due to the market mechanism. Economic activity and especially development are not determined by reference to the needs of humans, societies and ecosystems. In the present global economy they are determined mostly by market forces. The inevitable result is that the rich get almost all of the valuable resources (because they can pay most for them) and that almost all of the development that takes place is development of whatever rich people want (because that is most profitable, i.e., will return most on invested capital.) It is in other words a capitalist economic system and such a system ensures that the few who own most of the capital (most is now owned by about 1% of the world’s people) will only invest it in ventures that are most likely to maximise profits, and therefore in ventures which produce for those people with most "effective demand", i.e., rich people. No other forms of development are undertaken, hence much of the productive capacity of Tuvalu or Haiti lies idle because people with capital can make more money investing somewhere else. More importantly, no other forms of development are conceivable. The dominant ideology has ensured that "development" cannot be thought of in any other way than as investing capital in order to increase the capacity to produce for sale in the market.4. Thus the possibility that development might be seen predominantly as improving the quality of life, security, the environment and social cohesion, or that these things might be achievable only if the goal of increasing the GDP is rejected, almost never occurs in the development literature, let alone in development practice. Development can only be thought of in terms of movement along the single dimension to greater levels of business turnover, sales, consumption, exporting , investing and GDP. Thus conventional development is only the kind of development that results when what is developed is left to be determined by whatever will most enrich those few with capital competing in a market situation. The inevitable result is development in the interests of the rich, i.e., those with the capital to invest and those with most purchasing power. The global economy now works well for perhaps less than 10% of the world’s people, i.e., the upper 40% of the people in rich counties, plus the tiny Third World elites. Conventional development is, in other words, a form of plunder. It takes most of the world’s wealth, especially its productive capacity and allocates it to the rich few, and it takes much of this from billions of people who are so seriously deprived that 1200 million people are malnourished and tens of thousands die every day. Again the core point is that there are far better options; it is possible to imagine other forms of development in which the resources and the productive capacity of Third World people are fully devoted to production by the people of the things they most urgently need.

#### Market forces cause unequal resource distributions and thousands of systemic deaths daily.

Trainer 2k- University of New South Wales, Australia (Ted F.E., “Where are we, Where do we want to be, How do we get there?” Democracy and Nature, 2000, Volume 6, Number 2,)//PN

Little space needs to be given here to detailing the case that a major source of the overall global problem is simply the freedom given to market forces. It is appropriate however, to highlight the way that the basic market mechanism inevitably generates deprivation and inappropriate development. Markets allocate scarce resources and products to the rich and to deprive the poor of resources they once had. In a market, considerations of need and justice are irrelevant; goods go to those who can bid most for them. For example while possibly 800 million people in the world are hungry, about one-third of world grain production is fed to animals in rich countries. Thus market forces determine that the Third World ’s resources are mostly taken by Third World elites, Transnational Corporation s and shoppers in rich world supermarkets. Consequently market forces are the major and direct causes of the massive global injustice and deprivation that result s in the avoidable death of some 30,000 –40,000 Third World children every day. It is therefore no exaggeration to say that market forces are responsible for more deprivation, human suffering and ecological destruction than any other single factor. In a market economy there is also a powerful tendency for development to be inappropriate to the needs of most people and of the environment. Investment willow into those ventures likely to yield the highest returns. These are never the ventures that are most likely to produce what most people need. Thus while most Third World regions urgently need more production of cheap and simple food, tools, appliances, housing and clothing, the development that occurs is of export plantations, mines, Hilton hotels, international airports, etc. Such development draws away from poorer people the productive resources that they once had and were able to use to produce for themselves many of the thing s they need. Possibly the most disturbing examples of this process are to do with the application of Third World land to export crops while many people are malnourished. The conventional economist focuses on the ‘efficiency ’ of the market system, claiming that it alone can maximize the value produce d by available inputs. This is quite true, but only if an objectionable definition of ‘efficient’ is employed. To the conventional economist, ‘efficient ’ and ‘productive ’ investments are simply those that make most profit. They therefore regard it as far more ‘efficient ’ to put Third World land into producing g luxury crops for export than into feeding local hungry people. Obviously, market forces are appallingly inefficient as mechanisms for applying g available productive capacity to meeting the most urgent needs of people and their ecosystems.

#### Growth doesn’t solve poverty -- it forces unequal distribution.

Simms 10**-**Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

In January 2006, nef (the new economics foundation) published the report Growth isn’t working.9 It highlighted a flaw at the heart of the economic strategy that relies overwhelmingly upon economic growth to reduce poverty. The distribution of costs and benefits from global economic growth, it demonstrated, are highly unbalanced. The Introduction 5 share of benefits reaching those on the lowest incomes was shrinking. In this system, paradoxically, in order to generate ever smaller benefits for the poorest, it requires those who are already rich and ‘over-consuming’ to consume ever more. The unavoidable result, the report points out, is that, with business as usual in the global economy, long before any general and meaningful reduction in poverty has been won, the very life-support systems we all rely on are likely to have been fundamentally compromised.

#### Economies based on growth can never alleviate poverty -- access to resources is zero-sum.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

There is little evidence on the precise motivation behind the September 11 attacks on the World Trade Centre. It is not possible to say whether they derived primarily from fundamentalist religious concerns or from awareness of global economic injustice and the long history of appalling treatment of Islamic peoples by the West, There is at least some indication that the former elements are central in bin Laden's thinking. However even if those attacks were not responses to the imperial situation the point of the foregoing discussion is that they are the sorts of acts which must be expected given the existence, nature and functioning of the empire. If we are determined to maintain let alone increase the rich world's high material "living standards" and its commitment to ever-increasing levels of economic turnover then we must maintain the empire. We cannot have these living standards unless we get much more than our fair share of the world's resource wealth. Therefore these living standards are incompatible with global economic justice or with enabling all Third World people to use their own resources to meet their own needs. It is a zero growth game; if all that land growing our export crops was diverted to growing basic foods for Third World people we would get far less coffee and pork. If more of their labour was to go into producing things they need we would get fewer cheap shirts and TV sets. There are no where near enough resources for all people to rise to our affluence so if we are going to maintain our levels of material consumption they will have to go on getting a miniscule share and go on seeing most of their resources flow to us.

### Growth Bad – Prolif/Bioweapons

#### Globalization causes WMD prolif and bioterror attacks.

Heyman et al 9 - Director of CSIS Homeland Security Program (David, “The Global Forum on Biorisks”, CSIS, December, http://csis.org/files/publication/100113\_Heyman\_GlobalForumBiorisks\_Web.pdf) //RI

The process of globalization has also spurred the emergence of nongovernmental entities operating on a global basis. The impact of this growth and diversity is to increase the number of channels within and among societies through which action can be taken and influence exerted. More and more these increasingly empowered non-state actors are able to express their singular interests through the tools and channels that globalization provides, allowing them to operate beyond the control of any single government. The result is that actors who would otherwise be relatively weak can have a disproportionate impact both positively and negatively. This is as true with respect to the life sciences as any other arena. It is not just the number of possible participants in the process of proliferation that has changed, however, but also the nature of their interaction. Traditionally, proliferation of weapons of mass destruction was seen largely as the product of a hierarchical top-down process that began with a government’s commitment to seek a given capability. Today, the process is much more free form. In particular, the emergence of networks of non-state entities is one of the key factors that have empowered the wide array of players now active in the security landscape, and it has facilitated the flow and exchange of not only critical materials and equipment, but also of the increasingly important element of scientific and technological knowledge that now resides at the core of the proliferation process. The third dimension of science and technology development is that bioscience and biotech- nology are becoming ever more useful as they penetrate the marketplace in an increasing array of applications, including not only in the health, medicine, and agricultural sectors but also in sectors such as materials and energy. Biologically based processes are increasingly being used not only to manufacture pharmaceuticals, the objective of the first major biotechnology firms, but also an in- creasing number of products in sectors that traditionally have had little to do with the life sciences. Thus the pool of expertise, equipment, and supplies that might facilitate the malicious use of biol- ogy is becoming richer, more extensive, and more familiar to those who might have that objective. Increased Motivation . . . Concern about terrorist use of chemical and biological weapons significantly intensified following the sarin gas attack in the Tokyo subway by the Aum Shinrikyo in March 1995. In the investiga- tions that followed the attack, Aum’s efforts to use biological weapons also came to light. On mul- tiple occasions, the cult tried to disseminate anthrax, attacking Japanese targets as well as against U.S. military facilities in Japan. None of the attacks, however, were successful because the strain they used was a harmless variety. The September 11 attacks demonstrated the willingness of terrorist groups to commit mass destruction. Previously, terrorism scholars had generally argued that terrorists were ultimately in pursuit of political objectives and that they would not be particularly interested in catastrophic attacks that might alienate otherwise sympathetic constituencies whose support the terrorists need to accomplish their goals. One lesson from the September 11 attacks, therefore, seems to be that if such a limiting threshold of destruction exists, it is much higher than had been previously thought—particularly when recalling that the goal of that attack may have been to kill everyone in one or both World Trade Center towers, totaling not 2,700 individuals but up to 100,000. In this context, revelations that al Qaeda has been, and continues to be, interested in biological weapons are particularly troubling. Osama bin Laden and his colleagues have provided an elaborate justification for use of weapons of mass destruction, including biological weapons, and evidence discovered in Afghanistan suggest that they have done more than express interest in these capabilities.

### Growth Bad – Terrorism

#### The pursuit of US growth is the root cause of terrorism -- denying the majority of the world access to resources forces blowback.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

Given the foregoing documentation it hardly needs to be added that in the modern era the US by far the greatest practitioner of terrorism in the world. Again space permits no more than a brief selection from the many summary statements to this effect. "The US has rained death and destruction on more people in more regions of the globe than any other nation in the period since the second world war…it has employed its military forces in other countries over 70 times since 1945, not counting innumerable instances of counter insurgency operations by the CIA."45 "…the US state has long been using terrorist networks, and carrying out acts of terror itself."46 The US "…is the greatest source of terror on earth."47 "The greatest source of terrorism is the US itself and some of the Latin American countries."49 "…the US is itself a leading terrorist state."50 "There are many terrorist states, but the United States is unusual in that it is officially committed to international terrorism, and on a scale that puts its rivals to shame."51 "We are the target of terrorists because in much of the world our government stands for dictatorship, bondage, and human exploitation…We are the target of terrorists because we are hated… And we are hated because our governments have done hateful things….Time after time we have ousted popular leaders who wanted the riches of the land to be shared by the people who worked it…We are hated because our government denies (democracy, freedom, human rights) to people in Third World countries whose resources are coveted by our multinational corporations."52 In 1998 Amnesty International released a report which made it clear that the US was at least as responsible for extreme violation of human rights around the globe as -- including the promotion of torture and terrorism and state violence -- as any government or organisation in the world."53 "From any objective standpoint, Israel and the United States more frequently rely on terrorism, and in forms that inflict far greater quantums of suffering on their victims than do their opponents."54 That this has been clearly understood for decades by critical students of American Foreign Policy is evident in the following quotes from the late 1970s and early 1980s. "..the US and its allies have armed the elites of the Third World to the teeth, and saturated them with counterinsurgency weaponry and training… Hideous torture has become standard practice in US client fascist states … Much of the electronic and other torture gear, is US supplied and great numbers of …interrogators are US trained…"55. "Many of the world's most brutal dictatorships "…are in place precisely because they serve US interests in a joint venture with local torturers at the expense of their majorities."56 After documenting supply of aid to 23 countries guilty of "human rights abuses", Trosan and Yates say, "Without US help they would be hard pressed to contain the fury of their oppressed citizens and US businesses would find it difficult to flourish.," Whenever their people have rebelled and tried to seize power, thereby threatening foreign investments, the US has on every occasion actively supported government repression and terror, or has promoted coups to overthrow popular governments."57 It’s a zero sum game. The crucial role of oppression within the empire is made clear in the following quotes. "To maintain its levels of production and consumption…the US must be assured of getting increasing amounts of the resources of poor countries. …This in turn requires strong support of unpopular and dictatorial regimes which maintain political and police oppression while serving American interests, to the detriment of their own poor majorities. If on the other hand Third World people controlled their own political economies,…they could then use more of their resources themselves…much of the land now used to grow export cash crops…would be used to feed their own hungry people for example."58 "It is in the economic interests of the American corporations who have investments in these countries to maintain this social structure ( whereby poor masses are oppressed and exploited by local elites) It is to keep these elites in power that the United States has …provided them with the necessary military equipment, the finance and training."59 "The impoverished and long abused masses of Latin America…will not stay quietly on the farms or in the slums unless they are terribly afraid…the rich get richer only because they have the guns. The rich include a great many US companies and individuals, which is why the United States has provided the guns…."60 With the explosion of neo-liberalism onto the global scene since the 1970s the need for physical force to maintain the empire has been greatly reduced. Now the new rules of the global economy do the job very effectively. As has been explained, the Structural Adjustment Packages and the laws being introduced to govern trade, investment and provision of services force all countries to facilitate uncontested access for rich world corporations to almost all resource, regions and markets. Gunboats are no longer so necessary, and less often do nations need to be conquered or ruled via a client regime. If a few men in suits soon finally establish the neo-liberal agenda as the only set of rules governing the world economy no nation will be able to resist, and if that exclusive agenda continues to be taught to economics students no one will want to. To summarise, the global economy is grotesquely unjust. A few have high material living standards primarily because of the economic arrangements which deliver most of the world's wealth to them and seriously deprive billions of people. If access to the world's resources was allocated more justly people in rich countries could hot have anywhere near the affluent lifestyles they do have. We could not be so rich if we did not operate an empire and maintaining our empire involves a great deal of grabbing, repression and terror. It should not need to be said that none of this is to justify the actions of September 11. It is about understanding why things like that happen. In my view "terrorist" actions by oppressed people are neither morally nor strategically desirable; they are in general not even likely to contribute to desirable outcomes for those people. Although in certain situations violence may be the only means to eliminate oppression I do not see it as having a central role in the liberation of the Third World from rich world domination. The transition strategy I advocate is necessarily non-violent (i.e., it cannot succeed if it involves violence), and indeed is subject to attack from the Left for its deliberate avoidance of confrontation.61.

### Exts – Growth Bad (Terrorism)

#### Globalization enables terrorism.

Paun 7 - German Fulbright Scholar at the Elliott School of International Affairs, George Washington University (Christopher, “Is Globalization Making War More or Less Likely?”, Elliott School of International Affairs, 5/1, http://www.paun.de/archiv/paun-globalization-and-war.pdf) //RI

Today’s terrorists also heavily depend on globalization. Their ideology may be directed against cultural globalization and a perceived imperialism of the USA. But no matter what their ideology is, their organization and funding depends on globalization and especially on the illicit side of globalization. They employ modern technologies, such as the internet or cellphones, to communicate. They use legal and illegal migration streams to establish a global network between ethnic communities in different parts of the world. And they get their supplies as well as their funding through trade on the global black market. For example Hezbollah is reported to have a major source of income through criminals of the Shi'ite Lebanese diaspora in West Africa, the United States and the tri-border area of Paraguay, Argentina and Brazil. Their activities include cigarette smuggling, cigarette counterfeiting and other product piracy. (Horwitz 2004, Madani 2002) Ordinary criminals and terrorists may have different motives, but very often they work together to achieve their aims – not only through exchange of goods on the black market. Criminals and Terrorists both have an interest to operate out of areas with weak law enforcement, so that they are safe from prosecution. For example Louise Shelley (2005) describes how organized crime creates very effective networks of corruption that are also used by terrorists to avoid prosecution. And corruption is a phenomenon that is far more widespread than only to those failed states that are usually expected to harbor terrorists. The profit margins on the globalized black market are very high. For example the cocaine trade has a profit margin of about 1000%. With such profits, criminals are willing to pay bribes that are so high, that they also make officials in well-established western democracies vulnerable to corruption. This is one way how the dark side of globalization strikes the very core countries of the globalized system.

### Growth Bad – VTL

#### Empirical research and historical experience prove consumerism and growth are worse for human happiness -- growth is net worse for valuable lives.

Spratt et al. 10**-**Stephen holds a BA from the University of East Anglia, an MSc from the School of Oriental and African Studies (SOAS), University of London, and a DPhil from the Institute of Development Studies, University of Sussex.(Stephen, “The Great Transition”, NEF, June 2010, <http://neweconomics.org/sites/neweconomics.org/files/Great_Transition_0.pdf)//sjl>

Yet, even the briefest trawl through the history books suggests that this is profoundly at odds with centuries of philosophical, moral and religious teaching on how to live a good life. Throughout history, across widely different cultures, people have recognised the dangers of an excessive focus on wealth and material possessions. Viewed in this wider historical context, our recent fixation with the pursuit of individual gain as the route to happiness looks a curious anomaly. It is curious chiefly because, just as the sages of history told us and recent empirical research repeatedly confirms, once people’s needs are met, their material circumstances play a relatively small role in determining their well-being. Of course, given that half of the world’s population lives on less than $2.50 a day and one in thirteen children die before the age of five, getting everyone to this point is not a trivial matter. There can be no doubt whatsoever that, in many countries, raising material standards of living is an urgent requirement. But once this point has been reached – as it could be already for many in the developed world if our resources were more equally shared – wealth and possessions simply don’t make much difference. People adapt quickly to changes in material circumstances. When you receive a pay rise, move house, buy a new television set or the latest must-have fashion item, you’ll probably feel happier for a while (although, in fact, probably not as much or for as long as you expected3). All too soon the novelty wears off and with it any lasting benefit. This is not to say that having these things is not desirable, or that acquiring them is not pleasant, but simply that they make very little fundamental difference to the things that really matter to our lasting happiness. This ‘hedonic treadmill’ is responsible for the rising expectations that come with wealth but also for the persistent dissatisfaction of never seeming to have enough. Much more significant to our long-term happiness are factors relating to individual differences in outlook and to the kinds of activities that people engage in: having and raising children, socialising, participating in cultural life, caring for relatives or friends, and having a sense of meaning and purpose. These things have little to do with material possessions (provided, again, that basic needs are met) and everything to do with social and cultural norms and values. In fact, it is well established that having an overly materialistic outlook on life has negative impacts on well-being. Materialistic people suffer worse outcomes across a range of domains: happiness and satisfaction, mental health, social relationships, and more.4

### Growth Bad – Warming

#### Immediately halting growth is key to climate stabilization -- the alternative guarantees runaway warming.

Dr. Li 9, Assistant Professor Department of Economic at University of Utah. (Minqi, " Capitalism, Climate Change, and the Transition to Sustainability:

Alternative Scenarios for the US, China, and the World", p. 2)//AP

To achieve ecological sustainability, human impact on the ecological system in all its dimensions must stabilize at levels within the system’s natural operative capacity. If economic output were to grow indefinitely, then to stabilize human impact, impact per unit of economic output (in all dimensions of resources consumption and environmental pollution) must fall towards zero. As it is impossible for human economic activities to have zero impact on environment, an infinitely growing economy will inevitably violate the requirements of ecological sustainability. According to Intergovernmental Panel on Climate Change (IPCC 2007b), global emissions of carbon dioxide must fall by 50-85 percent from 2000 to 2050 to prevent global warming by 2-2.4 degrees Celsius from pre-industrial times, widely considered to be the threshold required to prevent climate catastrophes that could threaten the survival of humanity and civilization. Since the IPCC reports were published, new studies have pointed out that the IPCC reports seriously underestimated both the potential consequences and the urgency of climate change and far more drastic actions are required to prevent civilization-threatening catastrophic consequences (for example, see Hansen et al. 2008). Martin Parry, co-chair of the IPCC report recently said that a 80 percent reduction of emissions by 2050 would only give a 70 percent chance of avoiding a 2-degree warming (Pearce 2008, the news report did not specify the base year of emission reduction). James Hansen, one of the world’s leading climate scientists, argues that the current atmospheric concentration of carbon dioxide will have to fall from the current level of 385 parts per million (ppm) to no more than 350 ppm to prevent the climate system from moving beyond dangerous “tipping points” that could lead to run away global warming beyond human control. Hansen suggests that there must be an immediate halt of all new coal-fired power plants and all of the world’s conventional coal-fired power plants need to be phased out by 2030 (Hansen 2008). Hansen’s 350 ppm requirement roughly corresponds to IPCC’s 85 percent reduction requirement.[[1]](#footnote-1) The rest of this paper works with the assumption that an 85 percent reduction of carbon dioxide emissions from 2000 to 2050 would be required for climate stabilization. This translates into an average annual rate of reduction of 3.7 percent from 2000 to 2050. Figure 1 compares the actual annual rates of change of carbon dioxide emissions from fossil fuels and the annual rates of change of emission intensity of GDP (the ratio of world carbon dioxide emissions to world GDP) for the period 1960-2006 with the annual rates of reduction required for climate stabilization. From 1960 to 2006, for each and every year, global emissions grew at rates well above what is required for 85 percent reduction. In fact, for nearly every year, emission intensity failed to fall rapidly enough to match the 85 percent reduction requirement. Rates of change of emission intensity essentially tell us where the rates of change of emissions would be if economic growth were to be zero. Thus, given the current pattern of technical change, the global economy needs to stop growing immediately if there were to be any hope to achieve climate stabilization. On the other hand, as economic growth and emission growth have continued since 2000, climate stabilization would in fact require more rapid reduction of emissions than is suggested in Figure 1.

### Exts – Growth Bad (Warming)

#### Continued growth guarantees runaway warming -- solutions are impossible within the current global economy.

Simms 10**-**Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

The following sections explore some of the factors that may modify these scenarios. They seek to indicate the relative likelihoods of the range of different possible outcomes – better or worse – are more probable.

Since our main work was completed, Professor Kevin Anderson of the Tyndall Centre for Climate Change Research at Manchester University also looked at a range of scenarios for growth, greenhouse gas concentration levels and global warming.217 Assuming that growth continued, he looked at the rate of emissions reductions that would be needed to achieve greenhouse gas concentration levels commensurate with a 2, 3 or 4°C temperature rise. Most, of course, agree that temperature rise above two degrees represents unacceptable, dangerous warming. Anderson’s conclusion was stark: ‘Economic growth in the OECD cannot be reconciled with a 2, 3 or even 4°C characterisation of dangerous climate change.’218

#### Economic expansion guarantees runaway warming -- extinction.

Dr. Li 11, Assistant Professor Department of Economic at University of Utah. (Minqi, "The 21st Century: Is There An Alternative (to Socialism)?", p. 23)//AP

Historically, the core states (Western Europe and North America) have been responsible for most of the cumulative greenhouse gas emissions into the atmosphere. However, in recent years,as a result of the rapid economic expansion and growing energy demand of semi-peripheral states, most of the new emissions now come from the so-called “emerging economies”. In fact, China has already overtaken the United States to become the world’s largest greenhouse gas emitter and India has overtaken Japan to become the world’s third largest emitter (see BP, 2010). The global average surface temperature is now about 0.8°C (degree Celsius) higher than the pre-industrial time and rising at a rate of about 0.2°C per decade. At the current rate, by the end of the 21st century, global warming (relative to the pre-industrial time) will be around 3°C. A 3°C warming would destroy the Amazon rainforest, leading to a further warming of 1.5°C.Southern Africa, Australia, Mediterranean Europe, and Western United States would turn into deserts. Sea level could rise by 25 meters and billions of people could become environmental refugees. With a 4°C warming, the melting of the Arctic permafrost could release massive amount of carbon dioxide and methane. Algae, the main carbon sinker in the ocean, would die out. The world is set for runaway global warming that could lead to additional temperature rises by several degrees. If global warming rises to 5°C and above, the world would be hotter than any time over the past fifty million years. Much of the world would cease to be inhabitable and global human population could decline catastrophically. Nothing less than the very survival of the human civilization is at stake (Spratt and Sutton, 2008; Guardian, 2009; Hansen, 2009).

#### The recession proves our arg.

Begley 9­- Honorary Doctorate of Humane Letters for Contributions to the public understanding of science from the University of North Carolina, Author of *Train Your Mind, Change Your Brain* (Sharon, “The Recession’s Green Lining”, Daily Beast, 3/6, http://www.thedailybeast.com/newsweek/2009/03/06/the-recession-s-green-lining.html) //RI

It is no coincidence that some of the dirtiest industrial operations are falling victim to the global recession. Over the past two decades, much of the world's manufacturing moved to where pollution standards are little more than mild suggestions. Since small, corner-cutting, inefficient facilities tend to both flout pollution laws and be most vulnerable to a sudden drop in demand, the global recession has hit such operations especially hard. Thousands of factories in China's Pearl River Delta have shut their doors since late last year, for instance; output of autos, electronics and other goods from factories in Mexico's Ciudad Juárez, Monterrey and Toluca has fallen so sharply that the amount of cargo trucked across the U.S. border has dropped 40 percent. In India, enough small steel-rolling mills around Delhi have closed that levels of sulfur dioxide (which forms acid rain) fell 85 percent in October 2008 compared with a year earlier. The recession is bringing a green dividend in the developed world, too. Reduced economic activity is projected to cut Europe's emissions of carbon dioxide, the chief man-made greenhouse gas, by 100 million tons in 2009, and the United States' by about the same amount.

### A2 Aff/Tech Solves Warming

#### Growth makes successful emissions reductions impossible -- guarantees extinction from warming -- any efforts within the current economic framework will fail.

Dr. Li 11, Assistant Professor Department of Economic at University of Utah. (Minqi, "The 21st Century: Is There An Alternative (to Socialism)?", p. 24-26)//AP

Figure 7 compares three possible future trajectories of carbon dioxide emissions from fossil fuels with the historical emissions in the global economy. The world currently emits about 31 billion metric tons of carbon dioxide from fossil fuels burning. If the world commits to a stabilization of the carbon dioxide emissions at the current level, without any further increase, then the cumulative carbon dioxide emissions over the 21st century will amount to about three trillion metric tons. This is likely to lead to a 4°C warming by the end of the 21st century and a long-term equilibrium warming (over a period of several centuries) of about 8°C. If the world starts to immediately reduce carbon dioxide emissions and maintains an average annual reduction rate of 1 percent for the rest of the 21st century, then the cumulative carbon dioxides emissions over the 21st century will amount to about two trillion metric tons. This is likely to lead to a 3°C warming by the end of the 21st century and a long-term equilibrium warming of about 6°C. Global warming of this level would destroy the Amazon rainforest, lead to a sea level rise by 25-75 meters, turn much of the world into uninhabitable deserts, and cause catastrophic declines of global population. Finally, suppose the world starts to immediately reduce carbon dioxide emissions and maintains an average annual reduction rate of 4 percent for the rest of the 21st century, then the cumulative carbon dioxides emissions over the 21st century will amount to about one trillion metric tons. This is likely to lead to a 2°C warming by the end of the 21st century and a long-term equilibrium warming of about 4°C. Even though this scenario would still carry some significant risk of runaway global warming, under the current circumstances this is the only scenario that promises the preservation of the human civilization as we know it. Is it at all possible for a climate stabilization that is consistent with the preservation of human civilization (the scenario that corresponds to 2-4°C long-term warming) to be achieved within the historical framework of capitalism? The relationship between carbon dioxide emissions, economic output (GDP), and technology is determined by the following formula: Emission Intensity = Carbon Dioxide Emissions / GDP Or, Carbon Dioxide Emissions = Emission Intensity \* GDP Emission intensity is determined by technological factors, such as energy efficiency and the share of fossil fuels in total energy consumption. It follows that: The growth rate of carbon dioxide emissions = The growth rate of emission intensity + The economic growth rate When the same formula is stated in term of reduction rate: The reduction rate of carbon dioxide emissions = The reduction rate of emission intensity – The economic growth rate Thus, other things being equal, any reduction in emission intensity (resulting from rising energy efficiency or substitution of carbon-free energies, such as nuclear and renewable energies, for fossil fuels) leads to reduction of carbon dioxide emissions. But any increase in economic growth rate would offset reductions of carbon dioxide emissions. Both the mainstream and Marxist economists agree that the capitalist economic system is based on private ownership of the means of production and market competition. Moreover, both groups of economists agree that with relentless competition, capitalists are under powerful and constant pressure to increase efficiency and promote innovation, leading to sustained and rapid economic growth over the long run. Until now, this tendency towards unlimited growth is still seen by the mainstream economists as a major virtue of the capitalist system. By contrast, is there an equally powerful tendency for the capitalist system to reduce carbon dioxide emissions from fossil fuels? In fact, what is needed is for the emission intensity to fall much more rapidly than the growth of the economy. Over the decade 1999-2009, the world economy grew at an average annual rate of 3.5 percent, emission intensity fell at an average annual rate of 1.1 percent, and carbon dioxide emissions from fossil fuels burning had increased at an average annual rate of 2.4 percent. In the “Great Recession” of 2009, the world emissions fell by 1.3 percent. If the world were to repeat the exercise of Great Recession every year for the rest of the 21st century, the world would be roughly on track to achieve the scenario of 3-6°C long-term warming.

#### Tech fixes without decreasing consumption risk extinction -- don’t address the root cause of climate change.

Godhaven, ‘9

[Merrick, environmental writer and activist, “Swapping technologies fails to address the root causes of climate change,” July 15, http://www.guardian.co.uk/environment/cif-green/2009/jul/15/technofix-climate-change]

Technology is part of the solution to climate change. But only part. Techno-fixes like some of those in the Guardian's Manchester Report simply cannot deliver the carbon cuts science demands of us without being accompanied by drastic reductions in our consumption. That means radical economic and social transformation. Merely swapping technologies fails to address the root causes of climate change. We need to choose the solutions that are the cheapest, the swiftest, the most effective and least likely to incur dire side effects. On all counts, there's a simple answer – stop burning the stuff in the first place. Consume less. There is a certain level of resources we need to survive, and beyond that there is a level we need in order to have lives that are comfortable and meaningful. It is far below what we presently consume. Americans consume twice as much oil as Europeans. Are they twice as happy? Are Europeans half as free? Economic growth itself is not a measure of human well-being, it only measures things with an assessed monetary value. It values wants at the same level as needs and, while it purports to bring prosperity to the masses, its tendency to concentrate profit in fewer and fewer hands leaves billions without the necessities of a decent life. Techno-fixation masks the incompatibility of solving climate change with unlimited economic growth. Even if energy consumption can be reduced for an activity, ongoing economic growth eats up the improvement and overall energy consumption still rises. We continue destructive consumption in the expectation that new miracle technologies will come and save us. The hope of a future techno-fix feeds into the pass-it-forward, do-nothing-now culture typified by targets for 2050. Tough targets for 2050 are not tough at all, they are a decoy. Where are the techno-fix plans for the peak in global emissions by 2015 that the IPCC says we need? Even within the limited sphere of technology, we have to separate the solutions from the primacy of profit. We need to choose what's the most effective, not the most lucrative. Investors will want the maximum return for their money, and so the benefits of any climate technologies will, in all likelihood, be sold as carbon credits to the polluter industries and nations. It would not be done in tandem with emissions cuts but instead of them, making it not a tool of mitigation but of exacerbation. Climate change is not the only crisis currently facing humanity. Peak oil is likely to become a major issue within the coming decade. Competition for land and water, soil fertility depletion and collapse of fisheries are already posing increasing problems for food supply and survival in many parts of the world. Technological solutions to climate change fail to address most of these issues. Yet even without climate change, this systemic environmental and social crisis threatens society, and requires deeper solutions than new technology alone can provide. Around a fifth of emissions come from deforestation, more than for all transport emissions combined. There is no technological fix for that. We simply need to consume less of the forest, that is to say, less meat, less agrofuel and less wood. Our level of consumption is inequitable. Making it universal is simply impossible. The scientist Jared Diamond calculates that if the whole world were to have our level of consumption, it would be the equivalent of having 72 billion people on earth. With ravenous economic growth still prized as the main objective of society by all political leaders the world over, that 72 billion would be just the beginning. At 3% annual growth, 25 years later it would be the equivalent of 150 billion people. A century later it would be over a trillion. Something's got to give. And indeed, it already is. It's time for us to call it a crisis and respond with the proportionate radical action that is needed. We need profound change – not only government measures and targets but financial systems, the operation of corporations, and people's own expectations of progress and success. Building a new economic democracy based on meeting human needs equitably and sustainably is at least as big a challenge as climate change itself, but if human society is to succeed the two are inseparable. Instead of asking how to continue to grow the economy while attempting to cut carbon, we should be asking why economic growth is seen as more important than survival.

### A2 Efficiency Solves

#### No more efficiency gains -- it’s reached its maximum level of effectiveness -- won’t be able to solve warming.

Simms 10-Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

One hundred years ago, electricity production, at best was only 5–10 per cent efficient. For every unit of fuel used, between 0.05 and 0.1 units of electricity were produced. Today, the global average efficiency for electricity generation is approaching 35 per cent and has remained largely unchanged for the past 40 years.344 This may come as a surprise given the often-held view that technology has continued to improve ess and will continue to do so in the future. Whilst this is largely due to the current mix of the global energy system, rather than individual technologies, it highlights two problems associated with the assumption that we can expect a steady increase in energy efficiency/decline in carbon intensity of the global economy. First, as a general rule of thumb, in a given technology class, efficiency normally starts low, grows for decades to centuries and levels-off at some fraction of its theoretical peak.345 As described earlier in the report, the second law of thermodynamics, is one of the most fundamental physical laws; it states that energy conversion always involves dissipative losses (an increase in entropy). As such, any conversion can never be 100 per cent efficient. The results of our analyses have shown, future stabilisation pathways are dependent on assumptions about energy intensity and, therefore, energy efficiency. These assumptions fail to acknowledge, however, that in many cases of ess, engineers have already expended considerable effort to increase the energy efficiency.346 Second, we are built into and are still building ourselves into a centralised energy system. Such systems favour fossil and nuclear fuels over renewable energy, do not exploit the maximum efficiency possible (i.e., do not favour a system where an exergy cascade, such as combined heat and power, can be utilised), and the energy system is subject to large distribution loses. This is likely to continue into the future if energy policies rely heavily on nuclear and CCS schemes. Particularly given that CCS reduces the efficiency of the energy system, and nuclear fission is a mature technology, already approaching its efficiency limit, and is far from being carbon neutral, as is often claimed. If nuclear fusion ever becomes a viable option, it is likely to have the same thermal efficiencies as nuclear fission.347 In other words, many of the technologies that make up the global energy system are mature technologies and their current efficiencies are at or almost at their practical maximums.

### A2 Renewables Solves

#### Renewable energy is insufficient without a transition away from consumerism -- it can’t fuel current levels of growth.

Trainer 10 – University of New South Wales, Australia (Ted F.E., “The Radical Implications of a Zero Growth Economy”, Real-World Economics Review, 2010, Issue Number 57, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf)//PN

No technical-fix assumption is more common nor more unexamined than that renewable energy sources can be substituted for fossil fuels, thereby enabling abundant energy affluence while eliminating the greenhouse and other problems. A case to the contrary is detailed in Renewable Energy Cannot Sustain A Consumer Society (Trainer 2007, and updated in Trainer, 2008. See also Trainer, 2009 and 2010.) For example, following is 73 real-world economics review, issue no. 57 an indication of the reasons why there is no chance that all people could have vehicles fuelled by biomass. It will probably become possible to derive 7 tonnes of biomass per ha from very large scale production, and 7 GJ of ethanol per tonne of biomass. Thus it would take 2.6 ha to produce the 128 GJ each Australian uses each year as oil plus gas. If 9 billion people were to live as Australians do now, 23 billion ha of forest would be needed on a planet that has only 13 billion ha of land. This does not mean we should forget about renewables. They are the sources we should be moving to full dependence on as soon as possible. But they can’t fuel a consumer society for all. They have to be part of the “simpler way sketched below.

#### **Renewable energy doesn’t solve -- storage not viable.**

Trainer 10- Social Work, University of NSW, Kensington 2052 (Ted F.E., “THE SIMPLER WAY:WORKING FOR TRANSITION FROM CONSUMER SOCIETY TO

 A SIMPLER, MORE COOPERATIVE, JUST AND ECOLOGICALLY SUSTAINABLE SOCIETY,” 2010, http://socialsciences.arts.unsw.edu.au/tsw/)//PN

We must eventually move from fossil fuels to the use of renewable energy, but it is not likely that we can all live in our present energy affluent ways on renewable energy sources. It is most likely that the cost would be far too high and/or the deliverable quantity would be too low.   (The argument is detailed in [the Renewable Energy section.](http://socialsciences.arts.unsw.edu.au/tsw/RE.htm) Following are some of the considerations supporting this conclusion. Because the wind is so variable it can only provide 20-25% of electricity needed. For PV the proportion probably a little higher. Electricity is only about 20-25% of energy used, so wind plus sun can only meet about 7% of energy demand given the present use pattern.  Most renewable sources produce only electricity, except for biomass.  Where are we to get the other 75%. (We might shift as much as possible to use of electricity, e.g.. battery powered cars.) It is not likely that the world can derive more than about 100 EJ/y of ethanol from biomass, and that is only 3% of 2050 demand if 10billion live as Australians do now. It is not possible to store electricity on the required scale to even out the intermittent supply, especially when there can be periods of cloud and calm across a continent lasting for days.  (In these periods biomass might be used.) There are good reasons for thinking that we will never have a large scale hydrogen economy, especially the large losses in storing, pumping and transforming this difficult element. (To run a car on hydrogen produced from wind generated electricity would involve generating four times as much energy as drove the wheels.) The best strategy might be to rely heavily on solar thermal systems, storing energy as heat.  But winter supply is the main problem.  In winter a solar thermal plant in the desert might deliver at distance, net of all losses, (as distinct from produce) about 20 watts per square metre of collector.  Trainer 2010 derives the conclusion that this strategy would be much too capital costly. General conclusion.  The numerical argument in CANW derives the conclusion that   to meet expected future demand in winter we would need so much collection plant that annual energy investment would have to be in the region of 20+ times the present fraction of world investment going into energy. Note that this has not been an argument against use of renewable energy sources. We must live on them solely before long so it is important to make them as effective as possible. The argument has been that their development cannot support a consumer-capitalist society committed to affluent living standards and economic growth.

### A2 Geoengineering Solves

#### Geoengineering fails -- practical side effects mean it can’t solve warming.

Simms 10-Andrew studied at the London School of Economics and has worked for a variety of development and environmental organizations, including Oxfam and the International Institute for Environment and Development and has been a regular contributor to the International Red Cross’s annual World Disasters Report. He is a board member of Greenpeace UK and The Energy and Resources Institute (TERI) Europe. He is also a member of the Green New Deal Group.(Andrew, “Growth Isn’t Possible”, NEF, January 2010, <http://neweconomics.org/sites/neweconomics.org/files/Growth_Isnt_Possible.pdf)//sjl>

In most cases, geoengineering schemes are viewed as a stopgap between now and some point in the future where mitigation technology is cheaper and more widespread. 99 There are, however, large technical and scientific uncertainties. For example Professor David Victor, Director of the Laboratory on International Law and Regulation at Stanford University argues: ‘…real-world geoengineering will be a lot more complex and expensive than currently thought because simple interventions—such as putting reflective particles in the stratosphere—will be combined with many other costlier interventions to offset nasty side effects.’327 The large majority of academics working in the field of geoengineering research have been clear that their research and technical propositions are not intended to distract from the efforts of reducing greenhouse gas emissions as the first priority for controlling climate change. However, many now argue that a technological intervention may be required parallel to current mitigation efforts.328 The Royal Society’s recent report Geoengineering the climate: Science, governance and uncertainty assessed both technical and social aspects of geoengineering options.329 With respect to the technical level, two approaches are identified: Carbon Dioxide Removal (CDR) techniques and Solar Radiation Management (SRM) techniques.

### A2 Nuke Power Solves

#### **Nuclear energy does not solve for shortage of fossil fuels.**

Trainer 10- Social Work, University of NSW, Kensington 2052 (Ted F.E., “THE SIMPLER WAY:WORKING FOR TRANSITION FROM CONSUMER SOCIETY TO

 A SIMPLER, MORE COOPERATIVE, JUST AND ECOLOGICALLY SUSTAINABLE SOCIETY,” 2010, http://socialsciences.arts.unsw.edu.au/tsw/)//PN

There are several reasons why nuclear energy is not likely to solve the energy problem and/or, and should not be adopted even if it could  · There is far too little Uranium at high grade to fuel a large-scale nuclear era for more than about 5 – 10 years (.. unless breeders or fusion are developed; see discussion in Renewable Energy.) · If 9 billion people were to live as Australians do now, getting all their energy from nuclear sources, the world would have about 300 times the early 2000s nuclear capacity.  · A nuclear accident could have catastrophic consequences.  Some of the materials that would be released would remain radioactive for thousands of years.  If the US Price Anderson Act had not limited insurance claims that could be made on nuclear generating corporations there would be no reactors in that country, because no one would insure them. · No matter how well designed, reactors are operated by humans so it is always possible for mistakes to be made, e.g., when operators over-ride automatic safety systems as happened at Chernobyl. · The ‘proliferation’ problem; a nuclear era would increase the chances of access to dangerous elements by criminals and terrorists, or governments seeking to produce nuclear weapons. · Nuclear energy involves considerable release of carbon dioxide, because liquid fuels must be used in mining.  This would increase as ore grades deteriorated. · There is no agreed solution to the problem of waste disposal.  It is not possible to be sure that a site that has been very stable and dry for a long time will remain dry for hundreds of thousands of years into the future, through ice ages and greenhouse effects on hydrology.  The Synroc process involves reprocessing spent fuel and thus problems of contamination and terrorist access to highly radioactive elements.  · Nuclear energy only produces electricity, which is only c.20% of rich world energy use, so it could not cut carbon release sufficiently. (However we are likely to greatly increase the proportion of electricity in the economy in future.) · The moral problem; the people living in a nuclear era would get all the benefit, but many future generations would pay the biological costs without getting any of the benefit after he fuel has been used up. ·  We have no idea what will be the total long term health, genetic and mortality effects of nuclear energy.  These effects will accumulate over hundreds of thousands of years.  Even without accidents small quantities of long lived radioactivity are released.  There is no threshold level below which we can say there will be no biological effect.  We cannot be in a position to say that the benefits outweigh the costs, (even ignoring the fact that the cost will be paid by future people and organisms who get none of the benefits.) ·  Fusion reactors might be got to work (this is debated) but the electricity they would produce would be very costly, and scarcity of the Lithium they require would limit their potential severely. Fusion reactors and the Integral Fast Breeder Reactor. It is uncertain whether fusion reactors will ever become viable but if they do they will not be scaled up sufficiently to make much difference before 2050.  They will be very costly.  Some people believe that the Fourth Generation Integral Fast Breeder Reactor could provide abundant energy.  For a list of questions that would have to be satisfactorily answered before this was clear, see the discussion in the [Renewable Energy](http://socialsciences.arts.unsw.edu.au/tsw/RE.htm) section.  Note that if 10 billion were to derive all the energy needed for present Australian lifestyles from reactors we’d need at least 200 times as many as we have today 9 and probably far more given the additional energy needed to cope with environmental problems, deriving minerals from poorer ores etc.)

### Growth Bad – Overpopulation

#### Growth makes overpopulation a necessity.

Hickerson 9 – Statesman Journal (Jeremy, “Economic growth might be bad as well”, nexis)

I couldn't agree more with the April 29 letter from David Ellis, "Population growth might be bad." I suggest "Economic growth might be bad." In both cases, it depends on where you're at in the spectrum of the physical limits of your environment. For the population issue, experts concluded in the 1970s that we were nearing our planet's population limit (see the 1972 "The Limits to Growth" report to the Club of Rome). The idea that economic growth might not be desirable is just an extension of the population growth discussion. Continual economic growth depends on a growing population to supply more labor and more consumers. Likewise, a continually growing population depends on economic growth to provide jobs. Overpopulation implies economic growth is no longer good, though it remains a necessity for some of the undeveloped world. So if we can't have an economy based on continual growth, what should we do? (See Bill McKibben's "Deep Economy.") We must only manufacture what we need and end marketing ploys aimed at getting people to buy new gadgets; dismantling the economy we have known and beginning a totally different way of life. This can't be accomplished solely by the free market.

#### The planet is already massively overpopulated -- status quo levels make extinction inevitable -- multiple scenarios.

Dr. Farell 6-19-12-PHD in economics(Paul B., “20 rules that can save you from the Doomsday Cycle Commentary: Paradigm shift coming after Great Depression 2”, Wall Street Journal, June 19, 2012, http://www.marketwatch.com/story/20-rules-that-can-save-you-from-the-doomsday-cycle-2012-06-19)//sjl

1. Population control is absolutely essential. Experts warn Planet Earth can support about five billion people. We have 7 billion, heading for 10 billion by 2050. The Myth of Perpetual Growth is capitalist voodoo, outstripping resources, guaranteed suicide. 2. Worst-case-scenario, population grows to 10 billion, disasters. Population explodes to 10 billion. Non-renewable resources are exhausted as if from six Earths. Widespread global wars, starvation, poverty, pandemics, and other disasters could reduce population. 3. Next worst-case scenario: Population not cut back to 5 billion. Still too many people. Revolutions are wake-up calls to abandon capitalism and classical economics. 4. Population control must eventually become worldwide economic policy. Yes, even with the Vatican, conservatives, scientists. Well before 2050 deniers who will be shocked by the reality of accelerating catastrophes threatening the planet and human existence. 5. Mass denial ends in aftermath of global catastrophes . But what’ll shock the world’s collective conscience? The tipping point? Global pandemics? Poverty? Starvation? Terrorist nuclear wars? Our collective brain is still trapped in mass denial, refusing to prepare. We may not know what will awaken the world. But we’re certain a big one is dead ahead. 6. Revolutions end Super Rich capitalism. Rapidly increasing class warfare over inequalities will fuel new regional revolutions as unemployed youth demand reforms.

### Growth Bad – War

#### Growth makes wars inevitable -- resource competition -- only de-development creates peace.

Trainer 10- Senior Lecturer in Sociology at the School of Social Work, University of New South Wales. (Ted, " GLOBAL PEACE AND CONFLICT" 10/20/10,  <http://socialsciences.arts.unsw.edu.au/tsw/PEACE.htm>)//AP

Throughout history conflict and war have on earth by 2070 were to have the present rich world lifestyle and "footprint" we would need about 12 times the area of productive land that exists on the entire planet. Secondly if we were to cut greenhouse gas emissions sufficiently to prevent the carbon content of the atmosphere from increasing any more world per capita energy consumption would have to be cut to about one-eighteenth of its present amount If all 9 billion people likely by 2070 were to have the present rich world per capita resource consumption, resource production would have to be about 8 times the present rate. These multiples underline the magnitude of the overshoot. Sustainability will require enormous reductions in the volume of rich world production and consumption. Yet its supreme goal is economic growth, i.e., to increase the levels of production and consumption and GDP, constantly, rapidly and without any limit. That the absurdity of this is never recognised in conventional economic and political circles defies understanding. If we in rich countries average 3% economic growth to 2070 and by then all the world’s people had risen to the "living standards’ we would have by then, the total world economic mostly been caused by the determination to take the resources of others, or to take more than a fair share of the available resources.  The armed conflicts in the world today are mostly explicable in these terms. It is not possible to understand the problem of peace and war in the world today if we do not connect it to the taken for granted affluence of rich countries. Our high "living standards" in rich countries would not be possible if we were not getting far more than our fair share of the world’s resources. The global economy is massively unjust; it increasingly allocates most of the world’s wealth to the rich few.   This is not possible without a) the deprivation of the Third World, because most of their resources are flowing to th and b) armed conflict, because the situation cannot be maintained without the use of force and violence.e rich countries,  If we insist on remaining as affluent as we are we will have to support repressive regimes and remain heavily armed and ready to use force to preserve our access to more than our fair share of the world’s wealth. CONSIDER OUR SITUATION ·      Resources are scarce and many are being depleted at a rapid rate. ·      Rich countries are heavily and increasingly dependent on imports for their resources and energy. We have only about 15% of the world’s population but we get about 80% of resources produced. ·      Thus the distribution of world resource use is extremely unjust; a few rich countries are getting most of them, through the normal operation of the global market economy. If the already-rich countries insist on becoming even richer the distributions will become even worse. ·      Many of the resources the rich countries consume are taken from poor countries through normal economic processes which seriously deprive the majority of the world's people. For example much of the best Third World land grows crops to export, not to feed hungry local people. ·      World population will probably reach 9+ billion somewhere after 2060, so  there are likely to be 1.5 times as many people demanding resources as there are now. ·      Land available for agriculture might not increase at all, because the rate at which it is being eroded and otherwise lost to production. Water resources, fish and forests are rapidly becoming more scarce. There will be much greater demand for these biological resources in the near future.  However the most serious problems are probably going to be set by the peaking of petroleum supply, possibly between 2005 and 2010. (See http://socialwork.arts.unsw.edu.au/tsw/D08ThePetroleumSit.html) ·      If all the people the world will probably have by 2060 were to have the per capita resource consumption that people in rich countries average now, demand for resources would be about 8 times as great as it is now.  ...and everyone, including even people in the richest countries, is obsessed with increasing living standards, economic output, production and consumption and affluence as fast as possible and without end! The inescapable conclusion:- While all parties remain dedicated to greater and greater affluence regardless of how rich they already are, and there are nowhere near enough resources to enable all to be as affluent as the rich are now, there can be no outcome other than increasing competition and conflict between nations for resources and markets. In other words, global peace is not possible unless there is movement towards a society in which we can all live well on far lower per capita resource use rates than at present.

#### Extinction.

#### Chase-Dunn, ‘96

[Christopher, Distinguished Professor of Sociology and Director of the Institute for Research on World-Systems, “Among Core States: World-System Cycles and Trends,” 23 January 1996, http://wsarch.ucr.edu/archive/papers/c-d&hall/warprop.htm]

Late in the K-wave upswing (i.e. in the 2020s), the world-system schema predicts a window of vulnerability to another round of world war. This is when world wars have occurred in the past. Intensified rivalry and competition for raw materials and markets will coincide with a multipolar distribution of military power among core states. The world-system model does not predict who the next hegemon will be. Rather it designates that there will be structural forces in motion that will favor the construction of a new hierarchy. Historical particularities and the unique features of the era will shape the outcome and select the winners and losers. If it were possible for the current system to survive the holocaust of another war among core states, the outcome of the war would be the main arbiter of hegemonic succession. While the hegemonic sequence has been a messy method of selecting global "leadership" in the past, the settlement of hegemonic rivalry by force in the future will be a disaster that our species may not survive. It is my concern about this possible disaster that motivates this effort to understand how the hegemonic sequence has occurred in the past and the factors affecting hegemonic rivalry in the next decades. What are the cyclical processes and secular trends that may affect the probability of future world wars? The world-system model is presented in Figure 1. This model depicts the variables that I contend will be the main influences on the probability of war among core states. The four variables that raise the probability of core war are the Kondratieff cycle, hegemonic decline, population pressure (and resource scarcity) and global inequality. The four variables that reduce the probability of core war are the destructiveness of weaponry, international economic interdependency, international political integration and disarmament. The probability of war may be high without a war occurring, of course. Joshua Goldstein's (1988) study of war severity (battle deaths per year) in wars among the "great powers" demonstrated the existence of a fifty-year cycle of core wars. Goldstein's study shows how this "war wave" tracks rather closely with the Kondratieff long economic cycle over the past 500 years of world-system history. It is the future of this war cycle that I am trying to predict. Factors that Increase the Likelihood of War Among Core States The proposed model divides variables into those that are alleged to increase the probability of war among core states and those that decrease that probability. There are four of each. Kondratieff waves The first variable that has a positive effect on the probability of war among core powers is the Kondratieff wave -- a forty to sixty year cycle of economic growth and stagnation. Goldstein (1988) provides evidence that the most destructive core wars tend to occur late in a Kondratieff A-phase (upswing). Earlier research by Thompson and Zuk (1982) also supports the conclusion that core wars are more likely to begin near the end of an upswing. Boswell and Sweat's (1991) analysis also supports the Goldstein thesis. But several other world-system theorists have argued that core wars occur primarily during K-wave B-phases. This disagreement over timing is related to a disagreement over causation. According to Goldstein states are war machines that always have a desire to utilize military force, but wars are costly and so statesmen tend to refrain from going to war when state revenues are low. On the other hand, statesmen are more likely to engage in warfare when state revenues are high (because the states can then afford the high costs of war). Boswell and Sweat call this the "resource theory of war."

### Exts – Growth Bad (War)

#### Economic growth makes conflict escalation more likely -- increases resolve of leaders.

Boehmer, ‘10

[Charles, professor of political science at the University of Texas – El Paso and Ph.D. in Political Science from Pennsylvania State University, “Economic Growth and Violent International Conflict: 1875-1999,” Defence and Peace Economics, June, Vol. 21, Issue 3, pg. 249-268]

The theory set forth earlier theorizes that economic growth increases perceptions of state strength, increasing the likelihood of violent interstate conflicts. Economic growth appears to increase the resolve of leaders to stand against challenges and the willingness to escalate disputes. A non-random pattern exists where higher rates of GDP growth over multiple years are positively and significantly related to the most severe international conflicts, whereas this is not true for overall conflict initiations. Moreover, growth of mililary expenditures, as a measure of the war chest proposition, does not offer any explanation for violent interstate conflicts. This is not to say lhat growth of military expenditures never has any effect on the occurrence of war, although such a link is not generally true in the aggregate using a large sample of states. In comparison, higher rates of economic growth are significantly related to violent interstate conflicts in the aggregate. States with growing economies are more apt to reciprocate military challenges by other states and become involved in violent interstate conflicts. The results also show that theories from the Crisis-Scarcity perspective lack explanatory power linking GDP growth rates to war at the state level of analysis. This is not to say thai such theories completely lack explanatory power in general, but more particularly that they cannot directly link economic growth rates to state behavior in violent interstate conflicts. In contrast, theories of diversionary conflict may well hold some explanatory power, although not regarding GDP growth in a general test of states from all regions of the world across time. Perhaps diversionary theory better explains state behaviors short of war, where the costs of externalizing domestic tensions do not become too costly, or in relation to the foreign policies of particular countries. In many circumstances, engaging in a war to divert attention away from domestic conditions would seemingly exacerbate domestic crisis conditions unless the chances of victory were practically assured. Nonetheless, this study does show that domestic conflict is associated with interstate conflict. If diversionary conflict theory has any traction as an economic explanation of violent interstate conflicts, it may require the study of other explan­atory variables besides overall GDP growth rates, such as unemployment or inflation rales. The contribution of this article has been to examine propositions about economic growth in a global study. Most existing studies on this topic focus on only the United States, samples of countries that are more developed on average (due to data availability in the past), or are based on historical information and not economic GDP data. While I have shown that there is no strong evidence linking military expenditures to violent interstate conflicts at the state level of analysis, much of the remaining Growth-as-Catalyst perspective is grounded in propositions that are not directly germane to questions about state conflict behavior, such as those linking state behavior to long-cycles, or those that remain at the systemic level. What answer remains linking economic growth to war once we eliminate military expendi­tures as an explanation? Considering that the concept of foreign policy mood is difficult to identify and measure, and that the bulk of the literature relies solely on the American historical experience, I do not rely on that concept. It is still possible that such moods affect some deci­sion-makers. Instead, similar to Blainey, I find that economic growth, when sustained over a stretch of years, has its strongest effect on states once they find themselves in an international crisis. The results of this study suggest that states such as China, which have a higher level of opportunity to become involved in violent interstate conflicts due to their capabilities, geographic location, history of conflict, and so on, should also have a higher willingness to fight after enjoying multiple years of recent economic growth. One does not have to assume that an aggressive China will emerge from growth. If conflicts do present themselves, then China may be more likely to escalate a war given its recent national performance.

#### Diminishing resources make competition and conflict inevitable -- consumption and production rates are highly unsustainable.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

As is the case with the other major problems confronting the planet, such as environmental destruction, it is essential to understand the problem of global peace and conflict from the "limits to growth" perspective. This analysis focuses on the fact that the present living standards of the rich countries involve levels of production and consumption that are grossly unsustainable. Just to note two of the lines of argument documented in the large literature from the limits perspective, if all 9 billion people likely to live on earth by 2070 were to have the present rich world lifestyle and "footprint" we would need about 12 times the area of productive land that exists on the entire planet. Secondly if we were to cut greenhouse gas emissions sufficiently to prevent the carbon content of the atmosphere from increasing any more world per capita energy consumption would have to be cut to about one-eighteenth of its present amount If all 9 billion people likely by 2070 were to have the present rich world per capita resource consumption, resource production would have to be about 8 times the present rate. These multiples underline the magnitude of the overshoot. Sustainability will require enormous reductions in the volume of rich world production and consumption. Yet its supreme goal is economic growth, i.e., to increase the levels of production and consumption and GDP, constantly, rapidly and without any limit. That the absurdity of this is never recognised in conventional economic and political circles defies understanding. If we in rich countries average 3% economic growth to 2070 and by then all the world’s people had risen to the "living standards’ we would have by then, the total world economic output would be 60 times as great as the present grossly unsustainable level. If this limits to growth analysis is at all valid the implications for the problem of global peace and conflict and security are clear and savage. If we all remain determined to increase our living standards, our level of production and consumption, in a world where resources are already scarce, where only a few have affluent living standards but another 8 billion will be wanting them too, and which we the rich are determined to get richer without any limit, then nothing is more guaranteed than that there will be increasing levels of conflict and violence. To put it another way, if we insist on remaining affluent we will need to remain heavily armed. Increased conflict in at least the following categories can be expected. Firstly the present conflict over resources between the rich elites and the poor majority in the Third World must increase, for example as "development" under globalisation takes more land, water and forests into export markets. Secondly there are conflicts between the Third World and the rich world, the major recent examples being the war between the US and Iraq over control of oil. Iraq invaded Kuwait and the US intervened, accompanied by much high-sounding rhetoric, (having found nothing unacceptable about Israel's invasions of Lebanon or the Indonesian invasion of East Timor.) As has often been noted, had Kuwait been one of the world's leading exporter of broccoli, rather than oil, it is doubtful whether the US would have been so eager to come to its defence. At the time of writing the US is at war in Central Asia over "terrorism". Few would doubt that a "collateral" outcome will be the establishment of regimes that will give the West access to the oil wealth of Central Asia. Following are some references to the connection many have recognised between rich world affluence and conflict. General M.D. Taylor, U.S. Army retired argued "...U.S. military priorities just be shifted towards insuring a steady flow of resources from the Third World." Taylor referred to "...fierce competition among industrial powers for the same raw materials markets sought by the United States" and "... growing hostility displayed by have-not nations towards their affluent counterparts."62 "Struggles are taking place, or are in the offing, between rich and poor nations over their share of the world product; within the industrial world over their share of industrial resources and markets".63 "That more than half of the people on this planet are poorly nourished while a small percentage live in historically unparalleled luxury is a sure recipe for continued and even escalating international conflict."64 The oil embargo placed on the US by OPEC in the early 1970s prompted the US to make it clear that it was prepared to go to war in order to secure supplies. "President Carter last week issued a clear warning that any attempt to gain control of the Persian Gulf would lead to war." It would "…be regarded as an assault on the vital interests of the United States."65 "The US is ready to take military action if Russia threatens vital American interests in the Persian Gulf, the US Secretary of Defence, Mr. Brown, said yesterday."66 Klare's recent book Resource Wars discusses this theme in detail, stressing the coming significance of water as a source of international conflict. "Global demand for many key materials is growing at an unsustainable rate." "…the incidence of conflict over vital materials is sure to grow." "The wars of the future will largely be fought over the possession and control of vital economic goods." "…resource wars will become, in the years ahead, the most distinctive feature of the global security environment."67 Much of the rich world's participation in the conflicts taking place through out the world is driven by the determination to back a faction that will then look favourably on Western interests. In a report entitled, "The rich prize that is Shaba", Breeze begins, "Increasing rivalry over a share-out between France and Belgium of the mineral riches of Shaba Province lies behind the joint Franco-Belgian paratroop airlift to Zaire." "These mineral riches make the province a valuable prize and help explain the West’s extended diplomatic courtship,..."68 Then there is potential conflict between the rich nations who are after all the ones most dependent on securing large quantities of resources. "The resource and energy intensive modes of production employed in nearly all industries necessitate continuing armed coercion and competition to secure raw materials."69 "Struggles are taking place, or are in the offing, between rich and poor nations over their share of he world product, within the industrial world over their share of industrial resources and markets…"70

#### Multiple studies confirm -- domestic growth creates incentives for war -- only dedevelopment creates sustainable peace.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

Finally, at the most abstract level, the struggle for greater wealth and power is central in the literature on the causes of war. "...warfare appears as a normal and periodic form of competition within the capitalist world economy." "...world wars regularly occur during a period of economic expansion."71 "War is an inevitable result of the struggle between economies for expansion."72 Choucri and North say their most important finding is that domestic growth is a strong determinant of national expansion and that this results in competition between nations and war.73. World Wars I and II can be seen as being largely about imperial grabbing. Germany, Italy and Japan sought to expand their territory and resource access. But Britain already held much of the world within its empire…which it had previously fought 72 wars to take! "Finite resources in a world of expanding populations and increasing per capita demands create a situation ripe for international violence."74 Ashley focuses on the significance of the quest for economic growth. "War is mainly explicable in terms of differential growth in a world of scarce and unevenly distributed resources…" "…expansion is a prime source of conflict. So long as the dynamics of differential growth remain unmanaged, it is probable that these long term processes will sooner or later carry major powers into war."75 Security. The point being made can be put in terms of security. One way to seek security is to develop greater capacity to repel attack. In the case of nations this means large expenditure of money, resources and effort on military preparedness. However there is a much better strategy; i.e., to live in ways that do not oblige you to take more than your fair share and therefore that do not give anyone any motive to attack you. Tut this is not possible unless there is global economic justice. If a few insist on levels of affluence, industrialisation and economic growth that are totally impossible for all to achieve, and which could not be possible if they were taking only their fair share of global resources, then they must remain heavily armed and their security will require readiness to use their arms to defend their unjust privileges. In other words if we want affluence we must prepare for war. If we insist on continuing to take most of the oil and other resources while many suffer intense deprivation because they cannot get access to them then we must be prepared to maintain the aircraft carriers and rapid deployment forces, and the despotic regimes, without which we cannot secure the oil fields and plantations. Global peace is not possible without global justice, and that is not possible unless rich countries move to "The Simpler Way."

#### Globalization fuels internal unrest as well -- causes civil wars around the world.

Paun 7 - German Fulbright Scholar at the Elliott School of International Affairs, George Washington University (Christopher, “Is Globalization Making War More or Less Likely?”, Elliott School of International Affairs, 5/1, http://www.paun.de/archiv/paun-globalization-and-war.pdf) //RI

Besides this blending of law enforcement and military engagement, the globalization of the black market economy fuels civil wars almost everywhere. During the cold war the Soviet Union delivered arms to left-wing guerrillas all around the world. Today Russian organized crime is delivering the arms to everyone who pays for it. The payment can be from drug money, but also from the illegal trade in otherwise legal commodities. According to many studies of the causes of civil wars, economic incentives for rebel groups are a very important factor, if not the most important factor. Paul Collier (2003) explains in a World Bank study that the combination of a weak government and easily lootable resources makes a country very prone to civil war. This is why he says that diamonds are a rebel’s best friend. If diamond mines are conquered by rebels, the diamonds represent value in such a compact format that they can be easily smuggled out of the country and sold on a globalized market. Such conflict diamonds or “blood diamonds” are now well known and the Kimberly process limits the problem by providing a certification of the origin of diamonds. Yet there is still a remaining black market for conflict diamonds and many other resources that allow rebels to fund their arms purchases. Scholars such as Duffield (2000) or Keen (2000) challenge the idea that a civil war is a breakdown of a system. They describe civil war economies as functioning systems, where it is hard to distinguish if rebels are actually looting to support their war or if they are fighting a war in order to loot. For example Charles Taylor is reported to have made about 400-450 million US$ from the conflict in Liberal 1992-96. (Duffield 2000: 82) And government officials may very well depend on bribes that criminals pay to get looted resources out of the country and arms inside. In such a system the government bureaucracy depends on the rebels that they are officially fighting. And the globalization of a black market economy is fueling such civil wars.

### A2 Interdependence Solves War

#### Interdependence causes war -- states seek resources to prevent dependency during crisis.

Copeland, ‘96

[Dale, Assistant Professor in the Department of Government and Foreign Affairs at the University of Virginia, "Economic Interdependence and War: A Theory of Trade Expectations," International Security, Vol. 20, no.4, Spring, http://www.mtholyoke.edu/acad/intrel/copeland.htm]

Realists turn the liberal argument on its head, arguing that economic interdependence not only fails to promote peace, but in fact heightens the likelihood of war.(8) States concerned about security will dislike dependence, since it means that crucial imported goods could be cut off during a crisis. This problem is particularly acute for imports like oil and raw materials; while they may be only a small percentage of the total import bill, without them most modern economies would collapse. Consequently, states dependent on others for vital goods have an increased incentive to go to war to assure themselves of continued access of supply. Neorealist Kenneth Waltz puts the argument as follows: actors within a domestic polity have little reason to fear the dependence that goes with specialization. The anarchic structure of international politics, however, makes states worry about their vulnerability, thus compelling them "to control what they depend on or to lessen the extent of their dependency." For Waltz, it is this "simple thought" that explains, among other things, "their imperial thrusts to widen the scope of their control."(9) For John Mearsheimer, nations that "depend on others for critical economic supplies will fear cutoff or blackmail in time of crisis or war." Consequently, "they may try to extend political control to the source of supply, giving rise to conflict with the source or with its other customers." Interdependence, therefore, "will probably lead to greater security competition."(10) This modern realist understanding of economic interdependence and war finds its roots in mercantilist writings dating from the seventeenth century. Mercantilists saw states as locked in a competition for relative power and for the wealth that underpins that power.(11) For mercantilists, imperial expansion - the acquisition of colonies - is driven by the state's need to secure greater control over sources of supply and markets for its goods, and to build relative power in the process. By allowing the metropole and the colonies to specialize in production and trade of complementary products (particularly manufactured goods for raw materials), while ensuring political control over the process, colonies "opened up the possibility of providing a system of supply within a self-contained empire."(12) In this, we see the underpinning for the neorealist view that interdependence leads to war. Mercantilist imperialism represents a reaction to a state's dependence; states reduce their fears of external specialization by increasing internal specialization within a now larger political realm. The imperial state as it expands thus acquires more and more of the characteristics of Waltz's domestic polity, with its hierarchy of specialized functions secure from the unpredictable policies of others. In sum, realists seek to emphasize one main point: political concerns driven by anarchy must be injected into the liberal calculus. Since states must be primarily concerned with security and therefore with control over resources and markets, one must discount the liberal optimism that great trading partners will always continue to be great trading partners simply because both states benefit absolutely. Accordingly, a state vulnerable to another's policies because of dependence will tend to use force to overcome that vulnerability.

These wars are highly likely -- China, Japan, Russia, the US and the Middle East will fight for resources.

Copeland, ‘96

[Dale, Assistant Professor in the Department of Government and Foreign Affairs at the University of Virginia, "Economic Interdependence and War: A Theory of Trade Expectations," International Security, Vol. 20, no.4, Spring, http://www.mtholyoke.edu/acad/intrel/copeland.htm]

A few practical implications of this new theoretical framework for the post-Cold War world can be briefly noted. In anticipating likely areas of conflict, one should look for situations in which powers have both high levels of dependence on outsiders and low expectations for trade. Both China and Japan, as emerging great powers, may soon satisfy these conditions. China's economy is growing at a yearly rate many times that of most other powers, and its domestic sources of raw materials are struggling to keep pace; within the next couple of years, for example, China will have to begin importing oil.(87) As it continues to modernize its armed forces, it will gradually gain the strength necessary to press its territorial claims.(88) Japan has never truly overcome the problem it faced before World War II, namely, its overwhelming dependence on others for the vital minerals and oil needed to sustain its modern industrial economy. While U.S. hegemony in the region has allowed Japan to flourish since 1945, one can imagine the fears that would arise in Tokyo should the United States ever reduce its naval and military presence in the Far East (for budgetary or other reasons). Japan would be compelled to try to defend its raw material supply routes, setting off a spiral of hostility with regional great powers like China, India, Russia, and perhaps the United States itself.(89) Russia still has significant economic ties with the states of the former Soviet Union, and is, in particular, dependent on pipelines through Ukraine and Belarus to sell its natural gas to Western European customers. These states in turn depend on Russia for their energy supplies.(90) Should Ukraine use threats to turn off the pipelines as political leverage, low expectations for future trade might push Russia to reoccupy its former possession in order to mitigate its economic vulnerability. American and European dependence on Middle East's oil exports, combined with plummeting expectations for future trade, were probably the key factors leading the United States and Europe to unite against Iraq in 1990-91. It is not hard to envision future scenarios in the Persian Gulf involving fundamentalist Iran or a resurgent Iraq that could dictate a repeat of the Gulf War, this time with perhaps far more devastating consequences.

## Transition

### 1NC – Mindset Shift

#### Growth is unsustainable and will cause agricultural collapse, nuclear war and environmental destruction culminating in extinction -- only economic collapse causes cultural shift that solves.

#### Djordjevic, ‘98

[Johnny, March, BA Global Economics, Paper in Global Sustainability at UC, Irvine. “Sustainability,” Senior Seminar for Instructor: Peter A. Bowler, <http://www.dbc.uci.edu/~sustain/global/sensem/djordj98.html>]

Max Weber believed in the power of an idea. This political theorist discussed how Calvinism was one idea that perpetuated the rise of capitalism. Few people ever examine the power of an idea, but if one examines and contemplates this theory, a realization comes across: that ideas drive society. The key premise is that some values of our society must be altered in order to avert catastrophic consequences. The way of life in developed countries is "the origin of many of our most serious problems"(Trainer, 1985). Because developed countries have high material living standards and consume massive quantities of all resources, "hundreds of millions of people in desperate need must go without the materials and energy that could improve their conditions while these resources flow into developed countries, often to produce frivolous luxuries"(Trainer, 1985). People's way of life seems to be a glaring example of values leading to high rates of personal consumption of resources and the waste of these same materials. In addition to overconsumption, the services used to supply our society with goods, (examples of these goods would be food, water, energy, and sewage services.) tends to be wasteful and expensive. Production is organized in such a way, (usually highly centralized) that travel becomes an enormous burden. Another consideration is that our population is expected to increase to rise to eleven billion within the next half century. Considering the mineral and energy resources needed in the future, these estimates must also include the consumption of a population almost doubled from its current status and these same figures must include an expected increase in the affluence of developed countries. "If we are willing to endorse an already affluent society in which there is continued growth on this scale,(american resource use increasing 2% each year), then we are assuming that after 2050 something like 40 times as many resources can be provided each year as were provided in the 1970's, and that it is in order for people in a few rich countries to live in this superaffluent way while the other 9.5 billion in the world do not"(Trainer, 1985). The environment is in danger from our pursuit of affluence. Serious worries come from predictions about the atmosphere. The burning of fossil fuels will raise temperatures and result in climatic effects. Rising temperatures could have horrific effects. First of all, food production could seriously be imperiled even by increases of only one degree celcius. If the temperature should increase by five degrees scientists predict the coastal island nations would be submerged and possibly trigger the next ice age. Another environmental concern deals with the soil. Our agricultural practices disregard the value of recycling food waste. Also, the use of pesticides and chemicals in agriculture lead to the poisoning of the soil and topsoil loss through erosion. Yields per acre for grain are falling and "we do not produce food in ways that can be continued for centuries"(Trainer, 1985). Even more disturbing is the deforestation of rainforests. This results in the extinction of many species, concentration of carbon dioxide, the loss of many potential medical breakthroughs, and possibly the disruption of rainfall. Opponents of the deforestation fail to realize that our expensive way of life and greedy economic system are the driving forces. "Nothing can be achieved by fighting to save this forest or that species if in the long term we do not change the economic system which demands ever-increasing production and consumption of non-necessities"(Trainer, 1985). There also lies a problem in the Third World. Developed countries high living standards and quest for an ever-increasing quality of life lead to Third World poverty and the deprivation of the Third World's access to its own resources. As Third World countries get deprived of materials, the developed world consumes and imports over half of their resources. A few developed countries seem to be consuming the globe's resources and this consumption rate is always increasing. "The rich must live more simply that the poor may simply live"(Trainer, 1985). The Third World is exploited in many ways. One way is that the best land in a developing country is used for crops exported to developed countries, while citizens of the Third World starve and suffer. Another way is the poor working conditions of the Third World. A third exploitation can be overlooked but no less disgusting; "The world's greatest health problem could be simply by providing water for the perhaps 2.000 million people who now have to drink form rivers and wells contained by human and animal wastes. Technically it is a simple matter to set up plants for producing iron and plastic pipes. But most of the world's iron and plastic goes into the production of luxurious cars, soft-drink containers, office blocks and similar things in rich countries"(Trainer, 1985). The threat of nuclear war and international conflict rises with countries of all kinds entranced with the logic and idea of materialism. Perhaps the most dangerous and likely chances for a nuclear conflict arise from the competition for dwindling resources by developed countries. Similar events can be seen all across the globe. Major superpowers get themselves involved in domestic matters not concerning them, providing arms and advice to try and obtain the inside track on possible resources. International tension will rise in the competition for resources and so will the "ever-increasing probability of nuclear war"(Trainer, 1985). As developed countries pursue affluence they fail to see the inherent contradiction in this idea; as growth is the quest, the quality of life will decrease. For a healthy community, there exists a list of non-material conditions which must be present, "a sense of purpose, fulfilling work and leisure, supportive social relations, peace of mind, security from theft and violence, and caring and co-operative neighborhoods"(Trainer, 1985). And as developed countries think their citizens are the happiest in the world, "In most affluent societies rates of divorce, drug-taking, crime, mental breakdown, child abuse, alcoholism, vandalism, suicide, stress, depression, and anxiety are increasing"(Trainer, 1985). Despite all the gloomy facts and sad stories, there is a solution, to create a sustainable society. Rather than being greedy and only thinking about the self, each individual must realize the impacts of his/her selfish tendencies, and disregard their former view of the world. One must come into harmony with what is really needed to survive, and drawn a strict distinction between what is necessity and what is luxury. Not every family needs three cars, or five meals a day or four telephones and two refrigerators. Countries do not need to strive for increasing growth, less materials could be imported/exported and international tension could be greatly reduced. The major problems seem not to step from the determination of what a sustainable society is, but on how to get people to change their values. This task is not an easy one. People must be forced to realize the harmful and catastrophic consequences lie in their meaningless wants and greed. The problem of cognitive dissonance is hard to overcome, but it is not impossible. The solution to this dilemma lies in castastrophe. The only event that changes people's minds is social trauma or harm. The analogy is that a person who refuses to wear a seat belt and one day gets thrown through his/her windshield will remember to wear the seat belt after the accident. The logic behind this argument is both simple and feasible. So the question of dissonance is answered in part, but to change a whole society obviously takes a bigger and more traumatic event to occur. An economic collapse or ice age would trigger a new consciousness leading to a sustainable society. The power of an idea should never be underestimated. Hitler's idea of the Aryan race lead to the Holocaust, Marx's idea of socialism lead to Stalin's reign and the deaths of over 50 million people. But ideas change be changed, disregarded and adopted. As developed countries find themselves engaging in a greedy philosophy, once that realization is made, the first step to a better society is taken. Our current path will lead to massive suffering all across the world, with extinction a distinct possibility. Global sustainability must be adopted by every person on the planet, (starting in the developed world), otherwise the world will cease to support life.

### Exts – Yes Mindset Shift

#### Economic collapse causes peaceful shift away from globalization and industrialization.

#### Lewis, ‘00

[Chris, June, PhD American Studies Univ of Colorado Boulder. “The Paradox of Global Development and the Necessary Collapse of Global Industrial Civilization,”]

With the collapse of global industrial civilization, smaller, autonomous, local and regional civilizations, cultures, and polities will emerge. We can reduce the threat of mass death and genocide that will surely accompany this collapse by encouraging the creation and growth of sustainable, self-sufficient regional polities. John Cobb has already made a case for how this may work in the United States and how it is working in Kerala, India. After the collapse of global industrial civilization, First and Third World peoples won't have the material resources, biological capital, and energy and human resources to re-establish global industrial civilization. Forced by economic necessity to become dependent on local resources and ecosystems for their survival, peoples throughout the world will work to conserve and restore their environments. Those societies that destroy their local environments and economies, as modern people so often do, will themselves face collapse and ruin.

#### Collapse is inevitable but triggering it soon is critical to avoid extinction through environmental destruction.

#### Cobb, ‘6

[John, Professor Emeritus at the Claremont School of Theology, “Democratizing the Economic Order,” The American Empire and the Commonwealth of God, p. 95-6]

Financial capitalism may be even more dependent on growth, and if expansion ceases, it may be seriously upset. Problems internal to financial capitalism may combine with problems generated by increasing national debt to make it impossible for the United States to continue to fund its imperial expansion. This is especially true because of the dependence of the United States on other countries and their citizens to fund the debt. The falling value of the dollar may make investments in U.S. securities less attractive to outsiders. The economic future of the United States is precarious. How should we evaluate the prospect of such a collapse? From the point of view of the long-term prospects of the earth as a whole, it is one of the more hopeful scenarios. It is a way to end American imperial expansion. But that, too, needs to be set in a still wider context. It will slow down the suicidal human degradation of the natural environment. One reason for opposing imperial policy is that it runs counter to the global adjustments so clearly required to avoid ecological catastrophe. The collapse of the present order is inevitable. The global economy, especially with the added burden of enormous use of resources for military purposes, is radically unsustainable. It is rapidly exhausting the earth’s resources and polluting the environment. Its effects on the climate and weather patterns are still unpredictable in detail, but all the likely scenarios are frightening. Humanity does not have a century to reorder its affairs. Unless the present course of development is derailed fairly soon, the resulting ecological collapse will be far more terrible than a financial collapse.

#### Economic collapse eliminates the resources necessary to restart globalization -- resource over consumption also makes collapse inevitable.

#### Lewis, ‘00

[Chris, June, PhD American Studies Univ of Colorado Boulder. “The Paradox of Global Development and the Necessary Collapse of Global Industrial Civilization,”]

A more hopeful cause of the collapse of global industrial civilization is a global economic collapse, the same sort of global collapse that occurred during the Great Depression of the 1930s, but on a much larger more devastating scale. In 2000, more than 2 trillion dollars flows through the global financial markets everyday. According to the 1999 UN Human Development Report, “financial crises have become increasingly common with the speed and growth of global capital flows.” The financial crises caused by the 1994 collapse of the Mexican peso, the 1997 Asian financial panic, the 1998 Russian financial panic, and the 1998 bailout of Long Term Capital Management by the United States Federal Reserve and Global Banks are all examples of recent financial crises that greatly stressed the global financial system. During the 1997 Asian financial crisis, U.S. Treasury Secretary Robert Rubin said, “There was a moment when I thought it could have come undone.” He was, of course, referring to the global financial system. A global depression caused by a financial panic could finally undermine the entire structure of globalization. With the loss of trillions of dollars of paper money, First World elites would find that they don’t have the funds to bail out Third World countries and banks, and even bail their own banks and corporations out. With the loss of trillions of dollars, the global economy would come to a grinding halt and there wouldn’t be the collective resources or the will to restart it. Of course, these are the precise sorts of crises that lead to World Wars and military conflict. No matter how it collapses, through economic collapse and the development of local and regional economies and/or through a global military struggle by the First World to maintain its access to Third World resources, global industrial civilization will collapse because its demands for wealth, natural resources, energy, and ecosystem services aren't sustainable.

#### Resource usage is unsustainable -- economic crisis creates a shift to sustainability.

Trainer 06 - Social Work, University of NSW, Kensington 2052 (Ted F.E., “On Eco-Villages and the Transition,” The International Journal of Inclusive Democracy, June 2006, Volume 2, Number 3, http://www.inclusivedemocracy.org/journal/vol2/vol2\_no3\_Trainer\_eco-villages\_PRINTABLE.htm)//PN

In the last issue Mary Garden and Teo Velissaris made interesting contributions on the possible significance of the eco-village movement for the transition from capitalist to sustainable and just society.  Following are some brief thoughts that I would like to contribute on the issue.   If we focus on the global situation we must recognise that consumer-capitalist society is far beyond sustainable levels of per capita resource use, and that we must face up to reductions of something like 90% in present levels.[[1]](http://www.inclusivedemocracy.org/journal/vol2/vol2_no3_Trainer_eco-villages_PRINTABLE.htm#_edn1) The magnitude of this change is much greater than most people understand and it decisively settles a number of issues.  There is no possibility of technical fix strategies cutting resource use sufficiently to solve the problems while anything like a consumer-capitalist society continues.   This means we have to work for transition to some kind of "Simpler Way", in which we live very frugally and self-sufficiently, in economies that are mostly small and have highly localised, self-sufficient and cooperative ways under social control (i.e., not determined by market forces or profit), and without any economic growth.  None of these structural changes is possible without huge and radical value change.   Hence the first way in which the eco-village movement is relevant; whether we like it or not the basic form of settlement in a sustainable society (not the only one; there can still be cities) has to be a highly self-sufficient and cooperative and self-governing eco-village.   The chances of achieving such a transition in the time available are very poor, especially in view of the fact that all mainstream institutions, and publics remain fiercely committed to affluence and growth, even including most people in green, red and other critical movements, and refuse to think about the situation in the terms I am using here..   There is no possibility of achieving significant change in this massively complacent society before the crises impact.  While the supermarkets are stacked and the share prices are high, there will be no interest in change from the pursuit of affluence and growth. The probability of a severe petroleum supply crisis impacting within ten years, possibly accompanied by a collapse of the global financial house of cards, will concentrate minds wonderfully.  We will then get our chance.  People will realise with a jolt that the old system cannot provide for them and they will be forced to turn to local economic development.  Governments will not be able or willing to run things for us so local systems will emerge, run by local people or they will not survive.   There is a good chance however that the window of opportunity will soon be closed by chaotic failure to reorganise in sensible ways, or a knee-jerk response from the ruling class and the public in general to grab more oilfields.

#### Resource crunch forces transition to a sustainable society.

Duncan 93 - chief author of the [Olduvai theory](http://en.wikipedia.org/wiki/Olduvai_theory), a prediction of rapidly declining world energy production. He has an MS in Electrical Engineering (1969) and a PhD in Systems Engineering (1973) from the [University of Washington](http://en.wikipedia.org/wiki/University_of_Washington), (Richard C., “The Life-Expectancy of Industrial Civilization: The Decline to Global Equilibrium”, Institute on Energy and Man, March 1993, Volume 14, Number 4, http://www.springerlink.com.proxy.lib.umich.edu/content/g03835431333tr43/fulltext.pdf)//PN

Pondering the life-expectancy of advanced civilization has been in the air for a long time. Estimates wildly differ. The noted English geneticist J.B.S. Haldane (1927) wrote a clever, half tongue-in-cheek scenario entitled "The Last Judgement" in which the end of civilization on earth came in 39 million AD as a result of intense heat and gravitational forces caused by the moon's close approach to the earth. But as far as I know, it was Bertrand Russell who first warned that industrial civilization was on a collision course with the limits of a finite planet. During the past hundred and fifty years mankind has used up the raw materials of industry.., with ever increasing velocity. In relation to industry, the most striking example is oil .... When oil is no longer available in large quantities, a great deal will have to be changed in our way of life .... Industry as it 348 POPULATION AND ENVIRONMENT exists at present depends essentially on the expenditure of natural capital, and cannot long continue in its present prodigal fashion (Russell, 1949, pp. 71-72). In 1961, astronomer Frank Drake and colleagues tentatively assumed that the average longevity of an advanced technological civilization in the Milky Way Galaxy is one million years. Anthropologists R.A. and P.J. Watson linked the longevity of industrial civilization to the exhaustion of economical reserves of energy and raw materials. The industrial way of life will last only as long as both the fossil fuels that provide the energy and the raw materials in concen- trations that can be refined with such levels of entry are avail- able. When these sources have been exhausted, man will have to revert, perhaps, to an elementary civilized way of life or to farming villages. (Watson & Watson, 1969, p. 129; emphasis added).

#### Italian de-growth initiatives prove success and mindset shifts are possible.

Latouche 7- emeritus professor of economics at the University Paris-Sud. He has written more than twenty books about global development, growth critique and degrowth, including Décoloniser l’imaginaire. (Serge, "Is degrowth compatible with a market economy?" January 2007, <http://www.inclusivedemocracy.org/journal/vol3/vol3_no1_Takis_degrowth.htm>)//AP

Furthermore, the “de-growth” initiative inspires individual and collective attitudes such as those found among people aiming to live according to a “state of justice”, (i.e., an equitable ecological footprint), the eco-villages, the AMAP (Associations for the maintenance of an agriculture based on family farming), etc. One of the most original and promising initiatives is certainly the network of new municipalities in Italy. This is an association which proposes alternative ideas of local blossoming and good participatory practices in the rank and file, like the participatory budgets. The network includes researchers, social movements and a lot of responsible local people coming from small municipalities, but also from more important entities like the province (department) of Milan and the region of Tuscan. During the last meeting of the network, which took place in Bari in October 2005, there were 500 participants. This testifies to a reality, which is attracting all those who want to solve at the local level and in an honest way the problems generated by the absurdity of the growth society. The originality of the network consists in the choice of a strategy based on the territory, i.e., in the fact of conceiving the local as a field of interaction between social actors, physical environment and territorial heritages. As its charter says, it is about  “a political project which enhances the values of the local resources and specificities, by encouraging processes of conscious and responsible autonomy and by refusing external direction (hetero-direction) from the invisible hand of the global market”.[[10]](http://www.inclusivedemocracy.org/journal/vol3/vol3_no1_Latouche_degrowth.htm" \l "_edn10) The prospect offered is that in which the local is not a closed microcosm, but a linkage in a network of horizontal, virtuous and solidarity relations, aiming to experiment with practices of democratic reinforcement capable to resist the liberal domination. In other words, it is about laboratories of critical analysis and self-government for the defence of the common good. This is in accordance with the idea of “urban village” and the route traced by the movements of  “slow cities” (slow city), following those of “slow food”. It is about a world network of average-size cities, which voluntarily limit their demographic growth to 60,000 inhabitants. Beyond that limit it would become impossible to speak about “local” and “slowness”. Several authors coming from different backgrounds thus meet around the idea of “bioregions”, or regions. For Paul Aries: “This re-localization will probably go through the reinforcement of the concept of “regions” perceived as humane, social and economically relative similar units, homogeneous and based on solidarity”. It adds: “We should not only preserve the variety of regional seeds but also that of the diverse ways of being in the world”[[11]](http://www.inclusivedemocracy.org/journal/vol3/vol3_no1_Latouche_degrowth.htm" \l "_edn11).

### A2 Transition Wars

#### No transition wars -- there aren’t any resources.

D. Scott **Bennett and** Timothy **Nordstrom**, February **2000**. Department of Political Science Professors at Pennsylvania State. “Foreign Policy Substitutability and Internal Economic Problems in Enduring Rivalries,” Journal of Conflict Resolution, Ebsco.

In this analysis, we focus on using economic conditions to understand when rivalries are likely to escalate or end. Rivalries are an appropriate set of cases to use when examining substitutability both because leaders in rival states have clearly substitutable choices and because rivalries are a set of cases in which externalization is a particularly plausible policy option.7 In particular, when confronted with domestic problems, leaders in a rivalry have the clear alternatives of escalating the conflict with the rival to divert attention or to work to settle the rivalry as a means of freeing up a substantial amount of resources that can be directed toward solving internal problems. In the case of the diversion option, rivals provide logical, believable actors for leaders to target; the presence of a clear rival may offer unstable elites a particularly inviting target for hostile statements or actual conflict as necessary. The public and relevant elites already consider the rival a threat or else the rivalry would not have continued for an extended period; the presence of disputed issues also provides a casus belli with the rival that is always present. Rivals also may provide a target where the possible costs and risks of externalization are relatively controlled. If the goal is diversion, leaders willwant to divert attention without provoking an actual (and expensive)war. Over the course of many confrontations, rival states may learn to anticipate response patterns, leading to safer disputes or at least to leaders believing that they can control the risks of conflict when they initiate a new confrontation. In sum, rivals provide good targets for domestically challenged political leaders. This leads to our first hypothesis, which is as follows: *Hypothesis 1*: Poor economic conditions lead to diversionary actions against the rival. Conflict settlement is also a distinct route to dealing with internal problems that leaders in rivalries may pursue when faced with internal problems. Military competition between states requires large amounts of resources, and rivals require even more attention. Leaders may choose to negotiate a settlement that ends a rivalry to free up important resources that may be reallocated to the domestic economy. In a “guns versus butter” world of economic trade-offs, when a state can no longer afford to pay the expenses associated with competition in a rivalry, it is quite rational for leaders to reduce costs by ending a rivalry. This gain (a peace dividend) could be achieved at any time by ending a rivalry. However, such a gain is likely to be most important and attractive to leaders when internal conditions are bad and the leader is seeking ways to alleviate active problems. Support for policy change away from continued rivalry is more likely to develop when the economic situation sours and elites and masses are looking for ways to improve a worsening situation. It is at these times that the pressure to cut military investment will be greatest and that state leaders will be forced to recognize the difficulty of continuing to pay for a rivalry. Among other things, this argument also encompasses the view that the cold war ended because the Union of Soviet Socialist Republics could no longer compete economically with the United States. *Hypothesis 2*: Poor economic conditions increase the probability of rivalry termination. Hypotheses 1 and 2 posit opposite behaviors in response to a single cause (internal economic problems). As such, they demand a research design that can account for substitutability between them.

#### **The transition will be quick and easy -- resource depletion forces mindset shifts and elites won’t be able to retaliate.**

Trainer 10- Social Work, University of NSW, Kensington 2052 (Ted F.E., “THE SIMPLER WAY:WORKING FOR TRANSITION FROM CONSUMER SOCIETY TO

 A SIMPLER, MORE COOPERATIVE, JUST AND ECOLOGICALLY SUSTAINABLE SOCIETY,” 2010, http://socialsciences.arts.unsw.edu.au/tsw/)//PN

Change will be rapid when it comes. The problems in consumer-capitalist society are intensifying.  If we do achieve transition it will be via rapidly increasing discontent with the failure of the present society to provide. -       The breakdown of consumer-capitalist society will force us towards small, local economies whether we like it or not, to cooperate and to shift from high consumption. Local farms, jobs etc. will (have to) emerge as petroleum dwindles and transport and travel become too costly.  -       It could be a very peaceful revolution…if we can get enough people to see the sense of moving to The Simpler Way.  The rich and the corporations will have no power if enough of us decide to ignore them and to build our own local systems.  The corporations and banks will probably soon be grappling with the breakdown of their systems and will not have the resources to block the initiatives people will be taking up in thousands of towns and suburbs.  They can’t run armies and secret police forces very well without lots of oil. -       At this point in time our chances of a successful transition would seem to be very poor. Very few people have any idea that it is required, hardly anyone wants to even think about the need for transition to The Simpler Way, because it contradicts the most cherished values in modern Western Culture…and time is running out.  Despite the efforts of a few over 50 years to draw attention to these issues the mainstream still refuses to think about them.   Not only is working together to build elements of the Simpler Way the best effective purpose for people concerned about the planet to put their energy into, it provides the best possibility of maintaining morale and enthusiasm. This strategy enables us here and now to practise and enjoy elements of the post-revolutionary society.

### A2 De-Dev Bad – Feasibility

#### Transitioning away from growth is feasible.

Batterbury 96 – Associate Professor of Political Ecology of Natural Resources at University of Melbourne (Simon PJ, “Ted Trainer and the ‘Conserver Society’”, Environmental Studies, 1996, http://simonbatterbury.net/pubs/trainerbatterbury.pdf)//PN

Ted Trainer - Social Work, University of NSW

Nonetheless, these are important issues that must concern urban geographers and ecologists. In chapters 6-9, Trainer sets out his agenda for the reorganisation of economic activities under conserver principles. Here are a set of ideas, dogmatic at times, which bring us back to the notion of de-centred and endogenous economic development, but coupled with sweeping changes in social organisation. Through more sharing and more care, a simpler but adequate living standard may be maintained by all citizens. Re-directing our affluent tastes to more modest ones would do away with useless luxury items such as “sports cars, speedboats and electric door chimes” (p52), and reduce our tastes for expensive imported goods and holiday travel to escape from our bleak surroundings by creating “leisure-rich” environments on our own doorsteps (~53). Trainer is keen to stress that a conserver lifestyle does not mean shortages, and going without basic necessities. Yet his real project is the development of many small, highly self-sufficient settlements, and ‘village’ *4* *Simon PJ BUWI?W~* suburbs drawing most of the goods and services they need from close by, thus cutting processing and distribution costs. Municipalities would, wherever possible, organise their own hospitals, schooling, health care and other services (~189). Derelict land and a percentage of road networks and parking space should be converted into an “edible landscape” of gardens, woodlots and ponds. Ideally, suburban neighbourhoods, comprising perhaps fifteen to twenty-five dwellings at most, would be clustered around a larger suburban centre with good public transport facilities. In rural areas the small town would provide the community focus. The land between settlements would be devoted to agriculture. and the transport system itself restructured to reflect lower vehicle use and better cycling provision. City centres would remain the preserve of major cultural venues, universities. courts and essential higher- level services. A “completely co-operative and rational economy” (~92) must accompany such sweeping changes to regional geographies, and this is covered briefly in chapter 8. The argument is made that capitalism necessarily produces spatial inequalities. But economic growth is a “deeply entrenched myth” (p77), and reliance on the market sidelines issues of human need and equity (see Trainer, 1995a; Marglin & Guderman, forthcoming). Of course a move to a low or zero-growth economy, freed from the trap of “producing and consuming”, would initially be painful, and we lack real-world examples of how such a transition may realistically be carried out. Ingenious economic buffers would be needed to protect the participants of the alternative. conserver economy against the predations of capitalist market forces. Prices, for example, would probably rise for goods produced locally and in smaller quantities than before. However local production, in smaller factories and enterprises, would accompany “simple but sufficient living standards, far less production, local self-sufficiency, co-operation” and a “restricted cash sector” (p80), offering an alternative set of transactional relationships and incentives to producers and consumers. Trainer, like certain social ecologists. talks of the local control of the means of production as being an essential mechanism to protect neighbourhoods and shaky, new conserver values from the shock of plant closures, the nefarious actions of multinational corporations, and the damaging effects of global restructuring such as the mobility of key employers and capital and the withdrawal of profits to distant sites. De-linking from world markets, as John Friedmann (1992) has suggested, can lead to healthy local alternative economic systems arising through necessity and through choice. Local Economic Trading Systems (LETS), local trading currencies, local banking. and the exchange of basic foodstuffs for labour are all anti-capitalist *Ted Truirwr* *and the ‘conserver* *society’* *5* strategies to which neighbourhoods may turn. The removal of the need to earn a sufficient and rising cash income would, Trainer feels, improve the quality of life for citizens by reducing the hours spent in earning money. Indeed many alternative communities working along conserver lines already perform essential tasks like house-building entirely through co-operative effort, not through cash payments to craftsmen and labourers (~152). In this new society, technological change would emerge from a real need for innovations, as well as from simple curiosity and experimentation - not through the entrepreneurial drive towards seeking higher profits. Of course, it is recognised that larger firms would be needed to produce essential items such as pharmaceuticals, complex machinery and heavy engineering; these would be centrally located although much more closely tied to the forces of demand than to profit motivation. The energy requirements of the conserver society are given separate treatment in chapter 9, where Trainer is sanguine about the potential of wind, wave and solar power (especially in low latitudes and where winter heating is required) to meet current energy needs unless consumption is dramatically reduced. While a shift to renewables is a necessary ‘core’ change, their increased use does not tackle the basic crisis of over-consumption which raises energy demand in the first place. Trainer argues that there simply cannot be enough solar panels, lead batteries and windmills to service our present lifestyle without an overall reduction in energy use.

### A2 De-Dev Bad – Tech/Quality of Life

#### The transition will be fine -- tech and innovation can be preserved, increases the quality of life, and creates stable peace.

Trainer 2- Senior Lecturer of School of Social Work at the University of New South Wales. (Ted, " If you want affluence, prepare for war", Democracy and Nature, Volume 8, issue 2, July, <http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html>)//AP

The logically inescapable implications from the foregoing discussion is that global peace cannot be achieved before there has been a vast and historically unprecedented transition to "The Simpler Way'. The accelerating global predicament cannot be remedied until social, economic, political and cultural systems based on competitive individualism, acquisitiveness, affluence and growth are abandoned and replaced by ways of life based on production to meet needs rather than profits, high levels of individual and local self-sufficiency, cooperation, participation, mutual assistance and sharing, and above all on willing acceptance of materially simple lifestyles within zero-growth national economies.76 This does not mean hardship and deprivation; indeed it can be argued that high levels of simplicity, self sufficiency and cooperation are the necessary conditions for a high quality of life, as well as for global justice and ecological sustainability. Nor does it mean absence of sophisticated technology and research. It does mean a landscape made up mostly of small towns and villages within comfortable distance of small cities by public transport, with relatively little heavy industry, travel and transport, international trade or big firms. Most "government" would have to be carried out through small local participatory assemblies. Because large sectors of the present economy would no longer be necessary, the overall amount of work for monetary income would probably be reduced by two-thirds, enabling a much more relaxed pace of life. There would be no need to reduce the sophistication and quality of research and technology within socially desirable fields. Needless to say the simpler Way would require the abandonment of an economy in which profit and the market are the major determinants of production, consumption or development, and it would require a steady state or zero growth overall economy. Most difficult would be the radical changes in values. That the prospects for such a transition are poor in the extreme is not central to the present discussion. Any rational observer of the global situation must give little chance of the present accelerating race to catastrophic breakdown being halted, given that the fundamental cultural and systemic causes of the predicament are in general not even recognised by publics or governments. However the source of what hope there is lies in the recent emergence of the Global Alternative Society Movement. In the last two decades many small communities and regions have begun to establish settlements and economies more or less based on the principles of The Simpler Way The argument in my What Should We Do? Is that the prospects for transition depend primarily on whether or not this minority can develop rapidly in the next few decades, and that by far the most valuable global contribution one can make is to work within this movement.

# GROWTH GOOD

### **A2 Sustainability – General**

#### Growth is sustainable and self-correcting.

Eichenwald 2002 (Kurt, “The Nation: Clay Feet; Could Capitalists Actually Bring Down Capitalism?,” New York Times 6/30/02, <http://www.nytimes.com/2002/06/30/weekinreview/the-nation-clay-feet-could-capitalists-actually-bring-down-capitalism.html?pagewanted=all&src=pm>//Mkoo)

OVER the last few centuries, capitalism has been the heartiest contender in the global bout for economic supremacy. It emerged from its decades-long death match with communism as the unquestioned victor. Its dust-up with socialism barely lasted a few rounds. It flourished in wartime, and survived wrongheaded assaults from embargoes and tariffs. Even terrorism aimed at capitalism's heart failed to deliver a knock-out punch. But now, a staggering rush of corporate debacles is raising a disturbing question: can capitalism survive the capitalists themselves? The scandals that have oozed out of corporate America with alarming regularity in recent months have repeatedly featured executives betraying the marketplace for their own short-term self-interest. From Enron to Global Crossing, Adelphia to WorldCom, the details differ but the stories boil down to the same theme: the companies lied about their performance, and investors paid the price. To those inured to corporate wrongdoing -- perhaps by the insider trading scandals or the savings and loan debacle of recent decades -- the latest scourge of white-collar malfeasance might seem like more of the same, with greedy executives cutting corners to make a profit. But in truth, the corporate calamities of the new millennium are of a different ilk, one that challenges the credibility of the financial reporting system, and in turn the faith of investors in the capital markets -- the very engine that has driven capitalism to its success. It wasn't supposed to be like this. In the wake of the stock market crash in 1929 and the ensuing revelation of the scams and rigged dealings that had helped inflate the market, America faced what appeared to be capitalism's chief vulnerability. Through Senate hearings in the early 1930's with the special counsel Ferdinand Pecora, investors learned about stock price manipulation, insider trading and profiteering through so-called investment trusts, all of which had made fortunes for the capitalists, while costing investors their savings. How did it happen? Capitalism, at its most basic, dictates that the company producing the best product at the lowest price wins. For capitalists, victory is measured solely in profits. Left to their own devices, it was clear, some capitalists would aggressively pursue profits even if it meant cheating the investors who provided all the capital. So, the game stayed the same, but the government put in referees. Congress passed the Securities Exchange Act of 1933 and 1934, and created a new federal agency, the Securities and Exchange Commission, to enforce those laws. Disclosure became the centerpiece of the system. Companies could pretty much make whatever business decision they wanted, so long as the material information was revealed to investors in periodic filings with the S.E.C. The result was an entire bulwark of protections: the board of directors entrusted with overseeing corporate managements, the independent accounting firms relied upon to insure the numbers were accurate, the government regulators in place to supervise the rules. Despite all the apparent bricks and mortar of these protections, they turned out to be as permanent and impenetrable as smoke. At bottom, the system still relied on faith -- just in someone besides the top executives or company owners. The trust was given to the competence of the directors, the integrity of the accountants and the abilities of regulators. That was evident back in 1933, when a member of Congress asked Col. A. H. Carter, senior partner of Deloitte Haskins & Sells: if accountants would be auditing the companies, who would be auditing the accountants? The reply was noble -- and proved to be hollow. ''Our conscience,'' Colonel Carter said. By the late 90's, as is now becoming clear, that foundation of personal integrity had been eroded by easy profits. Eventually, driven by shareholder expectations and their own stock-option packages, some executives began hiding losses incurred in the faltering economy, manipulating the numbers they reported to investors. The fact that their companies are, in all probability, bad apples among many, many honest corporations makes little difference. By being deceptive on their disclosures for short-term gain, these capitalists have led investors to question the reliability of all the reported data -- and the reliability of the checks and balances instituted to keep the data valid. Not only has the accounting branch of the market been tarred by Arthur Anderson's enabling of Enron's schemes, but, from company to company, insular boards of directors, incompetent internal auditors and underfunded regulatory oversight have allowed the perception of stringent standards and protections to wither. IT is not as if corporate cheating comes out of nowhere. History holds many tales of businessmen who begin breaking the rules in boom times, when rising stock prices literally give them a sense of invincibility. Then, as the markets turn -- and they always turn -- these men try to preserve their power and wealth with more wrongdoing. They keep believing that stock prices will rise and cover their misdeeds. They really seem to think they won't get caught. This time, the crisis in investor confidence is becoming a primary policy issue for the leaders of the industrialized world -- a world largely formed on the American model, and that the United States has insisted virtually everyone else follow, too. ''It's a preoccupation of all the leaders that this is creating at this time a lack of confidence in the markets, and people are not sure about the way that information is transmitted to the public,'' Jean Chrétien, the prime minister of Canada, said on the first day of a summit of the Group of Eight leading industrialized nations. Workers are going to take it on the chin. WorldCom started laying off 17,000 people on Friday. Many more people, at many other companies, are worried. And investors -- shaken by the past and uncertain where the next disaster might emerge -- are moving their money about, dumping many stocks and moving cash into safer havens, like Treasury bonds. Could the short-term, self-rewarding mentality of a handful of capitalists truly destroy capitalism? Bring on hundreds of bankruptcies, force banks under, end the giving of loans? Destroy America as we know it? Not very likely. The system has a built-in corrective factor, which kicks in when abuses go too far. Harm to investor confidence harms the market, which harms the ability of corporations to raise the capital they need to grow and be profitable. Eventually, the capitalists' desire get investor confidence back wins the day. Already, after years of sniffing at naysayers who wagged fingers about fundamentals, investors seem to be discovering a new affection for stodgy old stock analysis. ''Nobody was paying attention to seemingly boring topics like accounting and corporate governance,'' said Troy Paredes, an associate professor at Washington University School of Law. ''People are realizing that those are the things that matter.'' At the same time, a range of proposals has emerged from Wall Street and Washington to overhaul corporate America. The S.E.C. is making moves to get tough on accounting standards. But still, there are some capitalists who are keeping their eyes on their short-term prize, betting that, despite all the evidence of corporate lies, investors need no substantial changes to justify keeping their confidence in the market. Many Wall Street firms are lobbying to cut back the power and authority of state securities regulators, the very individuals who historically have been particularly hard-nosed in their dedication to proper disclosure and investor protection. Meanwhile, accounting firms are doing their all to beat back efforts to strengthen their regulation. On Capitol Hill, there were rumors that tough accounting legislation was dead -- until WorldCom exploded. ULTIMATELY, capitalism will almost certainly survive this onslaught from the capitalists -- if only because survival is the most profitable outcome for all involved. Investors may well emerge wiser, less willing to jump into the latest fad and more concerned about the fundamentals. In the end, though, the experts say, that will only last as long as the memory of this period, which will wash away the next time unbridled exuberance creates a booming market. ''People eventually will emerge from this more discriminating about how they invest,'' said David Hawkins, a professor at Harvard Business School and Merrill Lynch's accounting consultant. ''But this isn't the last time we'll go through this. People will forget, and it will all happen again.''

#### Growth is sustainable and resilient – capitalism finds new ways to survive and grow

Flood 2005 (Andrew Flood, “Civilisation, Primitivism, and anarchism, libcom.org, <http://anarchistnews.org/?q=node/200>//Mkoo)

Primitivists are not the only ones to use the rhetoric of catastrophe to panic people into accepting their political proposals. Reformists such as George Monbiot, use similar 'we are all doomed' arguments to try and stampede people into support for reformism and world government. In the last decades acceptance that the world is somehow doomed has become part of mainstream culture, first as the cold war and then as looming environmental disaster. George Bush and Tony Blair created a panic over Weapons of Mass Destruction to give cover to their invasion of Iraq. The need to examine and dismantle such panics is clear. The most convincing form the 'end of civilisation' panic takes is the idea of a looming resource crisis that will make life as we know it impossible. And the best resource to focus on for those who wish to make this argument is oil. Everything we produce, including food, is dependant on massive energy inputs and 40% of the worlds energy use is generated from oil. The primitivist version of this argument goes something like this, 'everyone knows that in X number of year the oil will run out, this will mean civilization will grind to a halt, and this will mean lots of people will die. So we might as well embrace the inevitable'. The oil running out argument is the primitivist equivalent of the orthodox Marxist 'final economic crisis that results in the overthrow of capitalism'. And, just like the orthodox Marxists, primitivists always argue this final crisis is always just around the corner. When looked at in any detail this argument evaporates and it becomes clear that neither capitalism nor civilization face a final crisis because of the oil running out. This is not because oil supplies are inexhaustible, indeed we may be reaching the peak of oil production today in 1994. But far from being the end of capitalism or civilization this is an opportunity for profit and restructuring. Capitalism, however reluctantly, is gearing up to make profits out of developing alternative energy sources on the one hand and on the other of accessing plentiful but more destructive to extract fossil fuel supplies. The second path of course makes global warming and other forms of pollution a lot worse but that's not likely to stop the global capitalist class. It is not just primitivists who have become mesmerized by the oil crisis so I intend to deal with this in a separate essay. But in summary, while oil will become more expensive over the decades the process to develop substitutes for it is already underway. Denmark for instance intends to produce 50% of its energy needs from wind farms by 2030 and Danish companies are already making vast amounts of money because they are the leading producers of wind turbines. The switch over from oil is likely to provide an opportunity to make profits for capitalism rather then representing some form of final crisis. There may well be an energy crisis as oil starts to rise in price and alternative technologies are not yet capable of filling the 40% of energy generation filled by oil. This will cause oil and therefore energy prices to soar but this will be a crisis for the poor of the world and not for the wealthy some of whom will even profit from it. A severe energy crisis could trigger a global economic downturn but again it is the world's workers that suffer the most in such times. There is a good argument that the world's elite are already preparing for such a situation, many of the recent US wars make sense in terms of securing future oil supplies for US corporations. Capitalism is quite capable of surviving very destructive crisis. World War 2 saw many of the major cities of Europe destroyed and most of the industry of central Europe flattened. (By bombers, by war, by retreating Germans and then torn up and shipped east by advancing Russians). Millions of European workers died as a result both in the war years and in the years that followed. But capitalism not only survived, it flourished as starvation allowed wages to be driven down and profits soared.

### **A2 Sustainability – Resource Depletion**

#### Growth is sustainable -- no resource scarcity.

Sagoff 97 (Mark Sagoff, Director of Institute for Philosophy and Public Policy, A.B from Harvard, fellow of the American Association for the Advancement of Science and of the Hastings Center. “Do we consume too much,” The Atlantic online,

<http://www.theatlantic.com/past/docs/issues/97jun/consume.htm//Mkoo>

Misconception No. 1: We Are Running Out of Raw Materials IN the 1970s Paul Ehrlich, a biologist at Stanford University, predicted that global shortages would soon send prices for food, fresh water, energy, metals, paper, and other materials sharply higher. "It seems certain," Paul and Anne Ehrlich wrote in [The End of Affluence](http://www.amazon.com/exec/obidos/ISBN=1568496028/theatlanticmonthA/) (1974), "that energy shortages will be with us for the rest of the century, and that before 1985 mankind will enter a genuine age of scarcity in which many things besides energy will be in short supply." Crucial materials would near depletion during the 1980s, Ehrlich predicted, pushing prices out of reach. "Starvation among people will be accompanied by starvation of industries for the materials they require." Things have not turned out as Ehrlich expected. In the early 1990s real prices for food overall fell. Raw materials -- including energy resources -- are generally more abundant and less expensive today than they were twenty years ago. When Ehrlich wrote, economically recoverable world reserves of petroleum stood at 640 billion barrels. Since that time reserves have increased by more than 50 percent, reaching more than 1,000 billion barrels in 1989. They have held steady in spite of rising consumption. The pre-tax real price of gasoline was lower during this decade than at any other time since 1947. The World Energy Council announced in 1992 that "fears of imminent [resource] exhaustion that were widely held 20 years ago are now considered to have been unfounded." [The World Resources Institute](http://www.wri.org/), in a 1994-1995 report, referred to "the frequently expressed concern that high levels of consumption will lead to resource depletion and to physical shortages that might limit growth or development opportunity." Examining the evidence, however, the institute said that "the world is not yet running out of most nonrenewable resources and is not likely to, at least in the next few decades." A 1988 report from the Office of Technology Assessment concluded, "The nation's future has probably never been less constrained by the cost of natural resources." It is reasonable to expect that as raw materials become less expensive, they will be more rapidly depleted. This expectation is also mistaken. From 1980 to 1990, for example, while the prices of resource-based commodities declined (the price of rubber by 40 percent, cement by 40 percent, and coal by almost 50 percent), reserves of most raw materials increased. Economists offer three explanations. First, with regard to subsoil resources, the world becomes ever more adept at discovering new reserves and exploiting old ones. Exploring for oil, for example, used to be a hit-or-miss proposition, resulting in a lot of dry holes. Today oil companies can use seismic waves to help them create precise computer images of the earth. New methods of extraction -- for example, using bacteria to leach metals from low-grade ores -- greatly increase resource recovery. Reserves of resources "are actually functions of technology," one analyst has written. "The more advanced the technology, the more reserves become known and recoverable." Second, plentiful resources can be used in place of those that become scarce. Analysts speak of an Age of Substitutability and point, for example, to nanotubes, tiny cylinders of carbon whose molecular structure forms fibers a hundred times as strong as steel, at one sixth the weight. As technologies that use more-abundant resources substitute for those needing less-abundant ones -- for example, ceramics in place of tungsten, fiber optics in place of copper wire, aluminum cans in place of tin ones -- the demand for and the price of the less-abundant resources decline. One can easily find earlier instances of substitution. During the early nineteenth century whale oil was the preferred fuel for household illumination. A dwindling supply prompted innovations in the lighting industry, including the invention of gas and kerosene lamps and Edison's carbon-filament electric bulb. Whale oil has substitutes, such as electricity and petroleum-based lubricants. Whales are irreplaceable. Third, the more we learn about materials, the more efficiently we use them. The progress from candles to carbon-filament to tungsten incandescent lamps, for example, decreased the energy required for and the cost of a unit of household lighting by many times. Compact fluorescent lights are four times as efficient as today's incandescent bulbs and last ten to twenty times as long. Comparable energy savings are available in other appliances: for example, refrigerators sold in 1993 were 23 percent more efficient than those sold in 1990 and 65 percent more efficient than those sold in 1980, saving consumers billions in electric bills. Amory Lovins, the director of the Rocky Mountain Institute, has described in these pages a new generation of ultralight automobiles that could deliver the safety and muscle of today's cars but with far better mileage -- four times as much in prototypes and ten times as much in projected models (see "Reinventing the Wheels," January, 1995, Atlantic). Since in today's cars only 15 to 20 percent of the fuel's energy reaches the wheels (the rest is lost in the engine and the transmission), and since materials lighter and stronger than steel are available or on the way, no expert questions the feasibility of the high-mileage vehicles Lovins describes. Computers and cameras are examples of consumer goods getting lighter and smaller as they get better. The game-maker Sega is marketing a hand-held children's game, called Saturn, that has more computing power than the 1976 Cray supercomputer, which the United States tried to keep out of the hands of the Soviets. Improvements that extend the useful life of objects also save resources. Platinum spark plugs in today's cars last for 100,000 miles, as do "fill-for-life" transmission fluids. On average, cars bought in 1993 have a useful life more than 40 percent longer than those bought in 1970. As lighter materials replace heavier ones, the U.S. economy continues to shed weight. Our per capita consumption of raw materials such as forestry products and metals has, measured by weight, declined steadily over the past twenty years. A recent World Resources Institute study measured the "materials intensity" of our economy -- that is, "the total material input and the hidden or indirect material flows, including deliberate landscape alterations" required for each dollar's worth of economic output. "The result shows a clearly declining pattern of materials intensity, supporting the conclusion that economic activity is growing somewhat more rapidly than natural resource use." Of course, we should do better. The Organization for Economic Cooperation and Development, an association of the world's industrialized nations, has proposed that its members strive as a long-range goal to decrease their materials intensity by a factor of ten. Communications also illustrates the trend toward lighter, smaller, less materials-intensive technology. Just as telegraph cables replaced frigates in transmitting messages across the Atlantic and carried more information faster, glass fibers and microwaves have replaced cables -- each new technology using less materials but providing greater capacity for sending and receiving information. Areas not yet wired for telephones (in the former Soviet Union, for example) are expected to leapfrog directly into cellular communications. Robert Solow, a Nobel laureate in economics, says that if the future is like the past, "there will be prolonged and substantial reductions in natural-resource requirements per unit of real output." He asks, "Why shouldn't the productivity of most natural resources rise more or less steadily through time, like the productivity of labor?"

#### Growth is sustainable -- prefer our ev -- theirs is biased and based upon faulty data.

Taylor 2002 (Jerry, Cato Natural Resource Studies Director, “Sustainable Development: A Dubious Solution in Search of a Problem,” 8/26/02 <http://www.cato.org/pubs/pas/pa449.pdf>//Mkoo)

If resources are growing more abundant while the concentration of pollutants in air sheds and watersheds continues to decline, how can we explain the proliferation of various stylized sustainability indices that point to a deterioration of the planet’s resource base? There are five common weaknesses with such reports. First, they are almost always built upon a selective but fundamentally arbitrary or irrelevant set of indicators. Second, they are often built not upon actual resource data but upon hypotheses or theories about resource health that do not comport with the data or that rest upon highly suspect data fundamentally inconsistent with the larger data sets available to analysts. Third, they ignore the well-documented propensity of capitalist societies to create and invent new resources when old resources become relatively more scarce (that is, they assume that resources are fixed and finite when they are not). Fourth, they are highly aggregated and often subjective calculations of data sets that lack common denominators. Finally, they are frequently heavily biased by ideological assumptions about politics and government action. Accordingly, they provide little help to policy analysts or political leaders.

#### Resource scarcity is self correcting -- scarcity prompts more efficient solutions, the lack of solutions is what makes resources finite.

Simon 98 (Julian Simon, Former Professor of Business Administration at the University of Maryland and Former Senior Fellow at the CATO Institute, “The Ultimate Resource 2,”

<http://www.juliansimon.com/writings/Ultimate_Resource/TCHAR30.txt//Mkoo>)

All these assertions of impending scarcity turned out to be wildly in error. So much for Keynes's wisdom as an economist and a seer into the future. Millions of plain American farmers had a far better grasp of the agricultural reality in the 1920s than did Keynes. This demonstrates that one needs to know history as well as technical facts, and not just be a clever reasoner. Just as in Keynes's day, the question of finiteness is irrelevant to any contemporary considerations, as the joke at the head of the chapter suggests. Nevertheless, we must discuss the topic because of its centrality in so much contemporary doomsday thinking. The argument in this chapter is very counterintuitive, as are most of the ideas in this book. Indeed, science is most useful when it is counter-intuitive. But when scientific ideas are sufficiently far from "common sense," people will be uncomfortable with science, and they will prefer other explanations, as in this parable: Imagine for the moment that you are a chieftain of a primitive tribe, and that I am explaining to you why water gradually disappears from an open container. I offer the explanation that the water is comprised of a lot of invisible, tiny bits of matter moving at enormous speeds. Because of their speed, the tiny bits escape from the surface and fly off into the air. They go undetected because they are so small that they cannot be seen. Because this happens continuously, eventually all of the tiny, invisible bits fly into the air and the water disappears. Now I ask you: "Is that a rational scientific explanation?" Undoubtedly, you will say yes. However, for a primitive chief, it is not believable. The believable explanation is that the spirits drank it. But because the ideas in this chapter are counter-intuitive does not mean that there is not a firm theoretical basis for holding them. THE THEORY OF DECREASING NATURAL-RESOURCE SCARCITY People's response to the long trend of falling raw-material prices often resembles this parody: We look at a tub of water and mark the water level. We assert that the quantity of water in the tub is "finite." Then we observe people dipping water out of the tub into buckets and taking them away. Yet when we re-examine the tub, lo and behold the water level is higher (analogous to the price being lower) than before. We believe that no one has reason to put water into the tub (as no one will put oil into an oil well), so we figure that some peculiar accident has occurred, one that is not likely to be repeated. But each time we return, the water level in the tub is higher than before - and water is selling at an ever cheaper price (as oil is). Yet we simply repeat over and over that the quantity of water must be finite and cannot continue to increase, and that's all there is to it. Would not a prudent person, after a long train of rises in the water level, conclude that perhaps the process may continue - and that it therefore makes sense to seek a reasonable explanation? Would not a sensible person check whether there are inlet pipes to the tub? Or whether someone has developed a process for producing water? Whether people are using less water than before? Whether people are restocking the tub with recycled water? It makes sense to look for the cause of this apparent miracle, rather than clinging to a simpleminded fixed-resources theory and asserting that it cannot continue. Let's begin with a simple example to see what contrasting possibilities there are. (Such simplifying abstraction is a favorite trick of economists and mathematicians.) If there is only Alpha Crusoe and a single copper mine on an island, it will be harder to get raw copper next year if Alpha makes a lot of copper pots and bronze tools this year, because copper will be harder to find and dig. And if he continues to use his mine, his son Beta Crusoe will have a tougher time getting copper than did his daddy, because he will have to dig deeper. Recycling could change the outcome. If Alpha decides in the second year to replace the old tools he made in the first year, he can easily reuse the old copper and do little new mining. And if Alpha adds fewer new pots and tools from year to year, the proportion of cheap, recycled copper can rise year by year. This alone could mean a progressive decrease in the cost of copper, even while the total stock of copper in pots and tools increases. But let us for the moment leave the possibility of recycling aside. Another scenario: If suddenly there are not one but two people on the island, Alpha Crusoe and Gamma Defoe, copper will be more scarce for each of them this year than if Alpha lived there alone, unless by cooperative efforts they can devise a more complex but more efficient mining operation - say, one man getting the surface work and one getting the shaft. (Yes, a joke.) Or, if there are two fellows this year instead of one, and if copper is therefore harder to get and more scarce, both Alpha and Gamma may spend considerable time looking for new lodes of copper. Alpha and Gamma may follow still other courses of action. Perhaps they will invent better ways of obtaining copper from a given lode, say a better digging tool, or they may develop new materials to substitute for copper, perhaps iron. The cause of these new discoveries, or the cause of applying ideas that were discovered earlier, is the "shortage" of copper -that is, the increased cost of getting copper. So increased scarcity causes the development of its own remedy. This has been the key process in the supply of natural resources throughout history. (This process is explored for energy in Chapter 11. Even in that special case there is no reason to believe that the supply of energy, even of oil, is finite or limited.) Interestingly, the pressure of low prices can also cause innovation, as in this story: [In the] period 1984 to 1986 ... the producer price of copper hovered around 65 cents per pound. In terms of constant dollars, this was the lowest price since the great depression of the 1930s.... some companies ... analyzed what needed to be done to be profitable even if the price of copper remained low... Major copper companies have found ways of reducing their costs. Phelps Dodge...will improve the efficiency of its transportation of rock by use of computer monitoring and by installing an in-pit crusher...[It] has improved the efficiency of its copper concentration process by employing analytic instrumentation, including x-ray fluorescence. The most effective move...has been to install equipment that permits inexpensive...production of pure copper from leachates of wastes and tailings. Improvement in the efficiency of using copper not only reduces resource use in the present, but effectively increases the entire stock of unused resources. For example, an advance in knowledge that leads to a one percent decrease in the amount of copper that we need to make electrical outlets is much the same as an increase in the total stock of copper that has not yet been mined. And if we were to make such a one percent increase in efficiency for all uses every year, a one percent increase in demand for copper in every future year could be accommodated without any increase in the price of copper, even without any other helpful developments. Discovery of an improved mining method or of a substitute such as iron differs, in a manner that affects future generations, from the discovery of a new lode. Even after the discovery of a new lode, on the average it will still be more costly to obtain copper, that is, more costly than if copper had never been used enough to lead to a "shortage." But discoveries of improved mining methods and of substitute products can lead to lower costs of the services people seek from copper. Please notice how a discovery of a substitute process or product by Alpha or Gamma benefits innumerable future generations. Alpha and Gamma cannot themselves extract nearly the full benefit from their discovery of iron. (You and I still benefit from the discoveries of the uses of iron and methods of processing it made by our ancestors thousands of years ago.) This benefit to later generations is an example of what economists call an "externality" due to Alpha and Gamma's activities, that is, a result of their discovery that does not affect them directly. If the cost of copper to Alpha and Gamma does not increase, they may not be impelled to develop improved methods and substitutes. If the cost of getting copper does rise for them, however, they may then bestir themselves to make a new discovery. The discovery may not immediately lower the cost of copper dramatically, and Alpha and Gamma may still not be as well off as if the cost had never risen. But subsequent generations may be better off because their ancestors Alpha and Gamma suffered from increasing cost and "scarcity." This sequence of events explains how it can be that people have been using cooking pots for thousands of years, as well as using copper for many other purposes, and yet the cost of a pot today is vastly cheaper by any measure than it was 100 or 1,000 or 10,000 years ago. Now I'll restate this line of thought into a theory that will appear again and again in the book: More people, and increased income, cause resources to become more scarce in the short run. Heightened scarcity causes prices to rise. The higher prices present opportunity, and prompt inventors and entrepreneurs to search for solutions. Many fail in the search, at cost to themselves. But in a free society, solutions are eventually found. And in the long run the new developments leave us better off than if the problems had not arisen. That is, prices eventually become lower than before the increased scarcity occurred. It is all-important to recognize that discoveries of improved methods and of substitute products are not just luck. They happen in response to an increase in scarcity - a rise in cost. Even after a discovery is made, there is a good chance that it will not be put into operation until there is need for it due to rising cost. This point is important: Scarcity and technological advance are not two unrelated competitors in a Malthusian race; rather, each influences the other. Because we now have decades of data to check its predictions, we can learn much from the 1952 U.S. governmental inquiry into raw materials - the President's Materials Policy Commission (the Paley Commission), organized in response to fears of raw-material shortages during and just after World War II. Its report is distinguished by having some of the right logic, but exactly the wrong forecasts. There is no completely satisfactory way to measure the real costs of materials over the long sweep of our history. But clearly the man hours required per unit of output declined heavily from 1900 to 1940, thanks especially to improvements in production technology and the heavier use of energy and capital equipment per worker. This long-term decline in real costs is reflected in the downward drift of prices of various groups of materials in relation to the general level of prices in the economy. [But since 1940 the trend has been] soaring demands, shrinking resources, the consequences pressure toward rising real costs, the risk of wartime shortages, the strong possibility of an arrest or decline in the standard of living we cherish and hope to share. The commission went on to predict that prices would continue to rise for the next quarter-century. However, prices declined rather than rose. There are two reasons why the Paley Commission's predictions were topsy-turvy: First, the commission reasoned from the notion of finiteness and used a static technical analysis of the sort discussed in Chapter 2. A hundred years ago resources seemed limitless and the struggle upward from meager conditions of life was the struggle to create the means and methods of getting these materials into use. In this struggle we have by now succeeded all too well. The nature of the problem can perhaps be successfully oversimplified by saying that the consumption of almost all materials is expanding at compound rates and is thus pressing harder and harder against resources which whatever else they may be doing are not similarly expanding. The second reason the Paley Commission went wrong is that it looked at the wrong facts. Its report gave too much emphasis to the trends of costs over the short period from 1940 to 1950, which included World War II and therefore was almost inevitably a period of rising costs, instead of examining the longer period from 1900 to 1940, during which the commission knew that "the man-hours required per unit of output declined heavily". Let us not repeat the Paley Commission's mistakes. We should look at trends for the longest possible period, rather than focusing on a historical blip; the OPEC-led price rise in all resources after 1973 and then the oil price increase in 1979 are for us as the temporary 1940-50 wartime reversal was for the Paley Commission. We should ignore them, and attend instead to the long-run trends which make it very clear that the costs of materials, and their scarcity, continuously decline with the growth of income and technology.

#### Growth is sustainable -- no energy scarcity.

Sagoff 97 (Mark Sagoff, Director of Institute for Philosophy and Public Policy, A.B from Harvard, fellow of the American Association for the Advancement of Science and of the Hastings Center. “Do we consume too much,” The Atlantic online,

<http://www.theatlantic.com/past/docs/issues/97jun/consume.htm//Mkoo>

PROBABLY the most persistent worries about resource scarcity concern energy. "The supply of fuels and other natural resources is becoming the limiting factor constraining the rate of economic growth," a group of experts proclaimed in 1986. They predicted the exhaustion of domestic oil and gas supplies by 2020 and, within a few decades, "major energy shortages as well as food shortages in the world." Contrary to these expectations, no global shortages of hydrocarbon fuels are in sight. "One sees no immediate danger of 'running out' of energy in a global sense," writes John P. Holdren, a professor of environmental policy at Harvard University. According to Holdren, reserves of oil and natural gas will last seventy to a hundred years if exploited at 1990 rates. (This does not take into account huge deposits of oil shale, heavy oils, and gas from unconventional sources.) He concludes that "running out of energy resources in any global sense is not what the energy problem is all about." The global energy problem has less to do with depleting resources than with controlling pollutants. Scientists generally agree that gases, principally carbon dioxide, emitted in the combustion of hydrocarbon fuels can build up in and warm the atmosphere by trapping sunlight. Since carbon dioxide enhances photosynthetic activity, plants to some extent absorb the carbon dioxide we produce. In 1995 researchers reported in Science that vegetation in the Northern Hemisphere in 1992 and 1993 converted into trees and other plant tissue 3.5 billion tons of carbon -- more than half the carbon produced by the burning of hydrocarbon fuels worldwide. However successful this and other feedback mechanisms may be in slowing the processes of global warming, a broad scientific consensus, reflected in a 1992 international treaty, has emerged for stabilizing and then decreasing emissions of carbon dioxide and other "greenhouse" gases. This goal is well within the technological reach of the United States and other industrialized countries. Amory Lovins, among others, has described commercially available technologies that can "support present or greatly expanded worldwide economic activity while stabilizing global climate -- and saving money." He observes that "even very large expansions in population and industrial activity need not be energy-constrained." Lovins and other environmentalists contend that pollution-free energy from largely untapped sources is available in amounts exceeding our needs. Geothermal energy -- which makes use of heat from the earth's core -- is theoretically accessible through drilling technology in the United States in amounts thousands of times as great as the amount of energy contained in domestic coal reserves. Tidal energy is also promising. Analysts who study solar power generally agree with Lester Brown, of the [Worldwatch Institute](http://www.worldwatch.org/), that "technologies are ready to begin building a world energy system largely powered by solar resources." In the future these and other renewable energy sources may be harnessed to the nation's system of storing and delivering electricity. Last year Joseph Romm and Charles Curtis described in these pages advances in photovoltaic cells (which convert sunlight into electricity), fuel cells (which convert the hydrogen in fuels directly to electricity and heat, producing virtually no pollution), and wind power ("Mideast Oil Forever?" April, 1996,Atlantic). According to these authors, genetically engineered organisms used to ferment organic matter could, with further research and development, bring down the costs of ethanol and other environmentally friendly "biofuels" to make them competitive with gasoline. Environmentalists who, like Amory Lovins, believe that our economy can grow and still reduce greenhouse gases emphasize not only that we should be able to move to renewable forms of energy but also that we can use fossil fuels more efficiently. Some improvements are already evident. In developed countries the energy intensity of production -- the amount of fuel burned per dollar of economic output -- has been decreasing by about two percent a year. From 1973 to 1986, for example, energy consumption in the United States remained virtually flat while economic production grew by almost 40 percent. Compared with Germany or Japan, this is a poor showing. The Japanese, who tax fuel more heavily than we do, use only half as much energy as the United States per unit of economic output. (Japanese environmental regulations are also generally stricter than ours; if anything, this has improved the competitiveness of Japanese industry.) The United States still wastes hundreds of billions of dollars annually in energy inefficiency. By becoming as energy-efficient as Japan, the United States could expand its economy and become more competitive internationally. If so many opportunities exist for saving energy and curtailing pollution, why have we not seized them? One reason is that low fossil-fuel prices remove incentives for fuel efficiency and for converting to other energy sources.

#### Growth is sustainable -- resource scarcity can be corrected by technology.

Haynes 2008 (Beth Haynes, Professor of Economics at Brigham Young University-Hawaii, “Finite Resources vs. Infinite Resourcefulness”, 8/19/08 http://wealthisnottheproblem.blogspot.com/2008/08/finite-resources-vs-infinite.html//Mkoo)

Our consumption is excessive. If we continue to consume our natural resources, there will be nothing left for the future. Use less. Do it for the children! Limit. Limit. Limit. Do it for the poor! A significant number of environmental concerns center on this fear of using up some important resource: oil, rainforest, fresh water, open space, biodiversity. The concern is genuine. The fears are real. People then work to pass laws which intentionally slow production and hinder (even prevent) consumption. The express purpose is to make us poorer in the short run with the hope of preventing poverty in the long run. It’s common sense. Save today in order to have some available tomorrow. It’s how our bank accounts work, so it seems logical to apply the same reasoning to resource use. But there is a catch. All of economic history, up to and including today, demonstrates that the more we exploit our natural resources, the more available they become. (3-7) How can this possibly be? If we use our “limited, non-renewable resources” we have to end up with less, right? Actually, no. And here is why. We don’t simply “use up” existing resources; we constantly create them. We continually invent new processes, discover new sources, improve the efficiency of both use and extraction, while at the same time we discover cheaper, better alternatives. The fact that a particular physical substance is finite is irrelevant. What is relevant is the process of finding ways to meet human needs and desires. The solutions, and thus what we consider resources, are constantly changing. Oil was a nuisance, not a resource, until humans discovered a use for it. In order to survive and flourish, human beings must succeed at fulfilling certain needs and desires. This can be accomplished in a multitude of ways using a multitude of materials. The requirements of life set the goals. How these goals are met does not depend on the existence or the availability of any particular material. Limits are placed not by the finiteness of a physical substance, but by the extent of our knowledge, of our wealth, and of our freedom. Knowledge. Wealth. Freedom. These are the factors which are essential to solving the problems we face. “The Stone Age didn’t end because we ran out of stones.” (8) Think for a minute about how we have solved the problem of meeting basic needs throughout history: Transportation: from walking to landing on the moon Communication: from face-to-face conversations to the World Wide Web. Food: from hunting and gathering to intravenous feeding and hydroponics. Shelter: from finding a cave to building skyscrapers Health care: from shamans to MRIs and neurosurgery. How does progress happen? A synopsis of the process is provided by the main theme of Julian Simon’s book, The Ultimate Resource 2: More people, and increased income, cause resources to become more scarce in the short run. Heightened scarcity causes prices to rise. The higher prices present opportunity and prompt inventors and entrepreneurs to search for solutions. Many fail in the search, at cost to themselves. But in a free society, solutions are eventually found. And in the long run, the new developments leave us better off than if the problems had not arisen, that is, prices eventually become lower than before the scarcity occurred. (9) This idea is not just theory. Economists and statisticians have long been analyzing the massive amounts of data collected on resource availability. The conclusion: our ability to solve the problems of human existence is ever-expanding. Resources have become less scarce and the world is a better place to live for more and more people. (3-7) Overall, we create more than we destroy as evidenced by the steady progress in human well being and there is no evidence for concluding that this trend can't and won't continue. Doomsday predictions have been with us since ancient times and they have consistently been proven wrong.

### **Sustainability Coming**

#### We are on the brink of a new biosphere consciousness -- solves sustainability.

Rifkin 10 (Jeremy Rifkin, Author the Third Industrial Revolution: How Lateral Power is Transforming Energy, the Economy, and the World, “The Empathic Civilization’: Rethinking Human Nature in the Biosphere Era,” <http://www.huffingtonpost.com/jeremy-rifkin/the-empathic-civilization_b_416589.html>//Mkoo)

If human nature is as the Enlightenment philosophers claimed, then we are likely doomed. It is impossible to imagine how we might create a sustainable global economy and restore the biosphere to health if each and every one of us is, at the core of our biology, an autonomous agent and a self-centered and materialistic being. Recent discoveries in brain science and child development, however, are forcing us to rethink these long-held shibboleths about human nature. Biologists and cognitive neuroscientists are discovering mirror-neurons--the so-called empathy neurons--that allow human beings and other species to feel and experience another's situation as if it were one's own. We are, it appears, the most social of animals and seek intimate participation and companionship with our fellows. Social scientists, in turn, are beginning to reexamine human history from an empathic lens and, in the process, discovering previously hidden strands of the human narrative which suggests that human evolution is measured not only by the expansion of power over nature, but also by the intensification and extension of empathy to more diverse others across broader temporal and spatial domains. The growing scientific evidence that we are a fundamentally empathic species has profound and far-reaching consequences for society, and may well determine our fate as a species. What is required now is nothing less than a leap to global empathic consciousness and in less than a generation if we are to resurrect the global economy and revitalize the biosphere. The question becomes this: what is the mechanism that allows empathic sensitivity to mature and consciousness to expand through history? The pivotal turning points in human consciousness occur when new energy regimes converge with new communications revolutions, creating new economic eras. The new communications revolutions become the command and control mechanisms for structuring, organizing and managing more complex civilizations that the new energy regimes make possible. For example, in the early modern age, print communication became the means to organize and manage the technologies, organizations, and infrastructure of the coal, steam, and rail revolution. It would have been impossible to administer the first industrial revolution using script and codex. Communication revolutions not only manage new, more complex energy regimes, but also change human consciousness in the process. Forager/hunter societies relied on oral communications and their consciousness was mythologically constructed. The great hydraulic agricultural civilizations were, for the most part, organized around script communication and steeped in theological consciousness. The first industrial revolution of the 19th century was managed by print communication and ushered in ideological consciousness. Electronic communication became the command and control mechanism for arranging the second industrial revolution in the 20th century and spawned psychological consciousness. Each more sophisticated communication revolution brings together more diverse people in increasingly more expansive and varied social networks. Oral communication has only limited temporal and spatial reach while script, print and electronic communications each extend the range and depth of human social interaction. By extending the central nervous system of each individual and the society as a whole, communication revolutions provide an evermore inclusive playing field for empathy to mature and consciousness to expand. For example, during the period of the great hydraulic agricultural civilizations characterized by script and theological consciousness, empathic sensitivity broadened from tribal blood ties to associational ties based on common religious affiliation. Jews came to empathize with Jews, Christians with Christians, Muslims with Muslims, etc. In the first industrial revolution characterized by print and ideological consciousness, empathic sensibility extended to national borders, with Americans empathizing with Americans, Germans with Germans, Japanese with Japanese and so on. In the second industrial revolution, characterized by electronic communication and psychological consciousness, individuals began to identify with like-minded others. Today, we are on the cusp of another historic convergence of energy and communication--a third industrial revolution--that could extend empathic sensibility to the biosphere itself and all of life on Earth. The distributed Internet revolution is coming together with distributed renewable energies, making possible a sustainable, post-carbon economy that is both globally connected and locally managed. In the 21st century, hundreds of millions--and eventually billions--of human beings will transform their buildings into power plants to harvest renewable energies on site, store those energies in the form of hydrogen and share electricity, peer-to-peer, across local, regional, national and continental inter-grids that act much like the Internet. The open source sharing of energy, like open source sharing of information, will give rise to collaborative energy spaces--not unlike the collaborative social spaces that currently exist on the Internet. When every family and business comes to take responsibility for its own small swath of the biosphere by harnessing renewable energy and sharing it with millions of others on smart power grids that stretch across continents, we become intimately interconnected at the most basic level of earthly existence by jointly stewarding the energy that bathes the planet and sustains all of life. The new distributed communication revolution not only organizes distributed renewable energies, but also changes human consciousness. The information communication technologies (ICT) revolution is quickly extending the central nervous system of billions of human beings and connecting the human race across time and space, allowing empathy to flourish on a global scale, for the first time in history. Whether in fact we will begin to empathize as a species will depend on how we use the new distributed communication medium. While distributed communications technologies-and, soon, distributed renewable energies - are connecting the human race, what is so shocking is that no one has offered much of a reason as to why we ought to be connected. We talk breathlessly about access and inclusion in a global communications network but speak little of exactly why we want to communicate with one another on such a planetary scale. What's sorely missing is an overarching reason that billions of human beings should be increasingly connected. Toward what end? The only feeble explanations thus far offered are to share information, be entertained, advance commercial exchange and speed the globalization of the economy. All the above, while relevant, nonetheless seem insufficient to justify why nearly seven billion human beings should be connected and mutually embedded in a globalized society. The idea of even billion individual connections, absent any overall unifying purpose, seems a colossal waste of human energy. More important, making global connections without any real transcendent purpose risks a narrowing rather than an expanding of human consciousness. But what if our distributed global communication networks were put to the task of helping us re-participate in deep communion with the common biosphere that sustains all of our lives? The biosphere is the narrow band that extends some forty miles from the ocean floor to outer space where living creatures and the Earth's geochemical processes interact to sustain each other. We are learning that the biosphere functions like an indivisible organism. It is the continuous symbiotic relationships between every living creature and between living creatures and the geochemical processes that ensure the survival of the planetary organism and the individual species that live within its biospheric envelope. If every human life, the species as a whole, and all other life-forms are entwined with one another and with the geochemistry of the planet in a rich and complex choreography that sustains life itself, then we are all dependent on and responsible for the health of the whole organism. Carrying out that responsibility means living out our individual lives in our neighborhoods and communities in ways that promote the general well-being of the larger biosphere within which we dwell. The Third Industrial Revolution offers just such an opportunity. If we can harness our empathic sensibility to establish a new global ethic that recognizes and acts to harmonize the many relationships that make up the life-sustaining forces of the planet, we will have moved beyond the detached, self-interested and utilitarian philosophical assumptions that accompanied national markets and nation state governance and into a new era of biosphere consciousness. We leave the old world of geopolitics behind and enter into a new world of biosphere politics, with new forms of governance emerging to accompany our new biosphere awareness. The Third Industrial Revolution and the new era of distributed capitalism allow us to sculpt a new approach to globalization, this time emphasizing continentalization from the bottom up. Because renewable energies are more or less equally distributed around the world, every region is potentially amply endowed with the power it needs to be relatively self-sufficient and sustainable in its lifestyle, while at the same time interconnected via smart grids to other regions across countries and continents. When every community is locally empowered, both figuratively and literally, it can engage directly in regional, transnational, continental, and limited global trade without the severe restrictions that are imposed by the geopolitics that oversee elite fossil fuels and uranium energy distribution. Continentalization is already bringing with it a new form of governance. The nation-state, which grew up alongside the First and Second Industrial Revolutions, and provided the regulatory mechanism for managing an energy regime whose reach was the geosphere, is ill suited for a Third Industrial Revolution whose domain is the biosphere. Distributed renewable energies generated locally and regionally and shared openly--peer to peer--across vast contiguous land masses connected by intelligent utility networks and smart logistics and supply chains favor a seamless network of governing institutions that span entire continents. The European Union is the first continental governing institution of the Third Industrial Revolution era. The EU is already beginning to put in place the infrastructure for a European-wide energy regime, along with the codes, regulations, and standards to effectively operate a seamless transport, communications, and energy grid that will stretch from the Irish Sea to the doorsteps of Russia by midcentury. Asian, African, and Latin American continental political unions are also in the making and will likely be the premier governing institutions on their respective continents by 2050. In this new era of distributed energy, governing institutions will more resemble the workings of the ecosystems they manage. Just as habitats function within ecosystems, and ecosystems within the biosphere in a web of interrelationships, governing institutions will similarly function in a collaborative network of relationships with localities, regions, and nations all embedded within the continent as a whole. This new complex political organism operates like the biosphere it attends, synergistically and reciprocally. This is biosphere politics. The new biosphere politics transcends traditional right/left distinctions so characteristic of the geopolitics of the modern market economy and nation-state era. The new divide is generational and contrasts the traditional top-down model of structuring family life, education, commerce, and governance with a younger generation whose thinking is more relational and distributed, whose nature is more collaborative and cosmopolitan, and whose work and social spaces favor open-source commons. For the Internet generation, "quality of life" becomes as important as individual opportunity in fashioning a new dream for the 21st century. The transition to biosphere consciousness has already begun. All over the world, a younger generation is beginning to realize that one's daily consumption of energy and other resources ultimately affects the lives of every other human being and every other creature that inhabits the Earth. The Empathic Civilization is emerging. A younger generation is fast extending its empathic embrace beyond religious affiliations and national identification to include the whole of humanity and the vast project of life that envelops the Earth. But our rush to universal empathic connectivity is running up against a rapidly accelerating entropic juggernaut in the form of climate change. Can we reach biosphere consciousness and global empathy in time to avert planetary collapse?

### **A2 Complexity**

#### Complexity doesn’t result in collapse -- energy subsidies check.

Tainter 2009 (Joseph Tainter, professor of environment and society at Utah State University, “Interview with Joseph Tainter on Collapse,” 11/3/09 <http://varnelis.net/blog/interview_with_joseph_tainter_on_collapse>//Mkoo

So as civilizations develop, you conclude, they differentiate—for example, by creating highly specialized social roles—and build greater and greater levels of organization that require higher investment of energy to maintain. Eventually the marginal returns on investment decline and civilizations either figure out how to deal with that situation or collapse. You note that from the perspective of humans as a species and hominadae as a family, complexity is quite unusual. Most of our existence has been in small settlements or nomadic groups that have relatively little differentiation and low levels of complexity. Today we are living in the most complex society that has ever existed, yet we’ve avoided collapse thus far. Why is that? JT: Diminishing returns to complexity are probably inevitable, but collapse doesn’t necessarily follow. Collapses are actually not that common. There are several ways to cope with diminishing returns to complexity. One is to find energy subsidies to pay for the process. That is what we have done with fossil fuels. And it is a big part of why a future crisis in fossil fuels is the most important thing we should be worrying about.

#### Complexity is inevitable and good -- problem solving techniques.

Tainter 2006 (Joseph Tainter, professor of environment and society at Utah State University, “Social Complexity and Sustainablility,” Ecological Complexity, <http://www.fraw.org.uk/files/economics/tainter_2000.pdf>//Mkoo)

Thus, the development of complexity is a wonderful dilemmas of human history. Over the past 12,000 years, we have responded to challenges with strategies that cost more labor, time, money, and energy, and that go against our aversion to such costs. We have done this because most of the time complexity works. It is a basic problem-solving tool. Confronted with problems, we often respond by developing more complex technologies, establishing new institutions, adding more specialists or bureaucratic levels to an institution, increasing organization or regulation, or gathering and processing more information. Such increases in complexity work in part because they can be implemented rapidly, and typically build on what was developed before. While we usually prefer not to bear the cost of complexity, our problem solving efforts are powerful complexity generators. All that is needed for growth of complexity is a problem that requires it. Since problems continually arise, there is persistent pressure for complexity to increase.

### **Warming Aff – Solves Sustainability**

#### Growth is only unsustainable without effective government action -- MIT studies conclude aff.

The Inquistr 12-Cites an MIT study(“Global Economic Collapse Imminent: MIT Researchers Predict Next Great Depression By 2030”,The Inquistr, April 5, 2012, <http://www.inquisitr.com/215867/global-economic-collapse-imminent-mit-researchers-predict-next-great-depression-2030/)//sjl>

According to a study released by researchers at Jay W. Forrester’s institute at MIT, the world is headed for a “global economic collapse” if humans around the planet do not waver in their consumption of natural resource. Not only is global economic collapse imminent at the current rate of resource consumption and population growth, “precipitous population decline” will also occur. Recent findings published in the study coincide with those of the Limits to Growth which is an academic report from 1972. Smithsonian Magazine wrote about an Australian physicist named Graham Turner who famously said: “The world is on track for disaster.” According to the report which was produced for The Club of Rome, the researchers conjured a computing model in order to forecast various scenarios based upon the current models of global resource consumption and population growth. A computing model is a mathematical model of a complex process or system which requires conditions for testing. The majority of the computer scenarios processed indicated imminent economic collapse would occur right around the year 2030. Unlimited economic growth potential is still a possibility, however, governments around the world would have to enact policies to limit the expansion of our ecological footprint (human demand on the Earth’s ecosystems) in addition to investing in green technologies.

#### That’s key to sustainability -- total resource collapse in place of a managed transition guarantees a disastrous transition.

Spratt et al. 10**-**Stephen holds a BA from the University of East Anglia, an MSc from the School of Oriental and African Studies (SOAS), University of London, and a DPhil from the Institute of Development Studies, University of Sussex.(Stephen, “The Great Transition”, NEF, June 2010, <http://neweconomics.org/sites/neweconomics.org/files/Great_Transition_0.pdf)//sjl>

The threat of climate change should be a sufficient cause to tackle our carbon-intensive lifestyles, starting with our dependence on fossil fuels. There is also another very real and pressing reason to do so: peak oil. Opinion is divided as to when peak oil will be reached, but some experts believe it could be imminent, or may even already have passed. Energy prices reached record highs in mid-2008, culminating in a 14-fold rise in the price of oil from 2000 levels. By July 2008, oil prices had reached $147 a barrel. While prices fell in late 2008 to $40, only to rise yet again to over $70 in 2009, there is a growing consensus that oil prices are becoming increasingly volatile due to declining domestic reserves and production and growing reliance on international markets that are concentrated in a relatively small number of regions. For example, it is estimated that 62 per cent of all known oil reserves reside in the Persian Gulf.15 The International Energy Agency (IEA), hardly a radical body, first acknowledged peak oil in its 2006 World Energy Outlook. In 2008, the IEA went further, stating that there would most likely be a ‘narrowing of spare capacity to minimal levels by 2013’.16 While this might at first sight seem welcome to those concerned about climate change, the social and economic consequences of being forced to go ‘cold turkey’, rather than managing the transition from dependency on oil, could spell disaster. Until there is investment in viable alternative sources of energy, and our lifestyles are able to adapt, we are all locked into oil dependency: as we showed in Nine meals from anarchy, even our food supply depends on it. Despite huge untapped renewable energy sources in the UK and Ireland, both have become increasingly reliant on imports and struggle to maintain their energy independence. The UK is increasingly vulnerable to wild fluctuations in oil and gas prices. This will have huge impacts on social justice. For example, the Government estimated that for every 1 per cent increase in the price of energy, a further 40,000 households will be plunged into fuel poverty.

### Growth Good – Environment

#### Growth and technological development are critical to environmental protection -- empirics.

Adler 2008 (Jonathono, Professor of Law and Director Center for Business Law and Regulation at Case Western University, “Bridge to Nowhere,” <http://www.thenewatlantis.com/publications/green-bridge-to-nowhere>//Mkoo)

The first item on his agenda is the replacement of modern capitalism with some undefined “non-socialist” alternative. “The planet cannot sustain capitalism as we know it,” he warns, calling for a fundamental transformation. But he does not understand the system he wants to reform, let alone what he would substitute in its place. According to Speth, “most environmental deterioration is a result of systemic failures of capitalism.” This is an odd claim, as the least capitalist nations of the world also have the worst environmental records. The ecological costs of economic statism are far worse than those of economic liberty. The environmental record of the various Soviet regimes amply bears this out: The West’s ecological nightmares were the Soviet bloc’s environmental realities. This is not due to any anomaly of the Soviet system. Nations with greater commitment to capitalist institutions experience greater environmental performance. While Speth occasionally acknowledges pockets of environmental progress, he hardly stops to consider the reasons why some environmental resources have been conserved more effectively than others. Fisheries are certainly declining throughout much of the world—some 75 percent of fisheries are fully or over-exploited—but not everywhere. It is worth asking why. Tropical forests in less-developed nations are declining even as most temperate forests in industrialized nations are rebounding. Recognizing these different trends and identifying the key variables is essential to diagnosing the real causes of environmental deterioration and prescribing a treatment that will work. Speth acknowledges that much of the world is undergoing “dematerialization,” such that economic growth far outpaces increases in resource demand, but seems not to appreciate how the capitalist system he decries creates the incentives that drive this trend. Were it not for market-driven advances in technological capability and ecological efficiency, humanity’s footprint on the Earth would be far greater. While modern civilization has developed the means to effect massive ecological transformations, it has also found ways to produce wealth while leaving more of the natural world intact. Market competition generates substantial incentives to do more with less—thus in market economies we see long and continuing improvements in productive efficiency. This can be seen everywhere from the replacement of copper with fiber optics (made from silica, the chief component in sand) and the light-weighting of packaging to the explosion of agricultural productivity and improvements in energy efficiency. Less material is used and disposed of, reducing overall environmental impacts from productive activity. The key to such improvements is the same set of institutional arrangements that Speth so decries: property rights and voluntary exchange protected by the rule of law—that is, capitalism. As research by Wheaton College economist Seth Norton and many others has shown, societies in which property rights and economic freedoms are protected experience superior economic and environmental performance than those societies subject to greater government control. Indeed, such institutions have a greater effect on environmental performance than the other factors, such as population growth, that occupy the attention of Speth and so many other environmental thinkers. Speth complains that capitalism is fundamentally biased against the future; but the marketplace does a far better job of pricing and accounting for future interests than the political alternative. “Future generations cannot participate in capitalism’s markets [today],” says Speth. Fair enough, but they cannot vote or engage in the regulatory process either. Thus the relevant policy question is what set of institutions does the best—or least bad—job of accounting for such concerns, and here there is no contest. However present-oriented the marketplace may be, it is better able to look past the next election cycle than any plausibly democratic alternative.

#### Growth solves emissions and environmental collapse -- multiple studies prove.

Anderson, 4 - senior fellow at the Hoover Institute, and adjunct prof at the Stanford Graduate School of Business, Martin and Illie Anderson Senior Fellow executive director of PliRC—the Properly and Environment Research Center.( Terry L., Property Rights and Sustainable Development, Google Books, 2004)//AH

The doomsayers contend that such growth will ultimately deplete natural resources and destroy the environment, but Lomborg Tunis positive correlations between economic growth and environmental quality. He correlates the World Bank's environmental sustainability index with gross domestic product per capita across 117 nations, concluding that "higher income in general is correlated with higher environmental sustainability" (Lomborg 2001, 32). This idea is known as the "environmental Ku/nets curve," based on Nobel laureate Simon Ku/nets s earlier work on patterns of economic growth. Measuringenvi-ronmcntal quality (for example, air quality) on the vertical axis and economic performance (for example, the gross domestic product, or GDP) on the horizontal axis, the relationship displays a J-curve. At lower levels of income, environmental quality can deteriorate as people trade environmental quality for economic growth. But as Bruce Yandle. Maya Vijayaraghavan, and Madhusudan Bhattarai review in Chapter 3, all studies show that the relationship between environmental quality and economic performance becomes positive at higher levels of income because environmental quality is what economists call an income-elastic good. In other words, if income rises 10 percent, the demand for environmental quality rises more than 10 percent. Generally, the (annual) income level at which the turning point occurs is between $4,000 and $8,000, with the demand for water quality turning upward at lower levels of income than the income levels at which the demand for endangered species preservation turns upward. In his pioneering data on carbon emissions, presented in Chapter 6, Robert McCormick estimates that net carbon emissions also appear to fit the J-curve. Though the turning point occurs at much higher levels of income, McCormick admits that higher-income countries emit more carbon dioxide and other greenhouse gases into the atmosphere, but points out that wealthy countries also sequester more carbon through landfills, better farming techniques, and less burning of wood products, thus their net emissions of greenhouse gases ultimately decline. The work of Indur Goklany in Chapter 2 adds further optimism to the potential for economic growth to be a driving force in improving environmental quality. Goklany estimates how the turning point for the J-Curve shifts over time, given that new environmentally enhancing technologies are exported Irom rich countries to poor countries. For example, once a country such as the United States invents filters for water purification, developing countries do not have to "reinvent the wheel"; they can simply acquire the new filtering technology and improve water quality at lower levels of income. In case after case, Goklany shows that we can enjoy a given level of environmental quality measured by such considerations as access to clean water or clean air at lower income levels or we can enjoy higher levels of environmental quality at a given level 01 income. In short, economic growth allows the developing world to enjoy better living standards sooner than the developing world did in the past.

#### Growth is critical to environmental sustainability -- tons of empirics prove.

Simon 98 (Julian Simon, Former Professor of Business Administration at the University of Maryland and Former Senior Fellow at the CATO Institute, “The Ultimate Resource 2,”

<http://www.juliansimon.com/writings/Ultimate_Resource/TCHAR30.txt//Mkoo>)

The more developed an economy, and the more people it has, the more pollutants it produces; this story has been well told by Barry Commoner, and it is still the main line of conventional thinking on the subject. The total amounts of most kinds of pollutants depend upon the total scale of industry, and this scale may be roughly gauged by a country's GNP (except that beyond some per capita income, the proportion of industrial products in the GNP begins to decline as the proportion of services increases). A less-known story is that along with higher income and its consequent greater supply of pollutants comes a greater demand for cleanup, plus an increased capacity to pay for it and greater technical ability to execute the clean-up; this reduction in pollution as a result of increased income has been documented for the 1970s and 1980s for Europe (see Chapter 15, footnote 6). As we saw in chapter 9, the technology for cleaning up already exists in just about every case, and waits only for our will to expend the time and money to put it to work. For many years governments did not control the flow of industrial pollutants very well. But in recent years there has come a change in the rules of the game in the Western countries due to a combination of rising incomes and consciousness raising by environmentalists. And this has caused the favorable trends in air and water quality that we saw in chapter 9. If you have any doubt that increases in income are associated with a decrease in pollution, examine the levels of street cleanliness in the richer versus the poorer countries of the world, the mortality rates of richer versus poorer countries, and the mortality rates (or cleanliness of streets) among richer versus poorer people within particular countries. If increased income makes for less pollution, what is the effect of population growth? You might think that adding people necessarily induces more pollution. Yet in Australia's affluent cities, for example, there is much pollution despite the country's low population. And analyses find only a slight short-run relationship between population growth and pollution. In the long run, however, the total pollution output will be more or less proportional to the labor force (and hence, to population) for a given level of technology, all else being equal as you might expect. It is not sound, though, to assume that all else is equal. When pollution increases, political forces arise to fight it; this is the force that warred against smoke pollution in Great Britain at the local level beginning centuries ago, and that has had success since the 19th century (see Chapter 9). Once this process begins, the result may well be less pollution than earlier - or, of course, nothing may happen for a while except an even worse level of pollution. Also as a result of a higher population, and of the higher income that occurs after a while, new techniques emerge to handle the temporarily worse problems of pollution. And eventually there results a cleaner world than before population and income grew. Regarding any particular period in the near future, especially in poor countries, the overall outcome simply cannot be known in advance; neither economic logic nor political history can predict with confidence whether the intermediate-run result of the larger population and of the initially higher pollution will be a situation better or worse than if the population had not grown so large. Yet we must keep in mind the empirical fact that over the longest sweep of human history, while population has grown enormously, total pollution - as measured by life expectancy, and by the rate of deaths due to socially transmitted and socially caused diseases such as cholera and smog-caused emphysema - has fallen markedly. We do not live amongst ever-more-huge garbage dumps infested by rats, as in earlier times. The outcome of more people also depends very heavily on the kind of economic-political system in the given country. As discussed in Chapter 9, Eastern European communist countries suffered much worse damage from pollution than did Western free-enterprise countries, in considerable part because socialism rewards managers for using a high ratio of inputs to outputs whereas a market system rewards managers for economizing on inputs. The latest environmental justification for slowing or halting population growth is supposed global warming (see chapter 18 on global warming and the greenhouse effect). A World Bank paper on the subject concludes, "The global negative externality represented by rapid population growth in developing countries provides a strong, new rationale for developed countries, in their own interests, to finance programs that would reduce population growth in developing countries." That is, the old rationales for World Bank population-control programs - economic growth, resource conservation, and the like - having been discredited, a new "rationale" has been developed on the basis of speculative assumptions about global warming's economic effects derived from controversial climatalogical science. But isn't it obvious, the environmentalists argue, that additional people and additional economic growth will cause us to use more energy and hence emit more greenhouse gases? Therefore, even if we can't be sure of the greenhouse effect, wouldn't it be prudent to cut back on growth? It does make sense that during the next half-century or century there will be increased energy use as a result of more people as well as increased consumption per person. Some forecasts project that the former component will be larger, some the latter. But contrary to the implications of many such writings on the subject, these events need not be seen as malign. Shifts to nuclear fission and to other new sources of energy may result in reduced total emissions even as total energy use goes up - as was the case in the U.K. and the U.S. over the years.

#### Their authors overgeneralize growth -- not all aspects are negative -- its critical to ecological sustainability.

Folmer and Piersma 2007 (Henk and Theunis, Department of Spacial Sciences and Department of Economics at University of Groningen, “Conservation Biology, Environmental Policies versus a Steady State Economy in Times of Crisis”)

In his editorial "If Rome Is Burning, Why Are We Fiddling?" Brian Czech (2006) observes that the world can seem like a vast tragedy unfolding, and he speaks of the "sixth great extinction crisis." Although we agree with his diagnosis, we have problems in accepting the major premise of his therapy: adopt the "steady state economy." Practically, would a steady state economy have a chance of getting accepted anywhere? More important, would it work or would it make the situation worse? In consideration of an answer to these questions, consider Czech's obese person. Would any doctor advice this person to adopt the steady state (i.e., to continue eating the same quantities and types of food)? Most likely not. A good doctor's advice would be to substantially change the diet (i.e., to decrease the intake of fat and calories and to increase the consumption of fruit and vegetables). A similar therapy applies to the economy and its negative environmental and ecological impacts (EEIs). As Czech points out, economic growth is the increase in the production and consumption of goods and services. Nevertheless, as in the case of health and food, the goods and services that make up the gross domestic product (GDP) do not all have the same types of EEIs. Some are more damaging than others. The GDP is not only composed of polluting and ecologically damaging goods and services, such as cars and roads, but also includes health care, hiking, education, and economic and ecological research with much less negative EEIs. Hence, it is not overall economic growth that should be restricted but rather the production and consumption of goods and services with detrimental EEIs. In other words, it is selective growth and decline rather than steady state that is needed. Nevertheless, there are some important caveats. As Czech correctly observes, population growth leads to more production and consumption of polluting goods. So, controlling population growth is a major prerequisite for controlling environmental and ecological degradation. Economic growth, however, (including growth of the output of food and shelter and of other goods and services needed for the fulfillment of basic needs whose production goes together with negative EEIs) is a prerequisite for controlling population growth (e.g., Heerink & Folmer 1994). Hence, Czech's suggestion of a worldwide steady state in terms of goods with substantial negative EEIs would undermine the control of population growth. Particularly, restrictions on economic growth in developing countries with high population growth would be counterproductive. Moreover, there is ample evidence that the awareness of and willingness to pay to forego environmental and ecological degradation and to invest in nature conservation, environmentally benign R&D, and cleaner technology, requires per capita income levels of at least several thousands of U.S. dollars (e.g., Cole et al. 1997; Komen et al. 1997 and references therein). Again, for countries that have not yet reached the turning point, further growth is needed. This, in turn, implies production growth of goods and services with negative EEIs. If Czech's therapy of a steady state economy will not work, what other policy instruments to achieve environmental and ecological protection should be adopted? To answer this question, a distinction must be made between developed and developing countries. Let us first discuss the former. Czech observes that in the macroeconomic policy arena, fiscal, monetary, and trade policies have been developed with great impacts on biodiversity. Nevertheless, he ignores the development of a vast array of environmental policies, particularly regulations and standards, such as bans on the exploitation of ecologically important areas, the use of pesticides and fertilizers, and economic instruments, notably taxes and charges, tradable emission permits, damage liability, and compensation and voluntary approaches. There is ample evidence that these approaches have worked well in many developed countries (e.g., Folmer & Gabel 2000). Again, for developing countries, restrictions on (further) increases in per capita gross domestic product (GDP) are unacceptable and counterproductive. Nevertheless, the detrimental EEIs can be mitigated by means of income and technology transfers from developed to developing countries. These transfers should be accompanied by partnerships with developed countries and international organizations that help improve the development, implementation, and enforcement of environmental and ecological protection and stimulate the awareness of the advantages of adopting sustainable development. Individual ecologists and their organizations can play important roles in this context, for instance, by shedding light on the importance of environmental and ecological assets for tourism, development of new medicines, and the many immediate and long-term values of living in environments with good environmental and ecological conditions.

#### Affluence is a prerequisite to environmental progress -- empirics go aff.

Hollander 2003 (Jack M, The author is Professor Emeritus of Energy and Resources at the University of California, Berkeley. He is author and editor of more than one hundred research publications and twenty books, including The Real Environmental Crisis: Why Poverty, Not Affluence, Is the Environment's Number One Enemy. “No Region Left Behind” 5/19/03 <http://www.ideasinactiontv.com/tcs_daily/2003/05/no-region-left-behind.html>//Mkoo

History provides abundant evidence to support this conclusion. In the industrial countries, environmentalism arose as a reaction to the negative effects of early industrialization and economic growth - especially the onerous levels of air and water pollution. People had experienced environmental degradation firsthand, and they demanded improvement. As people became more affluent, two things happened: they became more insistent on environmental quality, and they had the means to pay for it. One of the great success stories of the recent half-century, in fact, is the remarkable progress the industrial societies have made in reversing the negative environmental impacts of industrialization. The view that economic growth is necessarily deleterious to environmental quality is contrary to historical fact: for decades the continuing environmental improvement of the industrial societies has coincided with their robust economic growth. In the United States, the air is cleaner and the drinking water purer than at any time in five decades; the food supply is more abundant and safer than ever before; the forested area is the highest in three hundred years; most rivers and lakes are clean again; and, largely because of technological innovation and the information revolution, industry, buildings, and transportation systems are more energy- and resource-efficient than at any time in the past. There is plenty of credit to go around for these environmental improvements: governments, environmental organizations, and individuals all continue to play significant roles. But the most important acknowledgment is due the citizens of every democratic affluent society, a majority of whom not only demand a clean and livable environment, but also have been willing to pay for achieving it. 

### Yes – EKC

#### No environmental dumping -- the correlation has not been seen.

Panayotou 1994 (Theodore Panayotou, John Sawhill Lecturer in Environmental Policy, is a Faculty Associate at the Center for International Development, a member of Core Faculty of Sustainable Development, and a Faculty Fellow of the Environmental Economics Program at Harvard University. “Economic Growth and the Environment,” <http://www.unece.org/fileadmin/DAM/ead/pub/032/032_c2.pdf>)

An alternative explanation for the downward sloping segment of the inverted-U-shaped relationship between certain pollutants and income per capita may be found in the hypothesized propensity of countries as they get richer to spin-off pollution-intensive products to lower income countries with lower environmental standards, either through trade or direct investment in these countries. If this is true, the past is not a good predictor of the future: developing countries, as Grossman and Krueger**111** noted, “will not always be able to find still poorer countries to serve as havens for the production of pollution-intensive goods”. There is little evidence, however, that either the patterns of trade or the location of investment are significantly influenced by different environmental standards among countries.**112** This is not to say that environmental dumping does not take place, but that it has not been significant enough to explain the observed reductions of pollution in developed countries, where economic growth has continued. Hettige, Lucas and Wheeler**113** observed that there is some evidence of an “industrial displacement effect” for the dirtier industries as a result of the tightening of environmental regulations in the industrialized countries since 1970. Another contributing factor has been “import protection” in developing countries.**114** Thus, countries with high tariffs and quota on chemicals, for example, have had faster rates of growth of toxic intensity in their industrial production mix than those that followed outward oriented policies.115 International trade obscures the link between income and environment in a given country by delinking consumption from production within the country. This has led some authors to take a consumption, rather than a production, approach to the income-environment relationship; income changes are seen to drive environmental degradation.

#### EKC theory is true -- empirically proven.

Fernandez et al no date (Esther, Rafaela Perez, Jesus Ruiz, Universidad Complutense de Madrid and ICAE, “The Environmental Kuznets curve and equilibrium indeterminacy,”

In this paper we explore a possibility different to previous works dealing with the EKC hypothesis: the existence of the EKC could be the result of indeterminacy of equilibria. We use a simple neoclassical growth model with a single environmental externality in the utility function of households. Firms pollute through the use of capital, and are forced to pay an environmental tax to the government, which devotes the resulting tax revenues and the ones coming from the income tax to develop abatement activities (e.g. subsidies to reduce CO2 emissions through both energy consumption and fuel choice) that reduce the pollution level and to lump-sum transfers for households. When this general equilibrium model exhibits local indeterminacy of equilibria, an EKC arises along the transition to the steady state of the economy. Also, the pollution path exhibit an inverse-U shaped pattern. We have used data corresponding to several industrial economies to estimate some crucial parameters of the model. In this case, we have found that the analytical condition of indeterminacy is satisfied. So, we have found evidence that the indeterminacy case could be a not unusual situation. Indeterminacy only can arise in economies where the weight of pollution in the utility function is high and/or economies where the elasticity of pollution respect to capital is large relative to the elasticity of pollution with respect to abatement activities. We also find that the analytical condition of indeterminacy does not include any policy instruments. This implies that if the economy falls inside the indeterminacy region, the government will not be able to drive it towards the determinacy region. So, the government is not able to influence the fact that the pollution path have a turning-point (indeterminate case) or not (determinate case). However, the environmental policy instruments can influence the steady state level for the variables, the convergence speed during the transition and, in the indeterminacy case, the period in which the pollution path will exhibit a turning point. We show that, in the presence of indeterminacy, the existence of abatement activities is not a necessary condition to obtain a turning point in the pollution path and, hence, the EKC. This is a major difference with respect to previous works in the literature that establish the existence of abatement as a necessary condition for the EKC to arise, even some of these papers require the need of increasing returns to scale in abatement.

### Growth Good – Warming

#### Their ev is alarmism -- we aren’t running out of resources, and growth is critical to solve warming and environmental protection.

Anderson, 4 - senior fellow at the Hoover Institute, and adjunct prof at the Stanford Graduate School of Business, Martin and Illie Anderson Senior Fellow executive director of PliRC—the Properly and Environment Research Center.( Terry L., “Why Economic Growth is Good for the Environment” Hoover Digest http://www.perc.org/articles)//AH

In the March 2004 issue of Scientific American, National Aeronautics and Space Administration global-warming expert James Hansen notes that greenhouse gas emissions and global-warming projections are "consistently pessimistic." Hansen suggests that projections do not take into account the lower carbon dioxide and methane emissions that have resulted from technological advancements. He explains that the lower carbon dioxide emissions result from increased energy efficiency following the energy crisis in the 1970s and the lower methane emissions, from technological changes in agriculture. Hansen's essay concludes on an optimistic note, saying "the main elements [new technologies] required to halt climate change have come into being with remarkable rapidity." This statement would not have surprised economist Julian Simon. He saw the "ultimate resource" to be the human mind and believed it to be best motivated by market forces. Because of a combination of market forces and technological innovations, we are not running out of natural resources. As a resource becomes more scarce, prices increase, thus encouraging development of cheaper alternatives and technological innovations. Just as fossil fuel replaced scarce whale oil, its use will be reduced by new technology and alternative fuel sources. Market forces also cause economic growth, which in turn leads to environmental improvements. Put simply, poor people are willing to sacrifice clean water and air, healthy forests, and wildlife habitat for economic growth. But as their incomes rise above subsistence, "economic growth helps to undo the damage done in earlier years," says economist Bruce Yandle. "If economic growth is good for the environment, policies that stimulate growth ought to be good for the environment." The link between greenhouse gas emissions and economic prosperity is no different. Using data from the United States, Professor Robert McCormick finds that "higher GDP reduces total net [greenhouse gas] emissions." He goes a step further by performing the complex task of estimating net U.S. carbon emissions. This requires subtracting carbon sequestration (long-term storage of carbon in soil and water) from carbon emissions. Think of it this way: When you build a house, the wood in it stores carbon. In a poor country that wood would have been burned to cook supper or to provide heat, thus releasing carbon into the atmosphere. McCormick shows that economic growth in the United States has increased carbon sequestration in many ways, including improved methods of storing waste, increased forest coverage, and greater agricultural productivity that reduces the acreage of cultivated land. Because rich economies sequester more carbon than poor ones, stored carbon must be subtracted from emissions to determine an economy's net addition to greenhouse gas emissions. McCormick's data show that "rich countries take more carbon out of the air than poorer ones" and that "the growth rate of net carbon emission per person will soon be negative in the United States." Put differently—richer may well be cooler.

#### Growth is critical to solve warming -- IPCC reports.

Worstall, 11 – contributor @ Forbes (Tim, “Solving Climate Change” 8/10, http://www.forbes.com/sites/timworstall/2011/08/10/solving-climate-change/)//AH

The IPCC process has just released their first update to these models since 2000. The overview paper is here. I’m not going to delve into all of the details (for which readers will no doubt thank me) I just wanted to make a few general points with the use of a couple of their graphs. As a handy guide, “RCPnumber” should be interpreted thusly: the higher the number after the RCP the closer we are to boiling Flipper as the last humans fight on the desert shores of Antarctica. The lower the number the more we can say, “Phew, we dodged the problem”. More specifically, RCP2.6 means CO2 peaks out at 490 ppm and then declines. RCP8.5 means it gets to 1370 ppm and perhaps keeps going leading to that dolphin BBQ. Note please that I don’t have to believe these numbers, you don’t, no one has to believe any of this at all. However, we do need to realise that these are the numbers which are being fed into the climate change models (perhaps more accurately, that these are the numbers that will be) and thus produce those IPCC reports. Which means that anyone taking the outputs of those IPCC reports seriously needs to take these inputs seriously. My general points can be made quite simply with the aid of two of their charts. We know very well that there’s a connection between economic growth and population size. Richer countries on average have lower fertility rates so as the world becomes richer fewer children are born. So more economic growth leading to peaking and declining population really isn’t a surprise at all. However, look at that light green line. The RCP 2.6 one, the “whew, we dodged it” one. The highest economic growth model leads to the lowest level of emissions considered. Less economic growth leads to higher emissions. Note again that these are not my assumptions. They are those of the IPCC process. Which is something of a body blow to those telling us that we must cease economic growth if calamity is to be averted: the very assumptions built into the whole proof that climate change is something we should worry about say exactly the opposite. Economic growth is the way out, not the problem. By the way, the assumption there about the rate of economic growth, from a roughly $50 trillion global economy in 2000 to a roughly $300 trillion one in 2100. That’s not all that far off the growth rate we had in the 20th century. The second chart: This is how much energy we’re going to use and where we’re going to get it from. We need to be more parsimonious in our use of energy, yes. We need to use less of it per unit of GDP (which is known as “energy intensity” and their desired decrease in that isn’t far off what the advanced economies already manage) but we don’t actually need to use less of it overall. Less oil, yes, but we can near double our energy consumption and still hit that “we missed the problem” sweet spot. It’s also amusing to note what a small role for solar and wind power is necessary to hit that target. Again, I want to point out that these aren’t my assumptions, they’re not made up out of whole cloth by some denialist, these are the assumptions which the very scientists who tell us about climate change themselves think are the driving forces and likely outcomes. Which leads to a very interesting conclusion indeed. We don’t have to stop economic growth at all, we can quite happily have around the same amount of it that we had in the 20 th century. So that’s a large number of the Green Miserablists shown to be wrong. We don’t have to reduce or even severely limit our energy consumption: we just have to get the growth in our consumption from other than the usual sources. A large number of the Energy Miserablists shown to be wrong there too. Or, to boil it right down, the IPCC is telling us that the solution to climate change is economic growth and low-carbon energy generation. That’s absolutely all we have to do. Or as I pointed out at book length recently, a globalised market economy with a carbon tax will do just fine.

### A2 K Waves

#### Reject the theory of K waves -- no theoretical or empirical correlations.

North 2009 (Gary North, Austrian School economic analyst, PhD in History, edited the financial newsletter, Remnant Review, formerly served as Research Assistant for Congressman Ron Paul, “The Myth of the Kondratieff Wave,” 6/27/09, <http://www.lewrockwell.com/north/north725.html>//Mkoo)

Kondratieff had at most two and a half cycles in his two papers. That number was available for only four data series. Of the 36 data series, he could find evidence of cycles in only 11 of them. The monetary series and the real series correlated in only 11 of 21 series, all short. Pugsley then cited extensively from an article by C. Van Ewijk of the University of Amsterdam (The Economist, Nov. 3, 1981). Van Ewijk noted that Kondratieff followed no consistent methodology in choosing the types of trend curves that he selected for different data sources. Kondratieff used various statistical techniques to smooth the curves to make them appear as long waves. "In case after case, no wave could be identified." He used price data, but these did not correlate with the actual economic output of the four economies that he studied. Then the waves that he presented were further "idealized" by whoever created the chart that has circulated ever since. Pugsley noted: "The upward movement of prices from 1933 to the present has already spanned fifty years, which is supposed to be the average length of a complete cycle." So far, price inflation has extended for about 75 years. Yet the deflationists are still predicting long-term, severe price deflation, and some of them invoke the Kondratieff wave to prove their assertion. Pugsley concluded: In not one case does the evidence corroborate the existence of the wave. Prices and output are not directly related — if anything they are inversely related. The forty-five to sixty-year period of the wave is only partially evident in the nineteenth century, and then only in the price series. Price moves in the twentieth century do not correspond to this periodicity, as claimed by long-wave proponents. There is absolutely no statistical correlation between series of real variables such as production and consumption, and monetary series such as prices and interest rates. Production and prices of the four countries studied do not statistically correlate; thus there is no wave operating coincidentally in the industrialized countries. In other words, Kondratieff's hypothesis is simply not supported by any evidence. The long wave exists only in the minds of a few misguided analysts, but not in the real world. It is pure hokum.

#### More ev -- no empirical support.

Rothbard 2003 (Murray N. Rothbard, the dean of the Austrian School of economics, was the author of Ethics of Liberty and For a New Liberty, “The Kondratieff Cycle: Real or Fabricated?,” Ludwig von Mises Institute, 2003, <http://www.lewrockwell.com/rothbard/rothbard44.html>//Mkoo)

To the criticism that "Kondratieff peaks" are simply the results of war-borne inflation, the Kondratieffites have an answer: "Ahh, but this analysis is superficial, for the wars themselves are caused by the arrival of the Kondratieff peak!" Well, in a sense: the War of 1812–Napoleonic War, the Civil War, World War I, major wars all, came at (i.e., brought about) Kondratieff peaks. Can we then say which was cause and which was effect – the war or the cycle? Aside from the fact that we would again have to postulate some mysterious force that drives men mad and on to war during Kondratieff peak periods, there is one mighty counter-example that destroys this theory totally: World War II, which came, not at the end of a Kondratieff boom, but rather – in stark contrast – at the end of a Kondratieff depression. This example indicates another gross error in the Kondratieff analysis. Where real cycles exist, in physics, astronomy or biology, the scientist concludes that there are cycles after hundreds, if not thousands, of mutually confirming observations. But in the alleged "Kondratieff," there are, at very most, only three-and-a-half cycles. What kind of analysis builds a cycle theory on only three-and-a-half observations

### Tech Good – Nuclear Waste

#### Transition away from technology causes nuclear waste that pollutes the world.

Libcom 2008 (“Primitivism, anarcho-primitivism and anti-civilisationism – criticism,” <http://libcom.org/thought/approaches/primitivism/>//mkoo)

The central tenet of primitivism, anarcho-primitivism and anti-civilisationism is the abolition of technology. For most people, arguing against this is completely unnecessary, since it is immediately obvious that it is a terrible idea. Even given the most cursory glance it is clear that abolishing technology would have devastating consequences for humankind and the planet. For starters, the 50%[2](http://libcom.org/thought/approaches/primitivism/#footnote2_t946yfd) of the UK population who need glasses or contact lenses (which rises to 97% over the age of 65[3](http://libcom.org/thought/approaches/primitivism/#footnote3_uq7muql)) would soon be left severely impaired. Tens of millions of people dependent on drug treatments for illnesses would quickly die. Radioactive nuclear waste needs to be monitored and controlled with high-tech equipment for tens of thousands of years. Without it, even if buried deep underground, climate changes and tectonic plate movements will eventually cause it to leak out and wreak ecological devastation on the planet. This aside from the all the other obviously unattractive prospects of this idea – no more books, recorded music, medical equipment, central heating, sewage systems... - means that almost everyone would reject this idea immediately. However, within and around anarchist circles these ideas do have some support, so this article will examine them in more detail.

#### Extinction.

Caldicott 1994 (Helen, “Nuclear Madness- What Can you Do?,” pg. 202-203)

The National Energy Policy Act directs the National Academy to look only at the impact of the facility on any single individual, rather than looking at the global impact over the hazardous life of the waste that will be placed there. Carbon 14, released by the fractured stone of Yucca Mountain into the atmosphere, will contribute to global fall out , with 70,000 curies as the projected release. The dump is planned to hold seventy thousand metric tons of potent, high-level waste, and a large release , according to some experts, could cause environmental damage on the scale of nuclear war. Ground water beneath the mountain could rise as it has in previous geological time frames, flooding the hot canisters and blowing the top off the mountain . Alternatively, contaminated water could seep into the ground water and spread to Death Valley, producing radioactive hot springs . U.S. Geological Survey scientists compare the Yucca Mountain Program to “NASA before the Challenger.” One spent-fuel assembly contains ten times more long-lived isotopes than the Hiroshima bomb , and 140,000 of these assemblies will be transported across the United States to the mountain. Temperature inside the repository will be above boiling point for 1,250 years, and the temperature inside the bore hole of the rock will be 527 degrees Fahrenheit and in the canister, 662 degrees Fahrenheit. Such heat could induce rock fractures and fault movement.

### Transition Fails – General

#### **Collapse doesn’t create a mindset shift -- increases resource competition and violence.**

Monbiot 2009 (George Monbiot, columnist for the Guardian, has held visiting fellowships or professorships at the universities of Oxford (environmental policy), Bristol (philosophy), Keele (politics), Oxford Brookes (planning), and East London (environmental science), “Is there any Point in Fighting to stave off industrial apocalypse”,” 8/17/09 http://www.guardian.co.uk/commentisfree/cif-green/2009/aug/17/environment-climate-change//Mkoo)

From the first observation, this follows: even if you are hardened to the fate of humans, you can surely see that our species will not become extinct without causing the extinction of almost all others. However hard we fall, we will recover sufficiently to land another hammer blow on the biosphere. We will continue to do so until there is so little left that even Homo sapiens can no longer survive. This is the ecological destiny of a species possessed of outstanding intelligence, opposable thumbs and an ability to interpret and exploit almost every possible resource – in the absence of political restraint. From the second and third observations, this follows: instead of gathering as free collectives of happy householders, survivors of this collapse will be subject to the will of people seeking to monopolise remaining resources. This will is likely to be imposed through violence. Political accountability will be a distant memory. The chances of conserving any resource in these circumstances are approximately zero. The human and ecological consequences of the first global collapse are likely to persist for many generations, perhaps for our species' remaining time on earth. To imagine that good could come of the involuntary failure of industrial civilisation is also to succumb to denial.

#### History proves elites will use strong incentives to maintain consumerism, and they’ll crush any serious transition with violence -- Trainers wrong.

Fotopoulos 2000 (Takis Fotopoulous, Greek political writer and former academic, “The limitations of life-style strategies: The Ecovillage “Movement” is NOT the way toward a enw democratic society,” <http://www.democracynature.org/vol6/takis_trainer_reply.htm>//Mkoo)

However, before we proceed to assess Trainer’s stand on the matter we have to clarify the meaning of confrontation with the system. In a broad sense, this confrontation means any kind of activity which aims to confront rather than to bypass the system, at any stage of the transition to a new society. Such activities could include both direct action and life-style activities, as well as other forms of action aiming at creating alternative institutions at a significant social scale through, for instance, the taking over of local authorities. The condition for such activities to be characterised as confronting the system is that they are an integral part of a mass political movement for systemic change. This type of confrontation does not involve in principle any physical violence, apart from self-defence in the case, for instance, of direct action, although it should be expected that the elites will extensively use any form of violence - particularly economic violence - to crush such a movement. On the other hand, in a narrow sense, confrontation means the physical confrontation with the mechanisms of physical violence which the elites may use against a movement for systemic change and refers exclusively to the final stage of the transition towards an alternative society. On the basis of the above definition of confrontation it is obvious that the two paradigms do not differ significantly as regards the possibility of confrontation in a narrow sense. Thus, for the ID project, whether the transition towards an ID will be marked by a physical confrontation with the elites will depend entirely on their attitude at the final stage of transformation of society, i.e. on whether they will accept peacefully such a transition, or whether they will prefer instead to use physical violence to crush it, as is most likely given that the transition will deprive them of all their privileges. Trainer also accepts the possibility of such a conflict: ‘If someday we do find ourselves in mortal conflict with capitalism then so be it, but the strategic situation will then be quite different to what it is now’.[[28]](http://www.democracynature.org/vol6/takis_trainer_reply.htm" \l "_edn28" \o ") Still, it seems that Trainer, in consistence with the focus on values rather than on institutions which characterises his paradigm, attempts to support the hypothesis that the system could be bypassed and a physical confrontation might be avoided, even at the very final stage of transition. However, the examples of the Eastern block regimes and of South Africa that he uses to justify his hypothesis are hardly convincing. A brief digression on the collapse of these regimes might be useful in understanding the unrealistic nature of this hypothesis. It is clear that to understand the reasons for the collapse of a regime one has to consider the nature and the causes of it. Thus, on the basis of the first criterion, the South Africa example is not relevant to the systemic change that we have been discussing here. What happened there was not a replacement of one type of social and economic system by another but a restructuring of the ruling political and economic elites to include members of the black majority. Although the average black individual, as a result of this change, gained more civil rights and liberties than before, s/he is still not going to be less heteronomous than the average citizen in the North —the topic of discussion here. On the basis of the second criterion, the collapse of the Eastern European blocks is also not relevant to the kind of systemic change that we are considering. As I attempted to show elsewhere,[[29]](http://www.democracynature.org/vol6/takis_trainer_reply.htm" \l "_edn29" \o ") it was the internal contradictions of these regimes which led to their collapse, as a result of the lack of any effective popular base to support them. This is because what reproduces a social system in the long term is not just the threat of physical violence but, mainly, the provision of adequate incentives which will gain the support, or at least the tolerance, of the majority of the population. It was therefore the failure of these regimes to provide such incentives, like the ones provided by Western regimes, which led to their collapse. Thus, first, the failure of ideological incentives was inevitable in a system characterised by a fundamental contradiction between the official ideology of economic equality and the reality of concentration of power. Second, the lack of effective material incentives, (positive or negative), similar to the ones provided in the West, made the long-term survival of the system impossible. Consumerism, a powerful positive incentive, was impossible in the East, given the relatively low level of economic development and the drainage on resources, as a result of the military competition with the West, imposed by the latter in its effort to choke any threat against the market economy. Also, the threat of unemployment, a basic negative material incentive used to undermine any effective social action against a system, was ruled out by an official ideology which even imposed a constitutional guarantee of full employment. On the other hand, the system of the market economy and representative democracy provides enough ideological and material incentives to create a ‘contented’ majority in the North (or a similar minority in the South), and at the same time achieve the tolerance of most of the rest of the population. It is these incentives which, together with the occasional use of physical violence, especially in the South, enable the ruling elites to keep power , rather than the use of physical power. However, when such incentives do not work and a serious threat to the market system develops (as for instance it happened in Germany during the Great Deppression or frequently happened in the post-war period in the South), the ruling elites will have no hesitation to use physical violence. The examples, therefore, given by Trainer to justify his hypothesis about the possibility of radical systemic change without confrontation are not representative at all. Had he wanted to be convincing he should have provided evidence of capitalist regimes which fell without confrontation and, as far as I know, History is not exactly full of such examples!

#### The global south won’t transition.

Sagoff 97 (Mark Sagoff, Director of Institute for Philosophy and Public Policy, A.B from Harvard, fellow of the American Association for the Advancement of Science and of the Hastings Center. “Do we consume too much,” The Atlantic online,

<http://www.theatlantic.com/past/docs/issues/97jun/consume.htm//Mkoo>

In developing countries, however, a no-growth economy "will deprive entire populations of access to better living conditions and lead to even more deforestation and land degradation," as Goldemberg warns. Moreover, citizens of developed countries are likely to resist an energy policy that they associate with poverty, discomfort, sacrifice, and pain. Technological pessimism, then, may not be the best option for environmentalists. It is certainly not the only one.

### Transition Fails – Environment/Warming

#### Transitioning away from growth doesn’t solve environmental catastrophe -- empirical proof.

Savory 2008 (Allan Savory, Savory Center for Holistic Management Founder, received the Australian International Banksia Award for the person or organization doing the most for the environment on a global scale, “A Global Strategy for Addressing Global Climate Change,” holisticmanagement.org.au/PDF/A+Global+Strategy+for+Addressing+Climate+Change+2%5B1%5D.pdf//Mkoo)

Simplistic and counter intuitive as it may be the fate of civilization today hangs on two slender threads – the correct management of livestock and the rapid development of benign energy to sustain cities and mass transport. Excessive emissions of carbon and other gases from fossil fuels are not the only causes of global climate change, nor are they the greatest cause of climate change, as popularly espoused. Humans began to change climate in ancient times through their actions that began to disrupt complex living communities, diminishing biodiversity and replacing the role of large herbivores and predators in the world's savannas with fire. Ancient practices, continued to this day, ensured land degradation (desertification) and increased atmospheric carbon dioxide and other gases from fires and soil breakdown. This process of environment destruction had destroyed many civilizations before coal and oil were discovered or widely used. Essential as it is, stopping carbon emissions entirely will not alone solve the potential catastrophe facing humanity because a great part of what amounts to global environmental malfunction cannot be attributed to carbon emissions. If tomorrow we somehow achieved zero emissions from fossil fuels we still would not avert major catastrophe. Grassland and savanna burning would continue, desertification would continue to accelerate with soils increasingly unable to store either carbon or water and the climate would continue to change.

#### Transition can’t solve climate change -- can’t remove current GHGs in the atmosphere, and people will prioritize getting back to growth over environmental concerns.

Elliot 2008 (Larry Elliot, Economics editor for the guardian, “Can a dose of recession solve climate change,” The Guardian, 8/25/08 <http://www.guardian.co.uk/business/2008/aug/25/economicgrowth.globalrecession//Mkoo>)

It's an interesting thought. Logically, if the obsession with growth at all costs has increased emissions to the point where rising temperatures pose a threat to mankind's existence (as many experts believe) then a prolonged period of slow or negative growth will limit the damage to the environment. At the very least, it would provide a breathing space to come up with an international agreement on how to tackle the problem. There are many reasons why it is not quite as simple as that. My rudimentary understanding of the science of climate change is that concentrations of greenhouse gases have been building up over many decades, and you can't simply turn them off like a tap. Even a three- or four-year 1930s-style global slump would have little or no impact, particularly if it was followed by a period of vigorous catch-up growth. On a chart showing growth since the dawn of the industrial age 250 years ago, the Great Depression is a blip. Similarly, Britain's trade deficit always comes down in recessions because imports go down, but then widens again once the economy returns to its trend rate of growth. Politically, recessions are not helpful to the cause of environmentalism. Climate change is replaced by concerns about unemployment and stimulating growth. To be fair, politicians respond to what they hear from voters: Gordon Brown's survival as prime minister depends on how well his package of economic measures is received, not on what he does or doesn't do to limit greenhouse gases. Looking back, it is clear that every advance in the green movement has coincided with period of strong growth - the early 1970s, the late 1980s and the first half of the current decade. It was tough enough to get world leaders to make tackling climate change a priority when the world economy was experiencing its longest period of sustained growth: it will be mightily difficult to persuade them to take measures that might have a dampen growth while the dole queues are lengthening. Those most likely to suffer are workers in the most marginal jobs and pensioners who will have to pay perhaps 20% of their income on energy bills. Hence, recession does not offer even a temporary solution to the problem of climate change and it is a fantasy to imagine that it does. The real issue is whether it is possible to challenge the "growth-at-any-cost model" and come up with an alternative that is environmentally benign, economically robust and politically feasible. Hitting all three buttons is mightily difficult but attempting to do so is a heck of a lot more constructive than waiting for industrial capitalism to collapse under the weight of its own contradictions.

#### Growth is comparatively better -- collapse speeds up environmental degradation.

Sagoff 97 (Mark Sagoff, Director of Institute for Philosophy and Public Policy, A.B from Harvard, fellow of the American Association for the Advancement of Science and of the Hastings Center. “Do we consume too much,” The Atlantic online,

<http://www.theatlantic.com/past/docs/issues/97jun/consume.htm//Mkoo>

Peasants in less-developed nations often confront intractable poverty, an entrenched land-tenure system, and a lack of infrastructure; they have little access to markets, education, or employment. Many of the rural poor, according to the environmental consultant Norman Myers, "have no option but to over-exploit environmental resource stocks in order to survive" -- for example, by "increasingly encroaching onto tropical forests among other low-potential lands." These poorest of the poor "are causing as much natural-resource depletion as the other three billion developing-world people put together." Myers observes that traditional indigenous farmers in tropical forests moved from place to place without seriously damaging the ecosystem. The principal agents of tropical deforestation are refugees from civil war and rural poverty, who are forced to eke out a living on marginal lands. Activities such as road building, logging, and commercial agriculture have barely increased in tropical forests since the early 1980s, according to Myers; slash-and-burn farming by displaced peasants accounts for far more deforestation -- roughly three fifths of the total. Its impact is fast expanding. Most of the wood from trees harvested in tropical forests -- that is, those not cleared for farms -- is used locally for fuel. The likeliest path to protecting the rain forest is through economic development that enables peasants to farm efficiently, on land better suited to farming than to forest. Many have argued that economic activity, affluence, and growth automatically lead to resource depletion, environmental deterioration, and ecological collapse. Yet greater productivity and prosperity -- which is what economists mean by growth -- have become prerequisite for controlling urban pollution and protecting sensitive ecological systems such as rain forests. Otherwise, destitute people who are unable to acquire food and fuel will create pollution and destroy forests. Without economic growth, which also correlates with lower fertility, the environmental and population problems of the South will only get worse. For impoverished countries facing environmental disaster, economic growth may be the one thing that is sustainable.

### Transition Fails – Warming

#### Economic collapse hurts efforts to solve warming -- stability is key to green energy investment.

CSM, ‘8 [“Financial crisis threatens climate-change momentum,” http://www.climateark.org/shared/reader/welcome.aspx?linkid=110643]

As financial mayhem and recession increasingly demand the attention and resources of governments around the world, environmentalists are starting to fret: What about climate change? Their concern is not just that the trillions devoted to rescuing the global financial system mean less cash for the climate-change agenda; they are worried a prolonged recession will deflect consumers from green habits and drain corporate and government coffers of funding for research and development into green technology. [Yvo de Boer](http://www.csmonitor.com/tags/topic/Yvo+de+Boer" \t "_self), who heads the [UN](http://www.csmonitor.com/tags/topic/United+Nations" \t "_self) climate change secretariat, warned last week that it was “undeniable that the financial crisis will have an impact on the climate-change negotiations,” which are due to resume in [Poznan](http://www.csmonitor.com/tags/topic/Poznan" \t "_self), [Poland](http://www.csmonitor.com/tags/topic/Poland" \t "_self), next month. He noted that of the 190 nations seeking to conclude a new UN treaty in [Copenhagen](http://www.csmonitor.com/tags/topic/Copenhagen" \t "_self) next year, few would find it easy to turn to taxpayers for funding. “If we go to citizens under the current circumstances ... and say ‘I’m increasing your tax burden ... to pay for climate policy,’ that might not go down very well,” Mr. de Boer said at a recent conference in [China](http://www.csmonitor.com/tags/topic/China" \t "_self). [Tom Burke](http://www.csmonitor.com/tags/topic/Tom+Burke" \t "_self), founding director of the sustainable-development group E3G, adds that the financial crisis has generated a “politics of distraction.” “People are focused on other things and [climate change] has slipped down the attention span of politicians and the media,” he says. Professor Burke believes some businesses and governments have opportunistically used the crisis to wriggle off the climate-change hook. He notes how governments in [Eastern Europe](http://www.csmonitor.com/tags/topic/Eastern+Europe" \t "_self) have begun to challenge [EU](http://www.csmonitor.com/tags/topic/European+Union" \t "_self) emission-reduction targets, fearing this will hit industry at the worst time. “It makes the prospect for getting agreement to a second phrase of the [Kyoto](http://www.csmonitor.com/tags/topic/Kyoto" \t "_self) protocol in Copenhagen next year a steeper hill to climb,” he says. Yet optimists maintain that the situation presents an opportunity, arguing that if the world can take rapid, expensive action to save its banks, it can do the same to save its climate. “One thing we have realized is that the authorities can take action if they want,” says [Stefan Singer](http://www.csmonitor.com/tags/topic/Stefan+Singer" \t "_self), head of the European Climate and Energy Unit at WWF. “We’ve been saying it will take a couple of hundred billion dollars to deal with this in the short term. “We knew it was a massive amount of money, but in the financial crisis we have seen it is possible to mobilize lots of money as soon as governments and heads of state take things seriously,” he adds. When heads of state meet in [Washington](http://www.csmonitor.com/tags/topic/Washington%2c+DC" \t "_self) this weekend to discuss how to resuscitate international financial architecture in the wake of the economic crisis, climate change will figure fleetingly, if at all. Meanwhile, at government level, responses to the crisis have largely involved measures like cutting interest rates and fiscal-stimulus packages designed to get the “old economy” moving again. Environmentalists are concerned that a big opportunity is going begging, that financial reforms should take into account the wider risk of climate change to the world. As one UN official put it, all the talk has been about [Wall Street](http://www.csmonitor.com/tags/topic/Wall+Street" \t "_self) and Main Street, but what about places with no streets? A slowing in economic activity might look like an environmental blessing. Slowing demand generally means lower energy usage. Car sales and gasoline demand have been falling sharply. Projections for flights out of [Europe](http://www.csmonitor.com/tags/topic/Europe" \t "_self)’s busiest airport, [Heathrow](http://www.csmonitor.com/tags/topic/London+Heathrow+Airport" \t "_self), show a 2 percent decline – equivalent to around 10,000 fewer flights a year. But the green lobby warns this is just a momentary blip. A few quarters of slowdown may bear down temporarily on the growth in greenhouse gas emissions, but will not shift the world onto a low-carbon path. Scientists are calling for an 80 percent cut in carbon emissions by 2050. “It will only take us back toward the trend line,” says Burke. “Anyone who thinks this will rescue us or buy more time has misunderstood where we are.” Green technology has benefited enormously from the sky-high cost of crude in recent years, which has made renewable energy like wind, wave, solar, tidal, and biomass power generation cheaper by comparison. The collapse in crude prices to $60 a barrel represents a threat to the renewables industry, and already there are signs of go-slow in the sector. Last week, the Danish group Vestas, the world’s biggest wind-turbine maker, indicated it would be slowing operations “until we see how the financial problems affect the wider picture.” A leading British scientist, speaking off the record at an informal recent event, says R&D for green technology will take a hit. British energy giants [BP](http://www.csmonitor.com/tags/topic/BP+plc" \t "_self) and Shell have signaled a pullback from renewable projects in [Britain](http://www.csmonitor.com/tags/topic/United+Kingdom" \t "_self). Such projects are highly capital intensive, and raising cash now is challenging. “All big investment projects are increasingly uncertain in this environment,” says [Julian Lee](http://www.csmonitor.com/tags/topic/Julian+Lee" \t "_self), a senior energy analyst at the [Centre for Global Energy Studies](http://www.csmonitor.com/tags/topic/Centre+for+Global+Energy+Studies" \t "_self). “People are holding off from investment decisions in oil and gas projects, and I’m sure the same reasoning will apply to big renewable projects like wind farms.” Some optimists argue that the renewable-energy sector could help power the world out of recession. [President-elect Barack Obama](http://www.csmonitor.com/tags/topic/Barack+Obama" \t "_self) has spoken of creating millions of “green-collar” jobs through a massive investment in renewable projects. “If you look at renewable technology, it’s very employment intensive,” says [Andrew Simms](http://www.csmonitor.com/tags/topic/Andrew+Simms" \t "_self), at the new economics foundation, a [London](http://www.csmonitor.com/tags/topic/London+(England)" \t "_self)-based think tank. “The game of massive environmental transformation of economies is the way we can tackle recession.” One silver lining of the financial crisis is that investment decisions may not be as short-term as they have been. A UN climate-change official, speaking on condition of anonymity, argues that this will mean the investment community will have to factor in the climate-change risk. “As soon as you start lengthening the period of risk that you take into consideration and you take in account what will happen in 10 to 15 years, then climate change is on the table,” says the UN official. “People who really do control large amounts of assets and money are starting to think like this.” Dr. Singer agrees. At a recent meeting of bankers he attended, representatives of financial institutions were actually considering clean technology investments as an attractive, long-term, less risky proposition. After all, he says, few people expect oil prices to stay low for a long time. And against that backdrop, green investment starts to look like a good hedge against future energy shocks.

1. According to the IPCC report, a 85 percent reduction of carbon dioxide emissions from 2000 to 2050 would help the atmospheric concentration of carbon dioxide equivalent to stabilize at 445 ppm, which corresponds to an atmospheric concentration of carbon dioxide at 350 ppm. [↑](#footnote-ref-1)