## Top Level Stuff

### 1NC—De-Dev

**Economic growth is unsustainable—requires resources beyond earth’s carrying capacity**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, June 1, ‘The Simpler Way perspective on the global predicament’, [http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament //](http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament%20//) JK

Fault 1: Sustainability. Most people seem to have no idea of the magnitude of the sustainability problem. Most people are familiar with the basic facts and figures here but do not grasp their significance. There is no possibility of the “living standards” of all people on earth ever rising to rich world per capita levels of consumption of energy, minerals, timber, water, food, phosphorous etc. These rates of consumption are the basic cause of most of the alarming problems now threatening our survival. Consider for instance: If all the estimated 9 billion people likely to be living on earth after 2050 were to consume resources at the present per capita rate in rich countries, world annual resource production rates would have to be about 8 times as great as they are now. At that rate all estimated potentially recoverable resources of fossil fuels would be exhausted in about 15 years. If all 9 billion were to have the present US timber use per person, the forest area harvested would have to be 3 to 4 times all the forest area on the planet. If 9 billion were to have a North American diet 4.5 billion ha of cropland would be required, but there are only 1.4 billion ha of cropland in use. It is now widely thought that global petroleum supply will peak within a decade at most, and could be down to half the present level by about 2030. We are so dependent on liquid fuels this prospect is alarming. If 9 billion people were to use minerals at the present per capita US rate of use, estimated potentially recoverable resources then 1/3 of the 36 most commonly used minerals would be completely exhausted in about 30 years. “Footprint analysis” indicates that the amount of productive land required to provide one person in Australia with food, water, energy and settlement area is about 8 ha. The US figure is closer to 12 ha. If 9 billion people were to live as Australians do 72 billion ha of productive land would be required. However the total amount of productive land available on the planet is only in the region of 8 billion ha. In other words our rich world per capita footprint is about nine times as big as it will ever be possible for all people to have. The atmospheric scientists are now generally indicating that the amount of carbon dioxide we release to the atmosphere must be reduced to zero by 2100, and probably by 2050. There is a strong argument that our energy-intensive lifestyles cannot be provided to 9 billion people by substituting renewable sources such as the wind for fossil fuels, burning coal and burying the CO2, or by the kind of nuclear reactors we have now. (Trainer, 2007, 2010a, 2011.) Such figures make two points glaringly obvious. The first is that we are far beyond sustainable levels of production and consumption, and the second is that it would be utterly impossible for all to have the ”living standards” we have taken for granted in rich countries like Australia. **We are not just a little beyond sustainable levels of resource demand and ecological impact – we are far beyond sustainable levels, maybe by a factor of ten**. Clearly rich world ways, systems and “living standards” are grossly unsustainable, and can never be extended to all the world’s people. Again, few people seem to grasp the magnitude of the overshoot. We must face up to dramatic reductions in our present per capita levels of resource use and therefore of production and consumption. The argument below is that the required reductions are so big that they cannot possibly be achieved in a society committed to affluence and growth. Now add the commitment to economic growth. But the main worry is not the present level of resource use and ecological impact discussed above. The fundamental problem is the levels we will rise to given the obsession with constantly increasing volumes of production. The supreme goal in all countries is to raise incomes, “living standards” and the GDP as much as possible, constantly and without any idea of a limit. That is, the most important goal is economic growth. If we assume a) a 3% p.a. economic growth, b) a population of 9 billion, c) all the world’s people rising to the “living standards” we in the rich world would have in 2050 given 3% growth until then, the total volume of world economic output would be 20 times as great as it is now, and doubling every 23 years thereafter. So even though the present levels of production and consumption are grossly unsustainable the determination to have continual increase in income and economic output will multiply these towards absurdly impossible levels in coming decades.

**Collapse now is key - growth causes ecocide and environmental collapse, leading to the extinction of all life; we must act to prevent the systemic violence occurring against the planet**

**Barry, ‘12** – Glen, Ph.D. in Land Resources from the University of Wisconsin-Madison, President and Founder of Ecological Internet, Janurary 1, ‘EARTH MEANDERS: On Violence and Earth Revolution’, http://www.ecoearth.info/blog/2012/01/on\_violence\_and\_earth\_revoluti.asp#more // JK

The ecological foundation of being is unraveling before our very eyes. Without ecosystems there is no life. Fiercely loving Earth is the answer. Let's sustain global ecology together like our shared survival and abundance depends upon it. And while we set out using classic civil disobedience tactics, let’s not dismiss out of hand any obstruction, uncivil disobedience, sabotage and targeted insurgency tactics – that are non-terrorist – and that may be necessary to achieve global ecological sustainability. The human family’s shared survival depends upon passionately defending Earth using all means necessary. Earth's ecosystems are collapsing under the burden of human growth, destroying our one shared biosphere that makes life possible. Industrial growth – frantically destroying ecosystems to feed insatiable, ever-growing appetites – is an aberration, a mistake, a disease. If left untreated, this will be the end of the human family, all life, and Earth's very being. Infinite economic growth at the expense of ecosystems is impossible, and seeking endless and inequitable growth in consumption and population can only lead to collapse and **massive die-off**. Humanity’s last best chance to justly and equitably sustain a livable planet is to protect and restore ecosystems, end fossil fuels, and a people's power Earth revolution to utterly destroy the ecocidal industrial growth machine. We are all bloody fools to tolerate and not immediately overthrow a violently ecocidal system that is killing us all. If we all understood the implications of global ecosystem collapse, we would go now, together, and slay the global growth machine. It is too late to escape profound ecological decline, yet complete disastrous social and ecological collapse – and possible end to most or all life – may yet be avoided. Sustaining ecology must become society’s central organizing principle or humans and all species face horrendous death. Globally it is time for radical change to simply survive converging ecology, food, war, water, inequity, population, climate, jobs, ocean, and extinction crises. It is deeply troubling most "environmentalists" deny the severity of ecosystem collapse, rejecting out of hand revolutionary measures sufficient to sustain ecology. Earth is dying a death of a billion lashes as ecosystems are liquidated for consumption as if nature has no worth. 80% of old forests are gone, 50% of top soil, 90% of big ocean fish, bee populations are collapsing, we are undergoing abrupt climate change, and two billion are hungry and thirsty – to say nothing of acidic and dead oceans, nitrogen pollution, fracking and tar sands, extinction, desertification, water scarcity, pervasive toxics, and how all these ecological crises interact and reinforce each other. Yes, you read this right – **EARTH IS DYING** – not that humans are going extinct, but Earth will recover. A whole body of global change and ecology science and intuition indicates Earth is well past its carrying capacity and planetary boundaries, that enough ecosystems have been lost, diminished, and changed forever, that the biogeochemical process that make life possible are failing. **We face an unprecedented planetary ecological emergency.** Earth’s ecology crises go unaddressed because of lack of justice, equity and rights –and 1% elite rule with big NGO environmental group greenwash. **Earth is dying NOW**. **The thin layer of life known as the biosphere is collapsing NOW**. **Life giving ecosystems are being destroyed NOW**. **Being is ending NOW.** It could be different if we acted together to stop the forces of ecocide. The human family embraces a sustaining ecology ethic, or all die brutal, needless deaths, gasping for air, hungry and cold, at each other’s throats. Most of us have lost contact with Earth that made and sustains us, so we kill our creator, life and ourselves without knowing or caring. It is everybody’s responsibility to stop this self-fulfilling death wish. Those who have yet to have this ecological revelation and are killing Earth must be compelled to stop, using all means necessary. There is no escaping the ECOLOGICAL FACT that global ecosystems and our one shared biosphere are **literally falling apart** as we continue to incautiously pull pieces from them.

**Tenvironmental collapse, resource shortages, poverty, and collapse of social cohesion are all caused by the current economic system. Transition to a simpler society allows a more equal and better society, and tech doesn’t solve**

**Trainer, ‘10** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, February 17th, ‘A Simpler Way’, http://ukiahcommunityblog.wordpress.com/2010/02/17/a-simpler-way/ // JK

1. THE GLOBAL SITUATION Global problems are rapidly getting worse. The environment is being severely damaged. Resources are being depleted. The poorest billion are probably becoming poorer. Even in the richest societies the quality of life is falling, cohesion is eroding and social problems are accelerating. These problems cannot be solved without huge and fundamental change, because **they are directly caused by our present socio-economic system.** The basic faults built into our society centre firstly on the demand for high material “living standards” in a world of limited resources. We cannot keep up the present levels of production and consumption and resource use for long, and there is no possibility of all the world’s people ever rising to these levels. People in rich countries have these high “living standards” only because we are taking much more than our fair share of the available resources and depriving the majority. Even though present levels of production and consumption are unsustainable this economic system must have constant and endless increase in output, i.e., economic growth. A sustainable world order is not possible unless we move to much less production and consumption, and much less affluent lifestyles within a steady-state economic system. Our second major mistake is allowing the market to determine our fate. An economy which relies heavily on free market forces will inevitably allocate most of the world’s wealth to the few, produce inappropriate development, destroy the environment, and ignore the needs of the majority. What is done must be determined by what humans and ecosystems need, not by what is most profitable in a market. Yet we are now racing to a globalised economy in which transnational corporations will be increasingly free to determine what is produced and developed, according to what will maximise their profits. We need much more than change to an economic system that is not driven by market forces, profit and growth (although markets and private enterprise could have a role in a satisfactory society.) Our values and culture put far too much emphasis on competition, success, individualism, acquisitiveness, wealth and luxury. There must be a value change to much more concern with cooperation, sharing, helping, caring, collective welfare and living more simply. Technical advance alone cannot solve these problems. It cannot make a big enough difference to levels of resource use and ecological impact. It cannot eliminate the need for radical change in our “living standards”, values and economy.

**And, Economic Decline doesn’t cause war**

**Deudney 91** – Hewlett Fellow in Science, Technology, and Society at the Center for Energy and Environmental Studies at Princeton (Daniel, “Environment and Security: Muddled Thinking”, Bulletin of the Atomic Scientists, p. 27)

Poverty Wars. In a second scenario, declining living standards first cause internal turmoil. then war. If groups at all levels of affluence protect their standard of living by pushing deprivation on other groups class war and revolutionary upheavals could result. Faced with these pressures, liberal democracy and free market systems could increasingly be replaced by authoritarian systems capable of maintaining minimum order.9 If authoritarian regimes are more war-prone because they lack democratic control, and if revolutionary regimes are warprone because of their ideological fervor and isolation, then the world is likely to become more violent. The record of previous depressions supports the proposition that widespread economic stagnation and unmet economic expectations contribute to international conflict. Although initially compelling, this scenario has major flaws. One is that it is arguably based on unsound economic theory. Wealth is formed not so much by the availability of cheap natural resources as by capital formation through savings and more efficient production. Many resource-poor countries, like Japan, are very wealthy, while many countries with more extensive resources are poor. Environmental constraints require an end to economic growth based on growing use of raw materials, but not necessarily an end to growth in the production of goods and services. In addition, economic decline does not necessarily produce conflict. How societies respond to economic decline may largely depend upon the rate at which such declines occur. And as people get poorer, they may become less willing to spend scarce resources for military forces. As Bernard Brodie observed about the modein era, “The predisposing factors to military aggression are full bellies, not empty ones.”’” The experience of economic depressions over the last two centuries may be irrelevant, because such depressions were characterized by under-utilized production capacity and falling resource prices. In the 1930 increased military spending stimulated economies, but if economic growth is retarded by environmental constraints, military spending will exacerbate the problem

## The Sustainability Debate

### Collapse Inev—Generic

### AT: Growth Sustainable

**Growth is unsustainable and is only going to get worse – Multitude of warrants**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, June 1, ‘The Simpler Way perspective on the global predicament’, [http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament //](http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament%20//) JK

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### Collapse Inev—Ecology

#### Prefer our evidence—it’s based on physical capacities of the earth while theirs is theory

Heinberg 10 [Richard Heinberg, journalist, teaches at the Core Faculty of New College of California, on the Board of Advisors of the Solar Living Institute and the Post Carbon Institute, “Life After Growth,” March 4, 2010, http://www.countercurrents.org/heinberg040310.htm]

In nature, growth always slams up against non-negotiable 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's another real-world example. In recent years China's economy has been growing at eight percent or more per year; that means it is more than doubling in size every ten 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? 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. In organisms, growth rates are largely controlled by genes. In economies, growth seems tied to factors such as the availability of resources—chiefly energy resources ("food" for the industrial system). During the 20th century, cheap and abundant fossil fuels enabled rapid economic expansion; at some point, therefore, fossil fuel depletion could put a brake on growth. It is also possible that industrial wastes could accumulate to the point that the biological systems that underpin economic activity (such as forests, crops, and human bodies) begin to fail. But economists generally don't see things this way. That's 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 so 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 U.S., the number of inflation-adjusted dollars generated in the economy for every unit of energy consumed has increased steadily over recent decades (the amount of energy, in British Thermal Units, required to produce a dollar of GDP has been dropping steadily, from close to 20,000 BTU per dollar in 1949 to 8,500 BTU in 2008). 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 either resources or money—to do more. That enables more growth. Finding substitutes for depleting resources and upping efficiency 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.

#### Economic growth is unsustainable – ecological economics prove economic resources cannot be maintained over long periods

Goerner et al 9 {Sally J. Integral Science Institute, 374 Wesley Ct, Chapel Hill, NC 27516, USA, Bernard Lietaer, Center for Sustainable Resources, 101 Giannini Hall, University of California, Berkeley, CA 94720-3100, USA, Robert E. Ulanowicz, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD 20688-0038, USA, WEB 7/6/2012; “Ecological Economics,” Vol. 69. Issue 1, 15 November 2009, Pages 76–81 }

2. QED's approach to quantifying sustainable economic development¶ The basic idea behind Quantitative Economic Development is that the same laws of growth and development apply both to natural flow systems and economic ones. This notion rests on a thermodynamic hypothesis with long historical roots in ecological economics, 2 namely, that similar energy concepts and network analysis methods can be applied to all matter–energy–information flow systems because, as Systems Science has long observed and Prigogine's (1967) work in Self-organizing Systems confirms, such systems exhibit strong parallels in behavioral patterns and developmental dynamics.¶ QED’s assessment of sustainable development grows out of energy flow's natural connection to network structure. **Ecologists**, for example, **have long known that an ecosystem's ability to maintain its own vitality over long periods—that is, its “sustainability”—depends largely on the layout and magnitudes of the trophic pathways by which energy, information and resources are circulated**. As early as 1951, Leontief showed that economic structure can be effectively modeled as a similar flow-map (input–output map) of goods, services, money or value circulating across a network of businesses (Leontief, 1951). QED's measures, therefore, are based on the layout and magnitudes of flows (T) from any node i to node j (Tij), where flows can represent biomass going from prey i to predator j (see Fig. 2), or money or materials going from business sector i to sector j or from country i to country j. This approach adds a structural specificity lacking in earlier thermodynamic measures such as energy (Odum, 1996) and exergy (Dincer and Cengel, 2001) which look at the level of free energy embodied in the organization, not how the organization's structure must be laid out for optimal longevity and work.3

### Collapse Inev—Economy

#### Global recovery is impossible – converging debt, monetary, and banking crises.

Roubini 12 – Nouriel Roubini, a professor at NYU’s Stern School of Business and Chairman of Roubini Global Economics, was one of the few economists to predict the recent global financial crisis. He previously served in the Clinton administration as Senior Economist for the President’s Council of Economic Advisers, and has worked for the International Monetary Fund, the US Federal Reserve, and the World Bank. [June 15, 2012, “A Global Perfect Storm,” Project Syndicate, http://www.project-syndicate.org/commentary/a-global-perfect-storm]

NEW YORK – Dark, lowering financial and economic clouds are, it seems, rolling in from every direction: the eurozone, the United States, China, and elsewhere. Indeed, the global economy in 2013 could be a very difficult environment in which to find shelter. This illustration is by Dean Rohrer and comes from <a CommentsFor starters, the eurozone crisis is worsening, as the euro remains too strong, front-loaded fiscal austerity deepens recession in many member countries, and a credit crunch in the periphery and high oil prices undermine prospects of recovery. The eurozone banking system is becoming balkanized, as cross-border and interbank credit lines are cut off, and capital flight could turn into a full run on periphery banks if, as is likely, Greece stages a disorderly euro exit in the next few months. CommentsMoreover, fiscal and sovereign-debt strains are becoming worse as interest-rate spreads for Spain and Italy have returned to their unsustainable peak levels. Indeed, the eurozone may require not just an international bailout of banks (as recently in Spain), but also a full sovereign bailout at a time when eurozone and international firewalls are insufficient to the task of backstopping both Spain and Italy. As a result, disorderly breakup of the eurozone remains possible. CommentsFarther to the west, US economic performance is weakening, with first-quarter growth a miserly 1.9% – well below potential. And job creation faltered in April and May, so the US may reach stall speed by year end. Worse, the risk of a double-dip recession next year is rising: even if what looks like a looming US fiscal cliff turns out to be only a smaller source of drag, the likely increase in some taxes and reduction of some transfer payments will reduce growth in disposable income and consumption. CommentsMoreover, political gridlock over fiscal adjustment is likely to persist, regardless of whether Barack Obama or Mitt Romney wins November’s presidential election. Thus, new fights on the debt ceiling, risks of a government shutdown, and rating downgrades could further depress consumer and business confidence, reducing spending and accelerating a flight to safety that would exacerbate the fall in stock markets. CommentsIn the east, China, its growth model unsustainable, could be underwater by 2013, as its investment bust continues and reforms intended to boost consumption are too little too late. A new Chinese leadership must accelerate structural reforms to reduce national savings and increase consumption’s share of GDP; but divisions within the leadership about the pace of reform, together with the likelihood of a bumpy political transition, suggest that reform will occur at a pace that simply is not fast enough. CommentsThe economic slowdown in the US, the eurozone, and China already implies a massive drag on growth in other emerging markets, owing to their trade and financial links with the US and the European Union (that is, no “decoupling” has occurred). At the same time, the lack of structural reforms in emerging markets, together with their move towards greater state capitalism, is hampering growth and will reduce their resiliency. CommentsFinally, long-simmering tensions in the Middle East between Israel and the US on one side and Iran on the other on the issue of nuclear proliferation could reach a boil by 2013. The current negotiations are likely to fail, and even tightened sanctions may not stop Iran from trying to build nuclear weapons. With the US and Israel unwilling to accept containment of a nuclear Iran by deterrence, a military confrontation in 2013 would lead to a massive oil price spike and global recession. CommentsThese risks are already exacerbating the economic slowdown: equity markets are falling everywhere, leading to negative wealth effects on consumption and capital spending. Borrowing costs are rising for highly indebted sovereigns, credit rationing is undermining small and medium-size companies, and falling commodity prices are reducing exporting countries’ income. Increasing risk aversion is leading economic agents to adopt a wait-and-see stance that makes the slowdown partly self-fulfilling. CommentsCompared to 2008-2009, when policymakers had ample space to act, monetary and fiscal authorities are running out of policy bullets (or, more cynically, policy rabbits to pull out of their hats). Monetary policy is constrained by the proximity to zero interest rates and repeated rounds of quantitative easing. Indeed, economies and markets no longer face liquidity problems, but rather credit and insolvency crises. Meanwhile, unsustainable budget deficits and public debt in most advanced economies have severely limited the scope for further fiscal stimulus. CommentsUsing exchange rates to boost net exports is a zero-sum game at a time when private and public deleveraging is suppressing domestic demand in countries that are running current-account deficits and structural issues are having the same effect in surplus countries. After all, a weaker currency and better trade balance in some countries necessarily implies a stronger currency and a weaker trade balance in others. CommentsMeanwhile, the ability to backstop, ring-fence, and bail out banks and other financial institutions is constrained by politics and near-insolvent sovereigns’ inability to absorb additional losses from their banking systems. As a result, sovereign risk is now becoming banking risk. Indeed, sovereigns are dumping a larger fraction of their public debt onto banks’ balance sheet, especially in the eurozone. CommentsTo prevent a disorderly outcome in the eurozone, today’s fiscal austerity should be much more gradual, a growth compact should complement the EU’s new fiscal compact, and a fiscal union with debt mutualization (Eurobonds) should be implemented. In addition, a full banking union, starting with eurozone-wide deposit insurance, should be initiated, and moves toward greater political integration must be considered, even as Greece leaves the eurozone. CommentsUnfortunately, Germany resists all of these key policy measures, as it is fixated on the credit risk to which its taxpayers would be exposed with greater economic, fiscal, and banking integration. As a result, the probability of a eurozone disaster is rising. CommentsAnd, while the cloud over the eurozone may be the largest to burst, it is not the only one threatening the global economy. Batten down the hatches.

#### Economic recovery is impossible—structural barriers.

Wallerstein 11— Immanuel Wallerstein is a senior research scholar at Yale University [January/February, 2011, “The Global Economy Won't Recover, Now or Ever,” http://www.foreignpolicy.com/articles/2011/01/02/unconventional\_wisdom?page=full]

Virtually everyone everywhere-economists, politicians, pundits -- agrees that the world has been in some kind of economic trouble since at least 2008. And virtually everyone seems to believe that in the next few years the world will somehow "recover" from these difficulties. After all, upturns always occur after downturns. The remedies recommended vary considerably, but the idea that the system shall continue in its essential features is a deeply rooted faith. But it is wrong. All systems have lives. When their processes move too far from equilibrium, they fluctuate chaotically and bifurcate. Our existing system, what I call a capitalist world-economy, has been in existence for some 500 years and has for at least a century encompassed the entire globe. It has functioned remarkably well. But like all systems, it has moved steadily further and further from equilibrium. For a while now, it has moved too far from equilibrium, such that it is today in structural crisis. The problem is that the basic costs of all production have risen remarkably. There are the personnel expenses of all kinds -- for unskilled workers, for cadres, for top-level management. There are the costs incurred as producers pass on the costs of their production to the rest of us -- for detoxification, for renewal of resources, for infrastructure. And the democratization of the world has led to demands for more and more education, more and more health provisions, and more and more guarantees of lifetime income. To meet these demands, there has been a significant increase in taxation of all kinds. Together, these costs have risen beyond the point that permits serious capital accumulation. Why not then simply raise prices? Because there are limits beyond which one cannot push their level. It is called the elasticity of demand. The result is a growing profit squeeze, which is reaching a point where the game is not worth the candle. What we are witnessing as a result is chaotic fluctuations of all kinds -- economic, political, sociocultural. These fluctuations cannot easily be controlled by public policy. The result is ever greater uncertainty about all kinds of short-term decision-making, as well as frantic realignments of every variety. Doubt feeds on itself as we search for ways out of the menacing uncertainty posed by terrorism, climate change, pandemics, and nuclear proliferation. The only sure thing is that the present system cannot continue. The fundamental political struggle is over what kind of system will replace capitalism, not whether it should survive. The choice is between a new system that replicates some of the present system's essential features of hierarchy and polarization and one that is relatively democratic and egalitarian. The extraordinary expansion of the world-economy in the postwar years (more or less 1945 to 1970) has been followed by a long period of economic stagnation in which the basic source of gain has been rank speculation sustained by successive indebtednesses. The latest financial crisis didn't bring down this system; it merely exposed it as hollow. Our recent "difficulties" are merely the next-to-last bubble in a process of boom and bust the world-system has been undergoing since around 1970. The last bubble will be state indebtednesses, including in the so-called emerging economies, leading to bankruptcies. Most people do not recognize -- or refuse to recognize -- these realities. It is wrenching to accept that the historical system in which we are living is in structural crisis and will not survive. Meanwhile, the system proceeds by its accepted rules. We meet at G-20 sessions and seek a futile consensus. We speculate on the markets. We "develop" our economies in whatever way we can. All this activity simply accentuates the structural crisis. The real action, the struggle over what new system will be created, is elsewhere.

#### Collapse inevitable—peak oil

Heinberg 10—Richard Heinberg is an American journalist and educator who has written extensively on energy, economic, and ecological issues, including oil depletion. He is the author of ten books. He serves as the senior fellow at the Post Carbon Institute. He has addressed the Trade Committee of the European Parliament and served as an advisor to the National Petroleum Council in its report to the U.S. Secretary of Energy on Peak Oil. [August 11, 2010, “Temporary Recession or the End of Growth?” http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of]

For several years, a swelling subculture of commentators (which includes the present author) has been forecasting a financial crash, basing this prognosis on the assessment that global oil production was about to peak. [(2)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref2) Our reasoning went like this: Continual increases in population and consumption cannot continue forever on a finite planet. This is an axiomatic observation with which everyone familiar with the mathematics of compounded arithmetic growth must agree, even if they hedge their agreement with vague references to “substitutability” and “demographic transitions.” [(3)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref3) This axiomatic limit to growth means that the rapid expansion in both population and per-capita consumption of resources that has occurred over the past century or two must cease at some particular time. But *when* is this likely to occur? The unfairly maligned *Limits to Growth* studies, published first in 1972 with periodic updates since, have attempted to answer the question with analysis of resource availability and depletion, and multiple scenarios for future population growth and consumption rates. The most pessimistic scenario in 1972 suggested an end of world economic growth around 2015. [(4)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref4) But there may be a simpler way of forecasting growth’s demise. Energy is the ultimate enabler of growth (again, this is axiomatic: physics and biology both tell us that without energy nothing happens—certainly not growth). Industrial expansion throughout the past two centuries has in every instance been based on increased energy consumption. [(5)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref5) More specifically, industrialism has been inextricably tied to the availability and consumption of cheap energy from coal and oil (and more recently, natural gas). However, fossil fuels are by their very nature depleting, non-renewable resources. Therefore (according to the Peak Oil thesis), the eventual inability to continue increasing supplies of cheap fossil energy will lead to a cessation of economic growth in general, unless alternative energy sources and efficiency of energy use can be deployed rapidly and to a sufficient degree. [(6)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref6) Of the three conventional fossil fuels, oil is arguably the most economically vital, since it supplies 95 percent of all transport energy. Further, petroleum is the fuel with which we are likely to encounter supply problems soonest, because global petroleum discoveries have been declining for decades, and most oil producing countries are already seeing production declines. [(7)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref7) So, by this logic, the end of economic growth (as conventionally defined) is inevitable, and Peak Oil is the likely trigger. Why would Peak Oil lead not just to problems for the transport industry, but a more general economic and financial crisis? During the past century growth has become institutionalized in the very sinews of our economic system. Every city and business wants to grow. This is understandable merely in terms of human nature: nearly everyone wants a competitive advantage over someone else, and growth provides the opportunity to achieve it. But there is also a financial survival motive at work: without growth, businesses and governments are unable to service their debt. And debt has become endemic to the industrial system. During the past couple of decades, the financial services industry has grown faster than any other sector of the American economy, even outpacing the rise in health care expenditures, accounting for a third of all growth in the U.S. economy. From 1990 to the present, the ratio of debt-to-GDP expanded from 165 percent to over 350 percent. In essence, the present welfare of the economy rests on debt, and the collateral for that debt consists of a wager that next year’s levels of production and consumption will be higher than this year’s. Given that growth cannot continue on a finite planet, this wager, and its embeddedness in the institutions of finance, can be said to constitute history’s greatest Ponzi scheme. We have justified present borrowing with the irrational belief that perpetual growth is possible, necessary, and inevitable. In effect we have borrowed from future generations so that we could gamble away their capital today. Until recently, the Peak Oil argument has been framed as a forecast: the inevitable decline in world petroleum production, whenever it occurs, will kill growth. But here is where forecast becomes diagnosis: during the period from 2005 to 2008, production stopped growing and oil prices rose to record levels. By July of 2008, the price of a barrel of oil was nudging close to $150—half again higher than any previous petroleum price in inflation-adjusted terms—and the global economy was beginning to topple. The auto and airline industries shuddered; ordinary consumers had trouble buying gasoline for their commute to work while still paying their mortgages. Consumer spending began to decline. By September the economic crisis was also a financial crisis, as banks trembled and imploded. [(8)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref8) Given how much is at stake, it is important to evaluate the two diagnoses (Conventional and Peak Oil) on the basis of facts, not preconceptions. It is unnecessary to examine evidence supporting or refuting the Conventional Diagnosis, because its validity is not in doubt—as a *partial* explanation for what is occurring. The question is whether it is a *sufficient* explanation, and hence an adequate basis for designing a successful response. What’s the evidence favoring the Alternative? A good place to begin is with a recent paper by economist James Hamilton of the University of California, San Diego, titled “Causes and Consequences of the Oil Shock of 2007-08,” which discusses oil prices and economic impacts, explaining how and why the economic crash is related to the oil price shock of 2008. [(9)](http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of#ref9) Hamilton starts by citing previous studies showing a tight correlation between oil price spikes and recessions. On the basis of this correlation, every attentive economist should have forecast a steep recession for 2008. “Indeed,” writes Hamilton, “the relation could account for the entire downturn of 2007-08…. If one could have known in advance what happened to oil prices during 2007-08, and if one had used the historically estimated relation [between price rise and economic impact]… one would have been able to predict the level of real GDP for both of 2008:Q3 and 2008:Q4 quite accurately.” Again, this is not to ignore the role of the financial and real estate sectors in the ongoing global economic meltdown. But in the Alternative Diagnosis the collapse of the housing and derivatives markets is seen as amplifying a signal ultimately emanating from a failure to increase the rate of supply of depleting resources. Hamilton again: “At a minimum it is clear that something other than housing deteriorated to turn slow growth into a recession. That something, in my mind, includes the collapse in automobile purchases, slowdown in overall consumption spending, and deteriorating consumer sentiment, in which the oil shock was indisputably a contributing factor.”

### Collapse Now Key

#### Collapse inevitable – now key to solve an environmental crisis – tech can’t solve and neither will space

**Brent 7/18** – frequent contributor to Countercurrents, expert on population issues

(Jason, “Cessation Of Growth: Voluntary And Coercive Population Control,” <http://www.countercurrents.org/brent180711.htm>, dml)

6. Since compound/exponential growth is so powerful, both the economy and the population of the world must cease their growth in the very near future. I can state with almost absolute certainty that if either were to grow at the compound rate of one percent per year growth will cease no later than 140 years from today as such a growth rate would cause both of them to increase by a factor of four and the Earth could not support a population four times as great as the present population or a world economy four times as great as the current world economy. 7. The resources used by humanity can be divided into two groups, nonrenewable and renewable. By definition nonrenewable resources are finite and will eventually be used up by humanity. Many, if not most, renewable resources are being used up by humanity faster than nature can replace them and, therefore, they also must be considered nonrenewable. 8. Recycling, substitution of one resource for another resource, new technologies, environmentalism, and any other action taken by humanity will not permit continuous compound economic and/or population growth. Alternative energy resources will not permit continuous compound population and/or economic growth. Humanity has withdrawn from the Earth the most easily accessible resources which the Earth can provide. In the future resources will become more expensive and difficult to obtain as they will be substantially less accessible and will be more difficult to process into usable a form. 9. The concept of obtaining resources from extraterrestrial planets or transferring part of humanity to extraterrestrial planets is a non-workable fallacy.

#### Collapse now is key to prevent extinction

Barry 8 – President and Founder of Ecological Internet, Ph.D. in Land Resources from U-Wisconsin-Madison

(Glen, “Economic Collapse And Global Ecology”, http://www.countercurrents.org/barry140108.htm)

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.

### A2: Tech/Progress Solves

#### Collapse is inevitable – we must allow small breakdowns to prevent total collapse – even tech developments will face diminishing returns.

MacKenzie 8 [Debora MacKenzie is Canadian, did graduate work in electrophysiology in the US, and since 1980 has lived in Europe. She has been a regular contributor to the British magazine New Scientist since 1984, in recent years specialising in infectious disease, food production, arms control, fisheries, and public attitudes to science. “Are We Doomed,” New Scientist, April 2, 2008, http://www.planetthoughts.org/?pg=pt/Whole&qid=2737]

DOOMSDAY. The end of civilisation. Literature and film abound with tales of plague, famine and wars which ravage the planet, leaving a few survivors scratching out a primitive existence amid the ruins. Every civilisation in history has collapsed, after all. Why should ours be any different? Doomsday scenarios typically feature a knockout blow: a massive asteroid, all-out nuclear war or a catastrophic pandemic (see "The end of civilisation"). Yet there is another chilling possibility: what if the very nature of civilisation means that ours, like all the others, is destined to collapse sooner or later? A few researchers have been making such claims for years. Disturbingly, recent insights from fields such as complexity theory suggest that they are right. It appears that once a society develops beyond a certain level of complexity it becomes increasingly fragile. Eventually, it reaches a point at which even a relatively minor disturbance can bring everything crashing down. Some say we have already reached this point, and that it is time to start thinking about how we might manage collapse. Others insist it is not yet too late, and that we can - we must - act now to keep disaster at bay. **Environmental mismanagement** History is not on our side. Think of Sumeria, of ancient Egypt and of the Maya. In his 2005 best-seller Collapse, Jared Diamond of the University of California, Los Angeles, blamed environmental mismanagement for the fall of the Mayan civilisation and others, and warned that we might be heading the same way unless we choose to stop destroying our environmental support systems. Lester Brown of the Earth Policy Institute in Washington DC agrees. He has long argued that governments must pay more attention to vital environmental resources. "It's not about saving the planet. It's about saving civilisation," he says. Others think our problems run deeper. From the moment our ancestors started to settle down and build cities, we have had to find solutions to the problems that success brings. "For the past 10,000 years, problem solving has produced increasing complexity in human societies," says Joseph Tainter, an archaeologist at the University of Utah, Salt Lake City, and author of the 1988 book The Collapse of Complex Societies. If crops fail because rain is patchy, build irrigation canals. When they silt up, organise dredging crews. When the bigger crop yields lead to a bigger population, build more canals. When there are too many for ad hoc repairs, install a management bureaucracy, and tax people to pay for it. When they complain, invent tax inspectors and a system to record the sums paid. That much the Sumerians knew. **Diminishing returns** There is, however, a price to be paid. Every extra layer of organisation imposes a cost in terms of energy, the common currency of all human efforts, from building canals to educating scribes. And increasing complexity, Tainter realised, produces diminishing returns. The extra food produced by each extra hour of labour - or joule of energy invested per farmed hectare - diminishes as that investment mounts. We see the same thing today in a declining number of patents per dollar invested in research as that research investment mounts. This law of diminishing returns appears everywhere, Tainter says. To keep growing, societies must keep solving problems as they arise. Yet each problem solved means more complexity. Success generates a larger population, more kinds of specialists, more resources to manage, more information to juggle - and, ultimately, less bang for your buck. Eventually, says Tainter, the point is reached when all the energy and resources available to a society are required just to maintain its existing level of complexity. Then when the climate changes or barbarians invade, overstretched institutions break down and civil order collapses. What emerges is a less complex society, which is organised on a smaller scale or has been taken over by another group. Tainter sees diminishing returns as the underlying reason for the collapse of all ancient civilisations, from the early Chinese dynasties to the Greek city state of Mycenae. These civilisations relied on the solar energy that could be harvested from food, fodder and wood, and from wind. When this had been stretched to its limit, things fell apart. **An ineluctable process** Western industrial civilisation has become bigger and more complex than any before it by exploiting new sources of energy, notably coal and oil, but these are limited. There are increasing signs of diminishing returns: the energy required to get each new joule of oil is mounting and although global food production is still increasing, constant innovation is needed to cope with environmental degradation and evolving pests and diseases - the yield boosts per unit of investment in innovation are shrinking. "Since problems are inevitable," Tainter warns, "this process is in part ineluctable." Is Tainter right? An analysis of complex systems has led Yaneer Bar-Yam, head of the New England Complex Systems Institute in Cambridge, Massachusetts, to the same conclusion that Tainter reached from studying history. Social organisations become steadily more complex as they are required to deal both with environmental problems and with challenges from neighbouring societies that are also becoming more complex, Bar-Yam says. This eventually leads to a fundamental shift in the way the society is organised. "To run a hierarchy, managers cannot be less complex than the system they are managing," Bar-Yam says. As complexity increases, societies add ever more layers of management but, ultimately in a hierarchy, one individual has to try and get their head around the whole thing, and this starts to become impossible. At that point, hierarchies give way to networks in which decision-making is distributed. We are at this point. This shift to decentralised networks has led to a widespread belief that modern society is more resilient than the old hierarchical systems. "I don't foresee a collapse in society because of increased complexity," says futurologist and industry consultant Ray Hammond. "Our strength is in our highly distributed decision making." This, he says, makes modern western societies more resilient than those like the old Soviet Union, in which decision making was centralised. **Increasing connectedness** Things are not that simple, says Thomas Homer-Dixon, a political scientist at the University of Toronto, Canada, and author of the 2006 book The Upside of Down. "Initially, increasing connectedness and diversity helps: if one village has a crop failure, it can get food from another village that didn't." As connections increase, though, networked systems become increasingly tightly coupled. This means the impacts of failures can propagate: the more closely those two villages come to depend on each other, the more both will suffer if either has a problem. "Complexity leads to higher vulnerability in some ways," says Bar-Yam. "This is not widely understood." The reason is that as networks become ever tighter, they start to transmit shocks rather than absorb them. "The intricate networks that tightly connect us together - and move people, materials, information, money and energy - amplify and transmit any shock," says Homer-Dixon. "A financial crisis, a terrorist attack or a disease outbreak has almost instant destabilising effects, from one side of the world to the other." For instance, in 2003 large areas of North America and Europe suffered blackouts when apparently insignificant nodes of their respective electricity grids failed. And this year China suffered a similar blackout after heavy snow hit power lines. Tightly coupled networks like these create the potential for propagating failure across many critical industries, says Charles Perrow of Yale University, a leading authority on industrial accidents and disasters. **Credit crunch** Perrow says interconnectedness in the global production system has now reached the point where "a breakdown anywhere increasingly means a breakdown everywhere". This is especially true of the world's financial systems, where the coupling is very tight. "Now we have a debt crisis with the biggest player, the US. The consequences could be enormous." "A networked society behaves like a multicellular organism," says Bar-Yam, "random damage is like lopping a chunk off a sheep." Whether or not the sheep survives depends on which chunk is lost. And while we are pretty sure which chunks a sheep needs, it isn't clear - it may not even be predictable - which chunks of our densely networked civilisation are critical, until it's too late. "When we do the analysis, almost any part is critical if you lose enough of it," says Bar-Yam. "Now that we can ask questions of such systems in more sophisticated ways, we are discovering that they can be very vulnerable. That means civilisation is very vulnerable." So what can we do? "The key issue is really whether we respond successfully in the face of the new vulnerabilities we have," Bar-Yam says. That means making sure our "global sheep" does not get injured in the first place - something that may be hard to guarantee as the climate shifts and the world's fuel and mineral resources dwindle. **Tightly coupled system** Scientists in other fields are also warning that complex systems are prone to collapse. Similar ideas have emerged from the study of natural cycles in ecosystems, based on the work of ecologist Buzz Holling, now at the University of Florida, Gainesville. Some ecosystems become steadily more complex over time: as a patch of new forest grows and matures, specialist species may replace more generalist species, biomass builds up and the trees, beetles and bacteria form an increasingly rigid and ever more tightly coupled system. "It becomes an extremely efficient system for remaining constant in the face of the normal range of conditions," says Homer-Dixon. But unusual conditions - an insect outbreak, fire or drought - can trigger dramatic changes as the impact cascades through the system. The end result may be the collapse of the old ecosystem and its replacement by a newer, simpler one. Globalisation is resulting in the same tight coupling and fine-tuning of our systems to a narrow range of conditions, he says. Redundancy is being systematically eliminated as companies maximise profits. Some products are produced by only one factory worldwide. Financially, it makes sense, as mass production maximises efficiency. Unfortunately, it also minimises resilience. "We need to be more selective about increasing the connectivity and speed of our critical systems," says Homer-Dixon. "Sometimes the costs outweigh the benefits." Is there an alternative? Could we heed these warnings and start carefully climbing back down the complexity ladder? Tainter knows of only one civilisation that managed to decline but not fall. "After the Byzantine empire lost most of its territory to the Arabs, they simplified their entire society. Cities mostly disappeared, literacy and numeracy declined, their economy became less monetised, and they switched from professional army to peasant militia." Staving off collapse Pulling off the same trick will be harder for our more advanced society. Nevertheless, Homer-Dixon thinks we should be taking action now. "First, we need to encourage distributed and decentralised production of vital goods like energy and food," he says. "Second, we need to remember that slack isn't always waste. A manufacturing company with a large inventory may lose some money on warehousing, but it can keep running even if its suppliers are temporarily out of action." The electricity industry in the US has already started identifying hubs in the grid with no redundancy available and is putting some back in, Homer-Dixon points out. Governments could encourage other sectors to follow suit. The trouble is that in a world of fierce competition, private companies will always increase efficiency unless governments subsidise inefficiency in the public interest. Homer-Dixon doubts we can stave off collapse completely. He points to what he calls "tectonic" stresses that will shove our rigid, tightly coupled system outside the range of conditions it is becoming ever more finely tuned to. These include population growth, the growing divide between the world's rich and poor, financial instability, weapons proliferation, disappearing forests and fisheries, and climate change. In imposing new complex solutions we will run into the problem of diminishing returns - just as we are running out of cheap and plentiful energy. "This is the fundamental challenge humankind faces. We need to allow for the healthy breakdown in natural function in our societies in a way that doesn't produce catastrophic collapse, but instead leads to healthy renewal," Homer-Dixon says. This is what happens in forests, which are a patchy mix of old growth and newer areas created by disease or fire. If the ecosystem in one patch collapses, it is recolonised and renewed by younger forest elsewhere. We must allow partial breakdown here and there, followed by renewal, he says, rather than trying so hard to avert breakdown by increasing complexity that any resulting crisis is actually worse. Tipping points Lester Brown thinks we are fast running out of time. "The world can no longer afford to waste a day. We need a Great Mobilisation, as we had in wartime," he says. "There has been tremendous progress in just the past few years. For the first time, I am starting to see how an alternative economy might emerge. But it's now a race between tipping points - which will come first, a switch to sustainable technology, or collapse?" Tainter is not convinced that even new technology will save civilisation in the long run. "I sometimes think of this as a 'faith-based' approach to the future," he says. Even a society reinvigorated by cheap new energy sources will eventually face the problem of diminishing returns once more. Innovation itself might be subject to diminishing returns, or perhaps absolute limits. Studies of the way cities grow by Luis Bettencourt of the Los Alamos National Laboratory, New Mexico, support this idea. His team's work suggests that an ever-faster rate of innovation is required to keep cities growing and prevent stagnation or collapse, and in the long run this cannot be sustainable.

### Bonus Sustainability

**Growth unsustainable**

**Alexander, 5/29** – Samuel, Ph. D from Melbourne Law School, lecturer at the Office for Environmental Programs, Founder of the Simplicity Collective, ‘Can Renewable Energy Sustain Consumer Societies?’, http://simplicitycollective.com/can-renewable-energy-sustain-consumer-societies // JK

In response Trainer points out that if the rich economies grow at 3% until 2070, and by that stage the poorest nations have attained similarly high living standards – which seems to be the aim of the global development agenda – total world economic output and impact could be 60 times larger than it is today. If we assume that sustainability requires that fossil fuel use and other resource consumption must be half of what they are today (and the greenhouse problem would probably require a far larger reduction than this), then what is needed is something like a factor 120 reduction in the per unit impact of GDP, not merely a factor 4 reduction.

**Growth is unsustainable and tech won’t solve**

**Alexander, ‘12** – Samuel, Ph. D from Melbourne Law School, lecturer at the Office for Environmental Programs, Founder of the Simplicity Collective, ‘TED TRAINER AND THE SIMPLER WAY’, http://energybulletin.net/sites/default/files/TedTrainerandTheSimplerWay.pdf // JK

4. THE LIMITS OF TECHNOLOGY AND RENEWABLE ENERGY At this point it is worth looking more closely at Trainer’s critical perspectives on technology and renewable energy, because his claims on these subjects contradict widely held assumptions. Most people, including most environmentalists, seem to believe that Western style lifestyles can indeed be sustained and even globalised, provided the world transitions to systems of renewable energy and produces commodities more cleanlyand efficiently. This assumption is reflected especially clearly in international political discourse on environmental issues (e.g. UNDP, 2007/8), which consistently pushes the message that we can decouple economic growth from ecological impact, or even that we need more economic growth in orderto fund environmental protection initiatives and thus save the planet (Beckerman, 2002). Trainer casts considerable doubt on the possibility ofany technological ‘fix’ to ecological problems. 4.1. Technology Cannot Sustain the Growth Paradigm Trainer’s general point on technology is that the extent of ecological overshoot is alreadyso great that technology will never be able to solve the ecological crises of our age,certainly not in a world based on economic growth and with a growing global population. Amory Lovins (1998) is probably the best known advocate of technological solutions to ecological problems, most famous for his ‘factor four’ thesis. He argues that if we exploit technology we could have four times the economic output without increasing environmental impact (or maintain current economic output and reduce environmental impact by a factor of four). But as we have already seen, if the rich world continues to grow at 3% per year until 2070 and by that stage the poorest nations have attained similarly high living standards – which is the aim of the global development agenda– total world economic output(and impact)could well be as much as 60 times larger than it is today. If we assume that sustainability requires that fossil fuel use and other resource consumption must behalf of what they are today (and the greenhouse problem would require a larger reduction than this), then what is needed is something like a factor of 120 reduction in the per unit impact of GDP, not merely a factor 4 reduction (Trainer, 2007: 117). Again, even allowing for some uncertainty in these calculations, the claim that technological solutions can solve the ecological crises and sustain the growth paradigm is **simply not credible**. Trainer has shown that the absolute decoupling necessary is just beyond what is remotely possible. The final nail in the coffin of techno optimists is the fact that despite decades of extraordinary technological advance, the overall ecological impact of the global economy is still increasing (Jackson, 2009: Ch.4), making even a factor four reduction through technological advance seem wildly optimistic.

**Growth is unsustainable – the figures are clear**

**Alexander, ‘12** – Samuel, Ph. D from Melbourne Law School, lecturer at the Office for Environmental Programs, Founder of the Simplicity Collective, ‘TED TRAINER AND THE SIMPLER WAY’, http://energybulletin.net/sites/default/files/TedTrainerandTheSimplerWay.pdf // JK

THE GLOBAL PREDICAMENT Trainer’s vision of The Simpler Way can only be understood in relation to his diagnosis of the global situation, which arises out of the ‘limits to growth’ analysis (Meadows et al, 2004). He argues that the most serious fault in the existing economy is the commitment to industrialized production, global trade, consumer lifestyles, and limitless economic growth. While the figures and statistics on resource depletion and environmental degradation are well known (MEA, 2005), their significance are not generally acknowledged or fully understood. Trainer contends that very few people recognize the real extent of ecological overshoot. The global economy, he argues, is far beyond the levels of resource and energy use that can be maintained for much longer, let alone spread to all people. Add to this situation the fact that global population will increase to 9 billion in the next few decades and the magnitude of our problems becomes clear. ‘Our way of life,’ he concludes, ‘**is grossly unsustainable’** (Trainer, 2010a: 19).1

**Growth is unsustainable and is coming soon**

**Brent, ‘10** – Jason, Juris Doctorate in Law from Columbia, Judge, Lawyer, and certified Public Attorney, November 30, ‘The Future Of Humankind: A Few Simple Rules’, http://www.countercurrents.org/brent301110A.htm // JK

4. Ultimately the level of the human population will be determined by level of the renewable resources the earth can provide to humanity on an annual basis for an extended period of time as modified by the energy received from the sun. Humanity can use its collective intelligence to increase the efficiency of usage of the resources provided by the earth and humanity can increase the resources provided by the earth by using the energy received from the sun. However, neither of these will permit infinite economic or population growth on the finite earth and ultimately humanity must realize that its population level will be determined by the annual amount of resources the earth can provide for an extended period of time. In my opinion (and I am stating it very clearly to be my opinion) the earth cannot support more than 300-500 million human beings for any period of time greater than 500 years. I want to make it absolutely clear that my opinion is not based on any mathematical calculation. Rather my opinion is based upon a review of the problems presently facing our species.

## Specific Links

### Link--Efficiency

#### Long-term efficiency stagnate the economic ecosystem – trades off with resilience and leaves no room

Goerner et al 9 {Sally J. Integral Science Institute, 374 Wesley Ct, Chapel Hill, NC 27516, USA, Bernard Lietaer, Center for Sustainable Resources, 101 Giannini Hall, University of California, Berkeley, CA 94720-3100, USA, Robert E. Ulanowicz, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD 20688-0038, USA, WEB 7/6/2012; “Ecological Economics,” Vol. 69. Issue 1, 15 November 2009, Pages 76–81 }

The long-term maintenance of vitality appears to rest heavily on two structure-related attributes: 1) efficiency: the network's capacity to perform in a sufficiently organized and efficient manner as to maintain its integrity over time (May, 1972); and, 2) resilience: its reserve of flexible fall-back positions and diversity of actions that can be used to meet the exigencies of novel disturbances and the novelty needed for on-going development and evolution ( [Holling, 1973], [Holling, 1986] and [Walker et al., 2006]).

**Both resilience and efficiency are related to the levels of diversity and connectivity found in the network, but in opposite directions**. A well-woven multiplicity of connections and diversity plays a positive role in resilience, for example, because additional options help the system rebound from the loss or disruption of one or more pathways or nodes. Yet, flow systems also require efficient end-to-end circulation of products in order to properly catalyze crucial processes at all levels of the whole. Redundant pathways and excess diversity hinder such throughput efficiency, leading to stagnation that erodes vitality by dissipating weak throughput via various inefficient sectors. In short, resilience and efficiency are essentially complementary because the streamlining that increases efficiency automatically reduces resilience. In general, greater efficiency means less resilience, and, conversely, greater resilience means less efficiency.

This inherent push–pull tradeoff explains why, after a certain point, increasing a system's efficiency makes it more brittle even as it grows bigger and more directed. Conversely, while increasing diversity and connectivity makes the system technically more resilient, beyond a certain point the loss of efficiency also makes it more stagnant. The upshot is that systems become unsustainable whenever they have either too much or too little diversity/connectivity (or too much or too little efficiency).

Since resilience and efficiency are both necessary, but pull in opposite directions, nature tends to favor those systems that achieve an optimal mix of the two. Furthermore, a system's balance of efficiency and resilience can be calculated via its configuration of diversity and connectivity. This allows the system's sustainability to be captured in a single metric that establishes its place in the continuum from brittle (insufficiently diverse) to stagnant (insufficiently efficient).

#### Economic efficiency weakens systemic resilience – any failure in the resource chain threatens the network; oil dependency and food suppliers prove

Goerner et al 9 {Sally J. Integral Science Institute, 374 Wesley Ct, Chapel Hill, NC 27516, USA, Bernard Lietaer, Center for Sustainable Resources, 101 Giannini Hall, University of California, Berkeley, CA 94720-3100, USA, Robert E. Ulanowicz, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD 20688-0038, USA, WEB 7/6/2012; “Ecological Economics,” Vol. 69. Issue 1, 15 November 2009, Pages 76–81 }

Maximizing efficiency leads, to use a cliché, to putting all of one's eggs in a single basket: it courts disaster because it eliminates resilience. Similarly, instead of signaling economic vitality, the surge in GDP growth that often accompanies increasing efficiency may actually mask increasing brittleness. Events such as Hurricane Katrina and the Iraq war show how global dependence on oil as a primary energy source provided by a few, large corporate suppliers makes the energy sector an obvious example of such systemic brittleness. Yet, since a mere ten to twelve companies now control over 80% of the world's food supply of cereals, grains, meat, dairy, edible oils, fats, and fruits (Goldsmith and Mander, 1997), global dependence for food supplies on a few large agribusinesses presents a similarly serious threat. **While this consolidated corporate system may, as many economists claim, represent the most efficient path from resource to consumer, it also puts the global food system in a situation with few options should economic, political, or environmental events disrupt one or more of these major pathways.**

### Link--Keynes

#### stopping Keynesian policies and allowing economic de-growth is key

Alier, 12 [Joan Martinez-Alier; ICTA; Catalan economist, Professor of Economics and Economic History and researcher at ICTA at the Autonomous University of Barcelona. He is the author of Ecological Economics: Energy, Environment and Society (1990).[ and The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation (2002). He is a founding member and past-president of the International Society for Ecological Economics. He was a member (2000–08) of the European Environment Agency Scientific Committee. <http://www.iea.usp.br/iea/textos/waterlat/trabalhos/52.pdf>]

Nearly 20 years after the United Nations Rio de Janeiro conference of 1992, the¶ environmental trends are alarming. The modest objective of the EU and the United¶ Nations of halting the loss of biodiversity has not been achieved and it has been **ditched.¶** The HANPP (human appropriation of net primary production) puts increasing pressure¶ on biodiversity (Vitousek et al, 1986, Haberl et al, 2009). Biodiversity loss is sometimes¶ seen as a market failure to be corrected by suitable pricing. At other times bad¶ governance, unsuitable institutions, and neoliberal policies that promote trade and¶ guarantee foreign investments are also (rightly) blamed. However, **environmental¶ impacts including the disappearance of biodiversity are mostly a product of the¶ increased social metabolism of the human economy.** This is the main driving factor. **The¶ impacts would be similar under** Keynesian social-democratic policies, or indeed under¶ socialist or communist economic systems, if the technologies and levels of population¶ and per capita consumption were as those of today.¶ Thus, the production of the main greenhouse gases continues to grow because of¶ **the increased metabolic flows in the economy**. **Until 2007 emissions of CO2 were¶ increasing by 3% per year. After a halt in the increase in 2008-09**, they are now bound¶ to increase again unless there is economic degrowth. They should decrease as soon as¶ possible by 50% or 60% according to the IPCC. To the failure of the Kyoto agreement¶ of 1997 (not ratified by the USA) was added the lack of agreement on emission¶ reductions in Copenhagen in December 2009. President Obama cannot get the Senate in¶ the United States to agree to carbon dioxide caps or taxes, and conveniently he decided¶ to blame China, which is indeed by now the largest producer of CO2 although per¶ capita it is fortunately still four times below the United States.¶ CO2 concentration in the atmosphere was about 300 ppm when Svante¶ Arrhenius wrote about the enhanced greenhouse effect in 1895; it is now almost¶ reaching 400 ppm. The yearly increase in CO2 is 2 parts per million. **Nothing is being done in practice to¶ reverse this trend. CO2 emissions by the human economy are mostly caused by burning¶ fossil fuels. Peak oil is now very near, perhaps already reached.** Peak extraction of¶ natural gas will be reached in twenty or thirty years. This means more burning of coal¶ although the production of CO2 per unit of energy from coal is larger than for oil and¶ gas.

### A2: We Transition away from Dirty Fuel

#### Transitioning away from fossil fuels is impossible – only ending growth solves

Heinberg 10—Richard Heinberg is an American journalist and educator who has written extensively on energy, economic, and ecological issues, including oil depletion. He is the author of ten books. He serves as the senior fellow at the Post Carbon Institute. He has addressed the Trade Committee of the European Parliament and served as an advisor to the National Petroleum Council in its report to the U.S. Secretary of Energy on Peak Oil. [August 11, 2010, “Temporary Recession or the End of Growth?” http://www.postcarbon.org/article/130597-temporary-recession-or-the-end-of]

Big Picture Diagnosis: Continuing the Trail of Logic

At this point in the discussion many readers will be wondering why alternative energy sources and efficiency measures cannot be deployed to solve the Peak Oil crisis. After all, as petroleum becomes more expensive, ethanol, biodiesel, and electric cars all start to look more attractive both to producers and consumers. Won’t the magic of the market intervene to render oil shortages irrelevant to future growth?

It is impossible in the context of this discussion to provide a detailed explanation of why the market probably cannot solve the Peak Oil problem. Such an explanation requires a discussion of energy evaluation criteria, and an analysis of many individual energy alternatives on the basis of those criteria. I have offered an overview of this subject elsewhere. (18)

My summary conclusions in this regard are as follows.

About 85 percent of our current energy is derived from three primary sources—oil, natural gas, and coal—that are non-renewable, whose production is likely to peak and decline in the next two decades leading to severe shortages, and whose environmental impacts are unacceptable. While these sources historically have had very high economic value, we cannot rely on them in the future; indeed, the longer the transition to alternative energy sources is delayed, the more difficult that transition will be unless some practical mix of alternative energy systems can be identified that will have superior economic and environmental characteristics.

But identifying such a mix is harder than one might initially think. Each energy source has highly specific characteristics. In fact, it was the characteristics of our present energy sources (principally oil, coal, and natural gas) that enabled the building of an urbanized society with high mobility, large population, and high economic growth rates. Surveying the available alternative energy sources for criteria such as energy density, environmental impacts, reliance on depleting raw materials, intermittency versus constancy of supply, and the percentage of energy returned on the energy invested in energy production, none currently appears capable of perpetuating this kind of society.7

Moreover, national energy systems are expensive and slow to develop. Energy efficiency likewise requires investment, and further incremental investments in efficiency tend to yield diminishing returns over time, since it is impossible to perform work with zero energy input. Where is there the will or ability to muster sufficient investment capital for deployment of alternative energy sources and efficiency measures on the scale needed?

While there are many successful alternative energy production installations around the world (ranging from small home-scale photovoltaic systems to large “farms” of three-megawatt wind turbines), there are very few modern industrial nations that now get the bulk of their energy from sources other than oil, coal, and natural gas. One example is Sweden, which obtains most of its energy from nuclear and hydropower. Another is Iceland, which benefits from unusually large domestic geothermal resources not found in most other countries. Even for these two nations, the situation is complex: the construction of the infrastructure for their power plants mostly relied on fossil fuels for the mining of the ores and raw materials, for materials processing, for transportation, for the manufacturing of components, for the mining of uranium, for construction energy, and so on. **Thus a meaningful energy transition away from fossil fuels is still a matter of theory and wishful thinking, not reality.**

My conclusion from a careful survey of energy alternatives, then, is that there is little likelihood that either conventional fossil fuels or alternative energy sources can be counted on to provide the amount and quality of energy that will be needed to sustain economic growth—or even current levels of economic activity—during the remainder of this century. (19)

## Transition Debate

### Transition solves—war

**And, dedev solves all violence**

**Trainer 95 –** Senior Lecturer in Sociology at the School of Social Work, Univ. of New South Wales

(Ted, The Conserver Society, p. 165)

If the foregoing analysis is valid, not much needs to be said about the alternative. We must develop ways of life in which all can live well without taking more than their fair share and therefore without living in fear of someone else threatening what we have. That is precisely what a radical conserver society involves**.** A world made up of relatively small communities which were supplying their own needs mostly from their local resources, and concerned primarily with enjoying a life rich in cultural and craft and community activities, without any interest in constantly increasing the amount they consume, would be a far more secure world. There would be no point in you attacking anyone, because you would not want much and what you did want you would have in abundance from local sources. Similarly you would not feel any need for weapons with which to defend yourself, because you would know that others were living comfortable and interesting lives without wanting more resources than they could supply for themselves and therefore they would have no interest in attacking you. Security is an impossible goal if it is conceived in terms of developing the arms needed to defend our imperial interests and to defend ourselves against attack — while we insist on lifestyles which inevitably involve us in taking more than fair share and therefore asserting control over ‘ours oilfields in the Middle East and in turn having to be armed to the teeth to fight off threats to them. Real security consists in knowing no one has any desire to threaten you.

### Transition—We’ll Survive/Adapt

#### Nope – we’ll survive and adapt

**Smith & Sauer-Thompson, ‘98** – Joseph Wayne, Ph. D in Geography from Cambridge, Senior Research Fellow in Geography at the University of Adelaide in Australia, Gary, Lecturer in Philosophy at Flinders University of South Australia, ‘Civilization's Wake: Ecology, Economics and the Roots of Environmental Destruction and Neglect’, Ebsco // JK

RAGNAROK: THE END OF THE WORLD In ancient Norse mythology Ragnarok or Ragnarokk (Ragnarokkr, from regin, the gods + rokkr, twilight; German equivalent Gotterdammerung) was the final cataclysmic battle between the gods (the Aesir) and the forces of evil. Apocalyptic scenarios such as this one are common in the great world religions. Usually, as in Judeo-Christianity, the forces of good triumph without even raising a sweat because the good guys are infinitely powered while the bad guys are not. Victory was guaranteed before the battle ever took place, by logical necessity. Norse mythology (what is now called Asatru or Odinism—consult the World Wide Web) has no such rosy picture of reality. The forces of good will be defeated and the world destroyed. Neither good nor evil shall triumph but both will destroy each other. Their destruction though will enable a new world to be born, growing from the decaying ruins of the old. Now as the reader is no doubt aware, our book shop shelves sag with the weight of popular science books telling us that quantum mechanics and general relativity confirm the metaphysics of various Oriental philosophies. This may be so, although none of these authors tell us what happens when quantum mechanics and general relativity theory are falsified and replaced, as scientific theories of this nature invariably are. But could it not be argued that Norse mythology also has its merits, as an ecological eschatology? Many works of radical environmentalism would seem to fit such a pattern. Joel Jay Kassiola in The Death of Industrial Civilization (1990) believes that industrial civilization will collapse but this will not mean the end of the world as a new "transindustrial society" will arise like a phoenix from the ashes and soot of the old world. Ted Trainer (1995a) believes that the affluent society is not sustainable and that for the world's population to be sustained, a movement must be made now to a conserver society which is a much less affluent, simpler, more cooperative and self-sufficient way of living. It is an implication of this view that if the West does not move towards this, a global battle for resources will occur. This shredding of the world will mean that a violent collapse of technoindustrial society will occur with ecological necessity forcing us to adopt a conserver lifestyle. David Price (1995) sees ecological scarcity leading to a collapse of civilization, with starvation, social chaos and disease culling the human population. He describes the world of survivors: These people might get by, for a while, by picking through the wreckage of civilization, but soon they would have to lead simpler lives, like the hunters and subsistence farmers of the past. They would not have the resources to build great public works or carry forward scientific inquiry. They could not let individuals remain unproductive as they wrote novels or composed symphonies. After a few generations, they might come to believe that the rubble amid which they live is the remains of cities built by gods. Or it may prove impossible for even a few survivors to subsist on the meagre resources left in civilization's wake. The children of the highly technological society into which more and more of the world's peoples are being drawn will not know how to support themselves by hunting and gathering or by simple agriculture. In addition, the wealth of wild animals that once sustain hunting societies will be gone, and topsoil that has been spoiled by tractors will yield poorly to the hoe. A species that has come to depend on complex technologies to mediate its relationship with the environment may not long survive their loss (Price, 1995, p. 316).

### Transition—Leads to Steady State

#### Economic de-growth key to check back resource and population peaks – leads to steady state economy

Alier, 12 [Joan Martinez-Alier; ICTA; Catalan economist, Professor of Economics and Economic History and researcher at ICTA at the Autonomous University of Barcelona. He is the author of Ecological Economics: Energy, Environment and Society (1990).[ and The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation (2002). He is a founding member and past-president of the International Society for Ecological Economics. He was a member (2000–08) of the European Environment Agency Scientific Committee. <http://www.iea.usp.br/iea/textos/waterlat/trabalhos/52.pdf>]

Taking into account other negative trends like the drop in the¶ availability of many edible species of fish, the spread of nuclear energy and its military¶ proliferation, and the approaching “peak phosphorous”, there are reasons to reassert the¶ relevance of the debates of the 1970s on the desirability of a steady-state economy in¶ rich countries and indeed of a period of degrowth (Schneider et al, 2010). Degrowth in¶ rich economies would lead to a steady state economy (Daly, 1973). This movement is¶ helped by the environmental justice movements of the South complaining against¶ ecologically unequal exchange. ¶ Peak population: love one another more, and do not multiply¶ Among all the alarming trends and impending “peaks” signaling distributional¶ conflicts, one welcome trend is the rapid decrease in the rate of growth of the human¶ population. Peak population will probably be reached around 2045 at perhaps 8.500¶ million people. The exhortations to European women to produce more children who¶ will become workers who will pay for the pensions of so many old people, are¶ ridiculous (Latouche, 2007), since the workers would also become pensioners in due¶ course. The pyramid of population (still taught at schools), should be drawn as a¶ rectangle (admittedly with a little pyramid on top). The debates between Malthusians¶ and Marxists, and between Malthusians and some economists who favour population¶ growth, are still relevant today as also the doctrines of the feminist Neo-Malthusians of¶ 1900.

### A2: Doesn’t solve Capitalism

**Growth = capitalism**

**Trainer, ‘10** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘De-growth – is not enough’, http://www.inclusivedemocracy.org/journal/vol6/vol6\_no4\_trainer\_degrowth\_not\_enough.htm // JK

**Capitalism is by definition about growth**. Its essential characteristic is the investment of capital in order to make as much profit as possible, to re-invest next year in order to make as much profit as possible … in a never ending spiral of capital accumulation. The Monthly Review school has continued to show the crucial significance of this process in the nature, functioning and crises of capitalist society, especially in pointing to the chronic “problem of surplus” that it generates. In other words the system’s most serious problem is finding investment outlets for that ever-accumulating volume of capital. In the last few decades this has been the major force pushing globalization through, as protection, regulation and state ownership have been swept aside to enable corporations and banks to get into previously inaccessible profitable fields. The volumes of capital now sloshing around the planet franticly seeking outlets are astronomical, much of it in the form of un-repayable debt, much in the form of wild speculation, and much of it cannibalistic (i.e., often profits can only be made through the carve up of the assets of gamblers who lose, including the meager savings of bankrupt home loan borrowers.)

### A2: No Alternative

**It’s try or die to see if the alt is better – the squo will only end in extinction**

**Pereira, ‘11** – Tony, Ph. D in Mechanical Engineering from UCLA, Lamar University, Assistant Research Professor, Fuel Cell and Energy Center, ‘The transition to a sustainable society: a new social contract’, http://www.springerlink.com/content/dn1g532024r4027m/fulltext.pdf // JK

5 Conclusions No doubt that the transition to a sustainable society constitutes an enormous challenge. However, difficult it is, not insurmountable. The solutions exist. Their nature is multi- and trans-disciplinary, in a manner that reflects the universe we live in. Change always happens, no matter whatever direction we end up taking. Everything in the known universe is in a constant state of flux of inevitable and continuous change. Change is to be expected, no matter who tells who that change must occur or, in their opinion only, is not happening. Enlarging pockets of sustainability working under a new social contract must be created, encouraged, protected, and given incentive. To our own benefit, we must come to the essential realization that if whatever we do, be it in science, education, engineering, architecture, politics, religion, culture, or economics, ultimately leads to the destruction of all life including our own, then it is or it was useless. In that case, our struggle was worthless and to no avail. As a civilization, we must make a deliberate and conscious choice to a ubiquitous and relentless practice of sustainability. This perspective was missing in most, if not all, previous civilizations and cultures. **Their end also signifies our end, if we do not change in time**. History only repeats itself if we allow it to. Other than change, in so many cases inevitable and brutal, nothing else is guaranteed in this universe. Our role in it is to be endlessly humble and to marvel at its infinite wonders, not the opposite. If we succeed in this challenge and remain a while longer, we may have a chance to have a chance. In that case, our choice was a better choice.

**The alternatives are empirically better**

**Pereira, ‘11** – Tony, Ph. D in Mechanical Engineering from UCLA, Lamar University, Assistant Research Professor, Fuel Cell and Energy Center, ‘The transition to a sustainable society: a new social contract’, http://www.springerlink.com/content/dn1g532024r4027m/fulltext.pdf // JK

None of what is proposed above is of a radical or unheard of nature. In fact, many of the proposed approaches already exist in one form or another around the world. Shortly after WWII, and after being tried as the proving grounds for carpet bombing by the then upcoming German Nazis, and as later depicted by Picasso in his Guernica painting, left with a ravaged country, a catholic priest started a cooperative in Basque country with the help of five young engineers, in an effort to bring jobs and economic relief to the area. Today, the Mondragon co-op has 85,000 employees in 24 countries worldwide, the vast majority of them being member owners, does about US$20 billion/year in business, an additional equal amount in finance and banking, has its own research and accredited PhD granting university, implemented its own general coverage health insurance independent of the publicly funded national health system administered by the Spanish government, providing among other benefits expectant mothers a leave of absence of 6 months to have and nurture their new-borns (Mondragon 2011). In Bangladesh, an economics professor and later Nobel Prize Winner rescued from bankruptcy a village of 100 people from loan sharks with US$27 out of his own pocket money, and subsequently, started the Grameen Bank, which has provided about US$6 billion in unguaranteed microloans overwhelmingly to women, thus also doubly shattering the stereotype that women are unreliable, ignorant, economically incapable, and financially untrustworthy, especially women of the Third World (Grameen Bank 2011; Yunus 2010). In Germany, the late Dr Hermann Scheer, elected member of the Bundestag for 28 years and also a Nobel Prize winner whom I had the great pleasure to host for a free and open to the public lecture at UCLA, convinced not just one or two individuals, but an entire country to move from fossil fuels and nuclear energy to wind and solar energy by introducing and successfully passing feed-in tariff legislation in Germany, now adopted by all the European Union (EU) member nations, and is being considered for adoption by another 40 countries around the world (Scheer 2004, 2007; Mendonc¸a and Scheer 2009). The State of Nebraska approved legislation banning farm ownership by big corporations, thus re-establishing the rightful bond between families and land stewardship (Nebraska 2011). The North Dakota State Bank has been taken under control by the State itself, relinquishing the federal government control, thus bringing the delivery and administration of credit into the control and the hands of the people of the State, where it rightfully belongs (Brown 2010). Last but not least, already about 350 cities and communities worldwide fully realized the gravity of the global downward spiral of planetary decay and embarked on a path to independence, self-sustaining economies and, in varying degrees, sustainability (Transition Cities 2011). In all the above examples, in spite of the promise they unravel and may or may not realize, the economic aspects of sustainability vary widely, from very low to very large degrees. The aim of this paper is to conjugate the two and to bring them together. When we finally succeed in fully combining sustainability with everything else we do, we will be in much better shape.

**Grassroots movements are key to the transition**

**Alexander, ‘12** – Samuel, Ph. D from Melbourne Law School, lecturer at the Office for Environmental Programs, Founder of the Simplicity Collective, ‘TED TRAINER AND THE SIMPLER WAY’, http://energybulletin.net/sites/default/files/TedTrainerandTheSimplerWay.pdf // JK

After presenting his critical analysis of the global situation, Trainer describes his vision of The Simper Way, which is a vision of communities creating highly localized, zero-growth economies, based on far lower resource and energy consumption than what is common in developed nations today, and in which the profit motive has been largely or entirely removed. Since Trainer believes that governments are inextricably intertwined with the economic imperative to grow, his theory of change is fundamentally ‘anarchistic,’ in the sense that he believes that ‘top down’ parliamentary processes cannot be relied on to play any significant role in restructuring society for The Simpler Way. The change that is needed, he argues, if it is ever to arrive, **must be driven by grassroots, community-based action**. It is a peaceful revolution that Trainer envisions, but a revolution all the same, and it is **one that he believes can be completed in a matter of months** (Trainer, 2010a: 14), provided a critical mass of people are prepared to act for its realization. The problem is not what needs to be done. ‘That’s easy,’ he asserts (Trainer, 2010a: 15). ‘The problem is developing the understandings and values whereby ordinary people will want to design and build the new systems, and will delight in doing so’ (Trainer, 2010a: 15).

**Mindset transition is inevitable**

**Holcombe, 6/12** – Randall, Ph. D in Economics from Virginia Tech, Research Fellow at The Independent Institute, Senior Fellow at the James Madison Institute, DeVoe Moore Professor of Economics at Florida State University, ‘Is There a Trade-Off Between Economic Growth and Equality?’, http://blog.independent.org/2012/06/12/is-there-a-trade-off-between-economic-growth-and-equality/ // JK

A few decades ago an argument that economic growth is undesirable would have been rejected out of hand. Now, it is gaining some traction. For those who see the United States as moving toward the social policies of Europe, this is the ideology toward which we are headed.

### A2: Elites Resist/Inevitable Post-alt

**Elites will turn simple after post-collapse and equality will improve**

**Barry, ‘12** – Glen, Ph.D. in Land Resources from the University of Wisconsin-Madison, President and Founder of Ecological Internet, ‘EARTH MEANDERS: On Violence and Earth Revolution’, http://www.ecoearth.info/blog/2012/01/on\_violence\_and\_earth\_revoluti.asp#more // JK

Things would be difficult for the formerly rich (broadly defined as those living detached from nature in a comfortable but Earth destroying technological cocoon, including much of the global bourgeoisie) for some time – as they readjust to living within ecological limits. But they would adjust, and all could survive leading simpler, more grounded and meaningful lives, rather than face a final and brutally violent apocalyptic end under the status quo.

### A2: Transition Wars

**Nope – we’ll survive and adapt**

**Smith & Sauer-Thompson, ‘98** – Joseph Wayne, Ph. D in Geography from Cambridge, Senior Research Fellow in Geography at the University of Adelaide in Australia, Gary, Lecturer in Philosophy at Flinders University of South Australia, ‘Civilization's Wake: Ecology, Economics and the Roots of Environmental Destruction and Neglect’, Ebsco // JK

RAGNAROK: THE END OF THE WORLD In ancient Norse mythology Ragnarok or Ragnarokk (Ragnarokkr, from regin, the gods + rokkr, twilight; German equivalent Gotterdammerung) was the final cataclysmic battle between the gods (the Aesir) and the forces of evil. Apocalyptic scenarios such as this one are common in the great world religions. Usually, as in Judeo-Christianity, the forces of good triumph without even raising a sweat because the good guys are infinitely powered while the bad guys are not. Victory was guaranteed before the battle ever took place, by logical necessity. Norse mythology (what is now called Asatru or Odinism—consult the World Wide Web) has no such rosy picture of reality. The forces of good will be defeated and the world destroyed. Neither good nor evil shall triumph but both will destroy each other. Their destruction though will enable a new world to be born, growing from the decaying ruins of the old. Now as the reader is no doubt aware, our book shop shelves sag with the weight of popular science books telling us that quantum mechanics and general relativity confirm the metaphysics of various Oriental philosophies. This may be so, although none of these authors tell us what happens when quantum mechanics and general relativity theory are falsified and replaced, as scientific theories of this nature invariably are. But could it not be argued that Norse mythology also has its merits, as an ecological eschatology? Many works of radical environmentalism would seem to fit such a pattern. Joel Jay Kassiola in The Death of Industrial Civilization (1990) believes that industrial civilization will collapse but this will not mean the end of the world as a new "transindustrial society" will arise like a phoenix from the ashes and soot of the old world. Ted Trainer (1995a) believes that the affluent society is not sustainable and that for the world's population to be sustained, a movement must be made now to a conserver society which is a much less affluent, simpler, more cooperative and self-sufficient way of living. It is an implication of this view that if the West does not move towards this, a global battle for resources will occur. This shredding of the world will mean that a violent collapse of technoindustrial society will occur with ecological necessity forcing us to adopt a conserver lifestyle. David Price (1995) sees ecological scarcity leading to a collapse of civilization, with starvation, social chaos and disease culling the human population. He describes the world of survivors: These people might get by, for a while, by picking through the wreckage of civilization, but soon they would have to lead simpler lives, like the hunters and subsistence farmers of the past. They would not have the resources to build great public works or carry forward scientific inquiry. They could not let individuals remain unproductive as they wrote novels or composed symphonies. After a few generations, they might come to believe that the rubble amid which they live is the remains of cities built by gods. Or it may prove impossible for even a few survivors to subsist on the meagre resources left in civilization's wake. The children of the highly technological society into which more and more of the world's peoples are being drawn will not know how to support themselves by hunting and gathering or by simple agriculture. In addition, the wealth of wild animals that once sustain hunting societies will be gone, and topsoil that has been spoiled by tractors will yield poorly to the hoe. A species that has come to depend on complex technologies to mediate its relationship with the environment may not long survive their loss (Price, 1995, p. 316).

## Impacts

### Economy Offense

#### Neoliberal economic growth causes catastrophic boom bust cycles – autocatalytic economic activity creates recessions and feeds its own collapse by focusing on a single “efficient” entity

Goerner et al 9 {Sally J. Integral Science Institute, 374 Wesley Ct, Chapel Hill, NC 27516, USA, Bernard Lietaer, Center for Sustainable Resources, 101 Giannini Hall, University of California, Berkeley, CA 94720-3100, USA, Robert E. Ulanowicz, University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory, Solomons, MD 20688-0038, USA, WEB 7/6/2012; “Ecological Economics,” Vol. 69. Issue 1, 15 November 2009, Pages 76–81 }

Policies that promote positive-feedback growth in an economy may result in a wealth-concentrating vortex that breeds similar brittleness and bubbles at the same time. The current banking/financial crisis initially precipitated by the mortgage derivative bubble shows how this process works. Deregulated bankers in search of new sources of income, stockbrokers in search of hot new products to sell, and big financial investors in search of higher gains, formed a self-amplifying circuit in which gains in any segment naturally fed gains in the others. This autocatalytic loop grew rapidly by pulling in resources from the broader economic network and concentrating wealth in the hub. It also evolved ever more efficient (if dangerous) “pull” techniques and a kind of rigid group-think that dismissed traditional risk assessments precisely because selection pressures were intense, with those who increased gains being lavishly rewarded and those who didn't being out of a job. While the derivative bubble triggered the crisis, the erosion of other sectors created an underlying brittleness (from debt burden, for instance) that made the broader economy susceptible along with the epicenter banking/financial circuit as well.

The innocence with which this process proceeds explains why a number of strategies intended to increase economic health actually erode it. The classic example is the “Walmart Effect”: the perplexing observation that the large, highly efficient companies supported by local economic development offices tend to erode surrounding economic networks even as they increase GDP. For decades now, most economic development offices have focused on creating incentives to lure big corporations to setup shop in their locale in hopes that jobs and taxes would trickledown best from there. This approach skyrocketed under neoliberal rule because emphasis on GDP growth and the giant, deregulated corporations that most increase it, tended to promote mutual-benefit arrangements between big corporations, media and the economic development officers, academics, and politicians that espoused neoliberal beliefs. Selecting for ability to bring in big-box retailers made sense because greater size generally meant greater GDP growth, while greater economies of scale (i.e., efficiency) meant lower prices. Lower prices naturally pulled more consumers and money into the corporate system causing corporate and government coffers to swell along with the GDP. Since the benefits of this circuit seemed undeniable, those who supported the “elephant hunting” process were rewarded, while those who did not were eliminated.

Unfortunately, neoliberal theorists discounted the erosion that came too. As the movie, Walmart: The High Cost of Low Prices (Brave New Films, 2005) documents, support from local government and head-to-head competition over price allowed the more efficient big-box retailer to drive the smaller, more diverse local enterprises out of business. The company then takes advantage of this situation to increase its profits by lowering wages, removing benefits and often increasing prices as well. **Burdens on public coffers increase, and brittleness sets in because worker and community options have been eliminated along with local business diversity**. At the same time, instead of building a strong local network by catalyzing local business processes, much of the money and benefit of large-scale efficiency is drained from the local economy and siphoned off to distant headquarters. A 2002 study in Austin, Texas, for instance, showed that for every $100 local consumers spent at a national bookstore, the local economy received only $13, whereas the same amount spent at local bookstores yielded $45. A 2003 study of Midcoast Maine expanded this finding showing that local businesses spent 54% of their revenue (goods, professional services, wages, benefits, etc.) within Maine, while big-box retailers returned just 14% of their revenue, mostly in the form of payroll. Local resilience declines along with local circulation; local wages decrease with employment options; and the local governments that supported the big box find that the costs of incentives and infrastructure expansion outweigh the taxes that the big retailer adds. Shuman (2006) documents the overall impact in lost jobs, lower wages, over-extended infrastructure and eroded community well-being.

The links between erosion, bubbles and autocatalytic growth also explain why neoliberal policies that over emphasized efficiencies, consolidation, deregulation, and GDP growth created widespread brittleness during a period of unprecedented worker productivity and owner profits. The observed effects of NAFTA are a case in point. Conventional economic wisdom erred grievously in predicting NAFTA would increase vitality for the entire economic network, as opposed to just a few epicenter circuits. In contrast, QED would have correctly predicted that the accelerated growth in the large-scale circuit's power and efficiency would be accompanied by the widespread loss of jobs and erosion of surrounding networks—just as Ross Perot argued it would. In essence, neoliberal policies are economically unsustainable because their exaggerated support for large-scale organizations leads to imbalance. Much as an overly large canal erodes surrounding wetlands by funneling soil and nutrients out to sea, so domination by a few high-capacity organizations tends to drain the broader networks upon which long-term vitality depends.

Autocatalysis, therefore, also explains why over-fueling dominant circuits or having insufficient constrains on them often leads to catastrophic boom-bust cycles, **instead of the healthy equilibrium that some theorists predict**. In nature, self-amplifying (positive-feedback) loops do eventually provoke their opposite: decelerating (negative feedback) loops that move back toward balance (which is often mistakenly described as “equilibrium”). **However, most economists fail to mention that these downward adjustments can also trigger autocatalytic over-shoot,** causing recessions**,** depressions**, panics and possibly even monetary, banking or economic** collapse **if resilience is low or the downward spiral is left unchecked.**

Consequently, as Tainter (1988) shows, **autocatalytic economic circuits follow a path similar to that of the Roman Empire: they grow; dominate their surroundings; reach their limits; and, if unchecked, end in collapse due largely to erosion of non-epicenter networks*,*** such as small farmers, local governments and the public at large. Understanding this process empirically grounds the age-old claims that monopolistic concentration, insider trading, speculation and sheer greed are all bad for economic health because they cause erosion, bubbles and crashes. Similarly, regulations like the Glass–Steagall Act of 1933, which effectively barred Wall Street investment banks from owning community savings banks, were effective because they blocked autocatalytic alignment.

### Impact—Warming Specific

#### Growth can’t stop a 2 degree rise and global warming—despite the aff,s efforts,, it’s irreconcilable

**Simms 10** (Andrew Simms is policy director of nef (the new economics foundation) the award-winning UK think-and-do tank, and head of nef's Climate Change Programme “Growth is good … isn't it? Expansion has progressed so far that key resource boundaries have been broken: we're teetering on the edge of an ecological cliff” Monday 25 January 2010 03.00 EST http://www.guardian.co.uk/commentisfree/cif-green/2010/jan/25/uk-growth-energy-resources-boundaries)(Pitman)

Like a patient waiting for hospital scan results, this week the government nervously anticipates new growth figures for the economy. Any sign of an increase and relief could quickly lead to self-satisfaction about its handling of the recession. Approving nods may be seen later this week in Davos at the World Economic Forum. Why? Because among political and business classes, growth, measured by rising GDP, is considered always a "good thing". But is it? The banking crisis taught us that when things look good on paper, if the underlying accounting system is faulty, it can conceal high risk and imminent disaster – as Jared Diamond put it in Collapse, his book about societies throughout history that fell by wrongly estimating the resilience of their environmental life-support systems. What looks like wealth might just be a one-off fire sale of irreplaceable natural capital. Ecologically speaking, he writes, "an impressive-looking bank account may conceal a negative cashflow". To avoid collapse the economy has to operate within thresholds that do not critically undermine the things that we depend on on a daily basis. They're often interconnected, like a sufficiently stable climate, productive farmland, fresh water and a healthy diversity of plants and animals. On climate change, a new piece of research by the New Economics Foundation thinktank looks at which rates of global economic growth are compatible with prevention of a dangerous level of warming. It shows that, even with the most optimistic likely uptake of low-carbon energy, it is seemingly impossible to reconcile a growing global economy with a good likelihood of limiting global temperature rise to 2C, the agreed political objective of the European Union, and widely considered the maximum rise to which humanity can adapt without serious difficulty. In this context, Adair Turner, chair of the Financial Services Authority and the Committee on Climate Change, refers to the pursuit of growth for its own sake as a "false god". Other work by Professor Kevin Anderson of the Tyndall Centre for Climate Change Research at Manchester University concludes that: "Economic growth in the OECD cannot be reconciled with a 2C, 3C or even 4C characterisation of dangerous climate change." The problem is that growth drowns out the gains from increased efficiency and technological innovation. The New Economics Foundation study looks at by how much growth would need to be delinked from fossil fuels – the so-called carbon intensity of the economy – to reach the mark of climate safety suggested by Nasa climate scientist James Hansen. Having improved steadily in the late last century, "carbon intensity" changes flatlined over the last decade and even worsened in some years. Against this trend, to avoid dangerous climate change the fall in carbon intensity would need to improve by more than two hundredfold. The economic doctrine of growth collides headlong with the laws of physics and thermodynamics. Only so much energy efficiency can be squeezed from a system. The other problem is the counter-intuitive rebound effect spotted by William Stanley Jevons in 1865 when he wrote, "It is a confusion of ideas to suppose that the economical use of fuel is equivalent to diminished consumption. The very contrary is the truth." Increased efficiency tends to lower costs and perversely drives up overall resource use. Writing in the science journal Nature last year, a multidisciplinary group of scientists identified nine key safe-use planetary resource boundaries, three of which had already been transgressed (climate change, biodiversity and the nitrogen cycle to do with farming). We are on the cusp of several others. So, this week, if you find yourself cheering a return to growth, you may be inadvertently celebrating our acceleration toward an ecological cliff edge and an opportunity missed to find a new, better direction. For example, the economist Herman Daly points out that full employment could be easier to achieve in an economy not addicted to growth because it would reverse "the historical trend of replacing labour with machines and inanimate energy". Both the desirability and possibility of never ending growth goes unquestioned in mainstream economics. It's odd, because the world would be a very strange place if the same was applied in nature. For example, from birth until around six weeks old, a hamster doubles its weight each week. If, it didn't stop and continued doubling each week, on its first birthday, you would be looking after a very hungry nine billion-tonne pet hamster. There is of course one thing in nature that grows uncontrollably. It's called cancer and tends to kill its host. So when those growth figures come out, let's hope the government scans the results for what they really mean.

### Impact – Laundry List

**Growth causes environmental exploitation and collapse, unequal wealth, and makes wars inevitable**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, June 1, ‘The Simpler Way perspective on the global predicament’, [http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament //](http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament%20//) JK

Global problems has to be seen in these limits terms. This “limits to growth” perspective is essential if we are to understand the most serious global problems facing us: The environmental problem is basically due to the fact that far too much producing and consuming is going on, taking too many resources from nature and dumping too many wastes into nature. We are eliminating species in a **fifth holocaust** now mainly because we are taking so much habitat. We should be returning vast areas to nature, meaning making huge reductions in our fishing, mining, forestry, pastures etc. The environmental problem cannot be solved in an economy that is geared to providing present affluence, let alone ever-rising production, consumption, “living standards” and GDP. Yet just about all green agencies and parties ignore this glaring point, seeking only to achieve reforms within consumer-capitalist society and showing no recognition that such a society has powerful mechanisms built into its foundations that can only constantly generate and worsen the environmental problem. Third World poverty and underdevelopment are inevitable if a few living in rich countries insist on taking far more of the world’s resources than all could have. The Third World can never develop to anything like rich world ways, because there are far too few resources for that. Yes the conditions of some are being improved by the conventional “growth and trickle down” approach to development, but as has been made clear above, that process cannot go on much longer and it cannot lift all to reasonable living standards; there are not enough resources for that. (See <http://ssis.arts.unsw.edu.au/tsw/08b-Third-World-Lng.html>.) **Conflict and war are inevitable** if all aspire to rich world rates of consumption, and if all countries insist on growth on a planet with limited and now rapidly dwindling resources. Rich countries must support repressive regimes willing to keep their economies to the policies that enable our corporations to ship out cheap resources, use Third World land for export crops, exploit cheap labour etc. We must be ready to invade and run countries that threaten to follow policies contrary to “our interests”. Our rich world “living standards” could not be as high as they are if a great deal of repression and violence was not taking place, and rich countries contribute significantly to this. If we are determined to remain affluent we should remain heavily armed! (See http://ssis.arts.unsw.edu.au/tsw/13-Peace-Conflict.html.) To summarise, these notes indicate that for reasons confined to sustainability consumer-capitalist society is so grossly unsustainable that it cannot be fixed. You cannot reform such a system so that it remains focused on affluence, market forces, and growth yet does not cause ever-increasing problems of resource depletion, environmental destruction and social conflict. If you still want to claim that such a system is redeemable the above discussion makes clear the magnitude of the problems you will have to show can be solved by technical advance; statements of faith in technology are not acceptable here.

**Growth causes ecological disaster, deterioration of life, and armed conflict**

**Trainer, ‘12** – Ted, Ph. D in Social Sciences from the University of New South Wales, Senior Lecturer in the school of Social Sciences, ‘BUT CAN’T TECHNOLOGICAL ADVANCE SOLVE THE PROBLEMS?’, http://simplicityinstitute.org/wp-content/uploads/2011/04/LimitsOfTechnologyTrainer.pdf // JK

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 this path will be taken.

**Growth is the cause of every global problem**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

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 is unsustainable and causes ecological collapse, structural violence, and war**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

The “limits to growth” case: An outline 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.

### Impact – Civilization Collapse

**Growth creates a cycle of societal destruction – history proves**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

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 selfdestructs. 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.

### Impact – Environment

**Collapse now is key - growth causes ecocide and environmental collapse, leading to the extinction of all life; we must act to prevent the systemic violence occurring against the planet**

**Barry, ‘12** – Glen, Ph.D. in Land Resources from the University of Wisconsin-Madison, President and Founder of Ecological Internet, Janurary 1, ‘EARTH MEANDERS: On Violence and Earth Revolution’, http://www.ecoearth.info/blog/2012/01/on\_violence\_and\_earth\_revoluti.asp#more // JK

The ecological foundation of being is unraveling before our very eyes. Without ecosystems there is no life. Fiercely loving Earth is the answer. Let's sustain global ecology together like our shared survival and abundance depends upon it. And while we set out using classic civil disobedience tactics, let’s not dismiss out of hand any obstruction, uncivil disobedience, sabotage and targeted insurgency tactics – that are non-terrorist – and that may be necessary to achieve global ecological sustainability. The human family’s shared survival depends upon passionately defending Earth using all means necessary. Earth's ecosystems are collapsing under the burden of human growth, destroying our one shared biosphere that makes life possible. Industrial growth – frantically destroying ecosystems to feed insatiable, ever-growing appetites – is an aberration, a mistake, a disease. If left untreated, this will be the end of the human family, all life, and Earth's very being. Infinite economic growth at the expense of ecosystems is impossible, and seeking endless and inequitable growth in consumption and population can only lead to collapse and **massive die-off**. Humanity’s last best chance to justly and equitably sustain a livable planet is to protect and restore ecosystems, end fossil fuels, and a people's power Earth revolution to utterly destroy the ecocidal industrial growth machine. We are all bloody fools to tolerate and not immediately overthrow a violently ecocidal system that is killing us all. If we all understood the implications of global ecosystem collapse, we would go now, together, and slay the global growth machine. It is too late to escape profound ecological decline, yet complete disastrous social and ecological collapse – and possible end to most or all life – may yet be avoided. Sustaining ecology must become society’s central organizing principle or humans and all species face horrendous death. Globally it is time for radical change to simply survive converging ecology, food, war, water, inequity, population, climate, jobs, ocean, and extinction crises. It is deeply troubling most "environmentalists" deny the severity of ecosystem collapse, rejecting out of hand revolutionary measures sufficient to sustain ecology. Earth is dying a death of a billion lashes as ecosystems are liquidated for consumption as if nature has no worth. 80% of old forests are gone, 50% of top soil, 90% of big ocean fish, bee populations are collapsing, we are undergoing abrupt climate change, and two billion are hungry and thirsty – to say nothing of acidic and dead oceans, nitrogen pollution, fracking and tar sands, extinction, desertification, water scarcity, pervasive toxics, and how all these ecological crises interact and reinforce each other. Yes, you read this right – **EARTH IS DYING** – not that humans are going extinct, but Earth will recover. A whole body of global change and ecology science and intuition indicates Earth is well past its carrying capacity and planetary boundaries, that enough ecosystems have been lost, diminished, and changed forever, that the biogeochemical process that make life possible are failing. **We face an unprecedented planetary ecological emergency.** Earth’s ecology crises go unaddressed because of lack of justice, equity and rights –and 1% elite rule with big NGO environmental group greenwash. **Earth is dying NOW**. **The thin layer of life known as the biosphere is collapsing NOW**. **Life giving ecosystems are being destroyed NOW**. **Being is ending NOW.** It could be different if we acted together to stop the forces of ecocide. The human family embraces a sustaining ecology ethic, or all die brutal, needless deaths, gasping for air, hungry and cold, at each other’s throats. Most of us have lost contact with Earth that made and sustains us, so we kill our creator, life and ourselves without knowing or caring. It is everybody’s responsibility to stop this self-fulfilling death wish. Those who have yet to have this ecological revelation and are killing Earth must be compelled to stop, using all means necessary. There is no escaping the ECOLOGICAL FACT that global ecosystems and our one shared biosphere are **literally falling apart** as we continue to incautiously pull pieces from them.

**Growth and environmental sustainability are opposites and cannot exist together – this ev is really good**

**Hueting, ‘08** – Roefie, Ph. D from the University of Groningen, Environmental Economist, ‘WHY ENVIRONMENTAL SUSTAINABILITY CAN MOST PROBABLY NOT BE ATTAINED WITH GROWING PRODUCTION’, ScienceDirect // JK

4. Arguments why environmental sustainability can most probably not be attained with growing production and without broad acceptance of de-growth The ofﬁcial policy of all countries in the world is that standard NI – production – must increase in order to create scope for ﬁnancing environmental conservation, and thus attain sustainability. The theoretical mistake of this reasoning is shown by Hueting [20]. Of course, the future cannot be predicted. But the plausibility of whether (a) the actual production level and (b) environmental sustainability will develop in the same direction, which is the consequence of the causal relation expressed in the political statements above, can indeed be examined. Developing in the same direction is a minimum prerequisite for assuming a causal relation. On the grounds of the data discussed below such development is extremely unlikely. The author feels the opposite is more plausible for the following seven reasons. (1) Theoretically, the possibility cannot be excluded that growth of production and consumption can be combined with restoration and maintenance of environmental quality. However, such combination is highly uncertain and scarcely plausible. It would require technologies that simultaneously: (i) are sufﬁciently clean, (ii) do not deplete renewable natural resources, (iii) ﬁnd substitutes for non-renewable resources, (iv) leave the soil intact, (v) leave sufﬁcient space for the survival of plant and animal species and (vi) are cheaper in real terms than current available technologies, because if they are more expensive in real terms then growth will be reduced. Meeting all these six conditions is scarcely conceivable for the whole spectrum of human activities. Especially simultaneously realising both (i) through (v) and (vi), which is a prerequisite for combining production growth and conservation of the environment, is extremely difﬁcult. To give one example: as a rule, renewable energy is in market terms currently much more expensive than energy generated using fossil fuels. The costs of implementing renewable energy throughout society are high, and this substantially lowers production growth. Internalising the costs of eliminating the emissions of burning fossil fuels will reduce the production level considerably. Anyhow, technologies necessary for the combination of production growth and full conservation of the functions of the environment are not yet available. Anticipating their future availability, that is stimulating NI growth in the expectation that e.g. clean, renewable, safe and cheaper energy, that does not damage vital environmental functions, will become available in the future, conﬂicts with the precautionary principle, and consequently with sustainability. Giving priority to research in e.g. such energy over production growth and to bringing such energy into practice, and then to wait and see whether or not production continues to grow, is a more prudent policy if one wants to arrive at environmental sustainability. At this moment less than 1% of energy consumption consists of such energy. As explained above and in Section 2, because of the precautionary principle no future technological progress is anticipated, which is, of course, certainly not the same as forecasting or not expecting such progress.

**Warming and resource depletion is happening soon – degrowth is key to solve**

**Martinez-Alier, ‘12** – Joan, Professor of Economics and Economic History at the University of Barcelona, Research Fellow and Senior Associate at Oxford, ‘ENVIRONMENTAL JUSTICE AND ECONOMIC DEGROWTH: AN ALLIANCE BETWEEN TWO MOVEMENTS’, http://www.iea.usp.br/iea/textos/waterlat/trabalhos/52.pdf // JK

Thus, the production of the main greenhouse gases continues to grow because of the increased metabolic flows in the economy. Until 2007 emissions of CO2 were increasing by 3% per year. After a halt in the increase in 2008-09, they **are now bound to increase again unless there is economic degrowth**. They should decrease as soon as possible by 50% or 60% according to the IPCC. To the failure of the Kyoto agreement of 1997 (not ratified by the USA) was added the lack of agreement on emission reductions in Copenhagen in December 2009. President Obama cannot get the Senate in the United States to agree to carbon dioxide caps or taxes, and conveniently he decided to blame China, which is indeed by now the largest producer of CO2 although per capita it is fortunately still four times below the United States. CO2 concentration in the atmosphere was about 300 ppm when Svante Arrhenius wrote about the enhanced greenhouse effect in 1895; it is now almost reaching 400 ppm. The yearly increase is 2 ppm. Nothing is being done in practice to reverse this trend. CO2 emissions by the human economy are mostly caused by burning fossil fuels. Peak oil is now very near, perhaps already reached. Peak extraction of natural gas will be reached in twenty or thirty years. This means more burning of coal although the production of CO2 per unit of energy from coal is larger than for oil and gas. Therefore, taking into account other negative trends like the drop in the availability of many edible species of fish, the spread of nuclear energy and its military proliferation, and the approaching “peak phosphorous”, there are reasons to reassert the relevance of the debates of the 1970s on the desirability of a steady-state economy in rich countries and indeed of a period of degrowth (Schneider et al, 2010). **Degrowth in rich economies should lead to a steady state economy** (Daly, 1973). This movement is helped by the environmental justice movements of the South complaining against ecologically unequal exchange (Bunker, 1984, 1985, 2007, Hornborg, 1998, 2009, Hornborg et al, 2007, 2010, Muradian and Martinez-Alier, 2001, Muradian et al, 2002, Rice, 2007, Roberts and Parks, 2007).

**Growth is bad for the environment and the impoverished**

**Martinez-Alier, ‘12** – Joan, Professor of Economics and Economic History at the University of Barcelona, Research Fellow and Senior Associate at Oxford, ‘ENVIRONMENTAL JUSTICE AND ECONOMIC DEGROWTH: AN ALLIANCE BETWEEN TWO MOVEMENTS’, http://www.iea.usp.br/iea/textos/waterlat/trabalhos/52.pdf // JK

GDP growth goes together with increasing pressure on biodiversity, climate change, and the destruction of human livelihoods at the commodity frontiers. Excessive consumption by rich and middle class people is not only a menace for other species and for future generations of humans. It deprives poor people now already of a fair share of resources and environmental space (Spangenberg, 1995).

**Most recent and accurate studies prove the link between growth and CO2 emissions – switching to close communities solves**

**Gerken, 5/1** – James, Associate Green Editor at the Huffington Post, ‘Climate Change And Sustained Economic Growth Link Observed In New Study’, http://www.huffingtonpost.com/2012/05/01/climate-change-economic-growth-linked\_n\_1468100.html // JK

Will sustained global economic growth intensify the effects of climate change? A new study from the University of Michigan's Institute for Social Research suggests that a transformation of the world's economies or a limit to economic growth may be needed to curb the rise of atmospheric carbon dioxide concentrations. Published online in the journal Environmental Science & Policy, the study examined the impacts on global CO2 levels caused by the world economy (measured in global GDP), population, volcanic eruptions and the El Niño Southern oscillation. **It is the "first analysis to use measurable levels of atmospheric carbon dioxide" rather than only estimates, "which are less accurate**," according to a press release. José Tapia Granados and Edward Ionides, both from Michigan, and Óscar Carpintero of the University of Valladolid, Spain, discovered "no observable relation" between short-term global population growth and CO2 levels, but greater carbon dioxide levels were observed in years of "above-trend world GDP" between 1958 and 2010. The researchers found that for each trillion in U.S. dollars that global GDP deviates from the trend, there is an accompanying deviation in CO2 levels of about half a part per million (ppm), reported LiveScience. Noting that the study "more or less" echoes 1972's "The Limits to Growth," author and environmental activist Bill McKibben told HuffPost in an email, "We should change the meaning of 'business-as-usual' to focus on building more resilient, localized, community-focused economies, instead of the sprawling ones that for the last few decades have been awarding their bounty to the 1%."

**Neoliberal institutions encourage corporations to neglect and exploit the environment – leads to extinction**

**O’Neall, ‘11** – Axis of Logic Writer, July 22, ‘Corporatism or Survival on Earth?’, http://www.countercurrents.org/oneall220711.htm // JK

The Empire is digging in its feet, invading and pillaging one obstinate and geo-politically important country after the other, at the same time as the people at home are deprived of their human rights, the rights to a decent livelihood and a good and secure job. One might think that this would be the sum of the horror show going on today in the world. But no, there just is no end to the damage that is wrought. The criminal takeover and destruction of the planet by the corporations stops at nothing. An additional problem is of course the rapidly progressing and deliberately ignored global warming, but this phenomenon too is most likely linked to corporate misbehavior and over-consumption. The Corpocrats are so totally deluded by their illusion of infinite power that they also believe that the earth offers the means for infinite growth. What they do not seem to understand at all is the fact that man can never, never dominate nature. The total insanity of these men, the criminal neglect of the environment, the absolutely certain effects of the corporate malfeasance that will soon make the earth unlivable is mind-boggling and literally devastating. They go on living the high life as if there was no tomorrow. Well, there may not be a tomorrow. Unless we put the machine in reverse – right now, this very moment

**Economic expansion kills the planet and individual liberty**

**Gibbons, 6/22** – Scott, Writer at American pundit, ‘UN Report: Hey, let’s shrink the world economy to fight global warming’, http://amerpundit.com/2012/06/22/un-report-hey-lets-shrink-the-world-economy-to-fight-global-warming/ // JK

If we have more economic expansion, according to the left, it’s not good for either the planet or the cause of forced material equality. Economic success, free trade, individual liberty, personal wealth generated as a result of an expanding global economy, ordinary people realizing they have an opportunity to make something of themselves financially — these are all enemy concepts to the left’s agenda. And that’s how you end up with this:

**The choice is between ecological sustainability and economic growth**

**Smith & Sauer-Thompson, ‘98** – Joseph Wayne, Ph. D in Geography from Cambridge, Senior Research Fellow in Geography at the University of Adelaide in Australia, Gary, Lecturer in Philosophy at Flinders University of South Australia, ‘Civilization's Wake: Ecology, Economics and the Roots of Environmental Destruction and Neglect’, Ebsco // JK

ECONOMICS AND THE ROOTS OF ENVIRONMENTAL NEGLECT In this article we will examine some of the ecological and social ramifications of the thesis that one of the principal ideological sources of our present environmental crisis is orthodox neoclassical economics. Insofar as economic agents approximate "rational economic men" maximizing their expected utility in a global technoindustrial capitalist system embodying such values, environmental degradation will occur. According to this view, often associated with radical environmental ism and "deep ecology" (Naess, 1973; Manes, 1990), it is our present growth-based economic system which lies at the heart of the environmental crisis, This view has been argued for by many (for a review see Lyons et al., 1995) but a particularly clear expression of this sentiment is given by the deep ecologist Andrew McLaughlin in Regarding Nature: Industrialism and Deep Ecology (1993). McLaughlin notes that the present day ills of industrial economies such as unemployment and urban poverty are blamed on lack of economic growth by our politicians and mainstream economists. Consequently unemployment and urban poverty can only be cured by increasing industrial production. However, if there is a global ecological crisis then increased economic growth arguably (arguments below) leads to increased environmental destruction and increased resource use. Consequently we are faced with a "fateful dilemma": "Either we pursue economic growth and ecological collapse, or we seek ecological sustainability and economic collapse" (McLaughlin, 1993, p. ix).

**Emissions are unsustainable – economic growth is the cause**

**Phys.org, 5/1** – ‘Global warming: New research emphasizes the role of economic growth’, http://phys.org/news/2012-05-global-emphasizes-role-economic-growth.html // JK

In years of above-trend world GDP, from 1958 to 2010, the researchers found greater increases in CO2 concentrations. For each trillion in U.S. dollars that the world GDP deviates from trend, CO2 levels deviate from trend about half a part per million (ppm), they found. Concentrations of CO2 are estimated to have been between 200-300 ppm during preindustrical times. They are presently close to 400 ppm, and levels around 300 ppm are considered safe to keep a stable climate. To break the economic habits contributing to a rise in atmospheric CO2levels and global warming, Tapia Granados says that societies around the world would need to make enormous changes.

**Extinction is inevitable with growth – tech doesn’t solve**

**Brent, ‘10** – Jason, Juris Doctorate in Law from Columbia, Judge, Lawyer, and certified Public Attorney, November 30, ‘The Future Of Humankind: A Few Simple Rules’, http://www.countercurrents.org/brent301110A.htm // JK

1. Since the earth is finite in size both economic and population **growth must cease**. No power on earth or in the heavens will permit infinite growth on the finite earth. Nothing humanity can do or say will permit infinite growth on the finite earth. New technology, recycling, environmentalism, and even a possible second or third green revolution will not permit either the economy or the human population to continue to grow. Any person who advocates economic growth or economic stimulation may be causing the short term destruction of humanity as no person knows the level of economic activity which will cause the that to happen. In addition, no person knows the level of economic activity which will permit the long term survival of our species.

**It’s an absolute certainty – we will destroy ourselves if growth keeps increasing**

**Brent, ‘10** – Jason, Juris Doctorate in Law from Columbia, Judge, Lawyer, and certified Public Attorney, November 30, ‘The Future Of Humankind: A Few Simple Rules’, http://www.countercurrents.org/brent301110A.htm // JK

While the following statement cannot be proven with absolute certainty, it is as close to an absolute certainty as any statement ever made by any human being---humanity will destroy itself before the economy or the human population grew by a factor of 32 and that would take between 120 and 700 years depending on the annual growth rate. A very strong argument can be made that the resources of the earth cannot and will not support the current human population for a period of 500 years at the current usage by humanity of the earth's finite resources. Choose any growth rate you desire and you can easily determine when humanity will destroy itself, if either economic or population were to continue to grow.

**Consumption = planetary decay**

**Pereira, ‘11** – Tony, Ph. D in Mechanical Engineering from UCLA, Lamar University, Assistant Research Professor, Fuel Cell and Energy Center, ‘The transition to a sustainable society: a new social contract’, http://www.springerlink.com/content/dn1g532024r4027m/fulltext.pdf // JK

This paper explores issues that are central to ecological economics. In spite of a substantial body of research and other literature that has appeared in recent decades on transition, and countless other efforts, no progress has been made to halt the increase in global warming, global emissions, rampant population growth, or several hundred other critical planet sustainability indicators including global species extinction. The opposite is true. Consumption has escalated and it is poised to double and, with it, planetary decay has followed closely. The aim of this work is to introduce a pragmatic solution and the economics mechanisms solidly rooted in science, in the laws of conservation of mass and energy, and in environmental and ecological sustainability that are necessary to overcome the tremendous forces of social, political, and economic resistance to major change. To advance towards a sustainable civilization, adopting a holistic approach with those underlying principles in all aspects of human activity, among others economy, finance, industry, commerce, engineering, politics, architecture, and education, is both lacking and fundamentally required. A short review of the state-of-the-art of the science on the critical status of the planet’s resources and its life-supporting systems is presented, as well as a brief catalog of the seminal works of the science that gave rise to its metrics and established early on the groundwork for the understanding of the degree of sustainability of the planet. We present the argument why past and current schemes of human economics, organization, culture, and politics cannot achieve anything else, but complete and utter failure under their own underlying precepts. A rigorous and disciplined process on how to overcome and avoid the precipitous decline and collapse of the environmental and planetary biosystems on which all life depends, including human life, and a new view towards the world and the universe we all have no choice but to live in, are also offered.

### Impact – Social Injustice

**Growth is really really REALLY bad and immoral – legitimizes the exploitation of all Third World countries and ignores those who are suffering now while destroying the quality of life**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, June 1, ‘The Simpler Way perspective on the global predicament’, [http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament //](http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament%20//) JK

Fault 2: It is a grossly unjust society. Even if we did not have an enormous sustainability problem we would still have an extremely disturbing global justice problem. We in rich countries could not have anywhere near our present “living standards” if we were not taking far more than our fair share of world resources. Our per capita consumption of items such as petroleum is around 17 times that of the poorest half of the world’s people. The rich 20% of the world’s people are consuming around 75% of the resources produced. Many people get so little that around 1000 million are hungry and more than that number have dangerously dirty water to drink. Three billion live on $2 per day or less. This grotesque injustice is primarily due to the fact that the global economy operates on market principles. In a market need is totally irrelevant and is ignored. Goods go mostly to those who are richer, because they can offer to pay more for them. Thus we in rich countries get almost all of the scarce oil and timber for sale, while millions of people in desperate need get none. This explains why one third of the world’s grain is fed to animals in rich countries while around 20,000 children die every day because they have insufficient food and clean water. Even more importantly, the market system explains why Third World “development” is so very inappropriate to the needs of Third World people. What is developed is not what is needed; it is always what will make most profit for the few people with capital to invest. Thus there is development of export plantations and cosmetic factories but not development of farms and firms in which poor people can produce for themselves the basic things they need. Many countries get almost no development at all because it does not suit anyone with capital to develop anything there…even though they have the land, water, talent and labour to produce most of the things they need for a simple but satisfactory quality of life. (On Appropriate development, see (See http://ssis.arts.unsw.edu.au/tsw/08b-Third-World-Lng.html.) Even when transnational corporations do invest, wages can be 15-20c an hour. Compare the miniscule benefit that flows to such workers from conventional development with what they could be getting from an approach to development which enabled them to put all their labour, applied via mostly cooperative local firms, into producing the simple things they most urgently need. But development of this kind is deliberately prevented, e.g., by the Structural Adjustment Packages which the World Bank and IMF make them accept in order to get rescue loans. These packages are now the main mechanisms forcing them to do things that benefit the rich countries and their corporations and banks. “Assistance” is given to indebted countries on the condition that they de-regulate and eliminate protection and subsidies assisting their people, cut government spending on welfare, etc., open their economies to more foreign investment, devalue their currencies (making their exports cheaper for us and increasing what they must pay us for their imports), sell off their public enterprises, and increase the freedom for market forces to determine what happens. All this is a bonanza for our corporations and for people who shop in rich world supermarkets. The corporations can buy up firms cheaply and have greater access to cheap labour, markets, forests and land. The repayment of loans to our banks is the supreme goal of the packages. Thus the produce of the Third World’s soils, labour, fisheries and forests flows more readily to our supermarkets, not to Third World people. For most Third World people the effects of “neo-liberal” globalisation are catastrophic. (For many quotes from the vast literature documenting these themes see http://ssis.arts.unsw.edu.au/tsw/DOCS.ThirdWorld.html.) Large numbers of people lose their livelihood, access to resources is transferred from them to the corporations and rich world consumers, and the protection and assistance their governments once provided is eliminated. These are the reasons why conventional development can be regarded as a form of plunder. The Third World has been developed into a state whereby its land and labour benefit the rich, not Third World people. Rich world “living standards” could not be anywhere near as high as they are if the global economy was just. Global justice is not possible unless rich countries shift down to living on something like their fair share of global resource wealth. Again it is clear that we in rich countries should be working out how to live on a small fraction of our present levels of production, consumption and GDP. And it is also clear that a morally satisfactory situation cannot be achieved while we adhere to social and economic systems committed to affluence and growth. As Gandhi said long ago, “The rich must live more simply so the poor may simply live.” Fault 3: Deteriorating cohesion and quality of life. In the richest countries there are increasing levels of social disintegration, such as drug and alcohol problems, eating disorders, community breakdown, homelessness and family breakdown. Levels of stress and anxiety are high; in fact depression is almost the most common illness. These problems are basically due to prioritising the ceaseless increase of production, consumption and GDP. Resources are not invested in building supportive communities, eliminating unemployment and homelessness, and providing for all and making sure no one has to struggle. Nothing is more important than promoting growth of GDP, although it is now well established that beyond a low level increasing monetary wealth makes no significant difference to happiness or quality of life. It should be no surprise that measures of the quality of life are in general declining now. A major cause of the social problems is the triumph of neo-liberal doctrine, whereby we are urged to compete as individuals to maximise self-interest, and market forces are to be as free as possible to determine everything. Cooperation and caring are not focal. All this means the rich and energetic few are free to get much richer, so it is no surprise that the real wage of 80% of Americans has barely increased in decades while the super-rich are rocketing to ever higher levels of wealth. The fundamental mechanisms and values in consumer-capitalist society, most obviously the competitive, individualistic pursuit of limitless wealth via market mechanisms, destroy and drive out social cohesion and directly generate social problems. Again we can’t expect to solve these problems unless we undertake vast and radical change to very different systems and values.

**Development works for the elites but ignores the 1.2 billion people who are malnourished and exploited – the alternative is better**

**Trainer, ‘02** - Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘If you want affluence, prepare for war’, http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html // JK

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.

**Growth is bad – ignores starving marginalized people**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

The global economy totally ignores the needs and the rights of people and ecosystems. It allows, guarantees, that 850 million people starve while 600 million tonnes of grain are fed to animals in rich countries every year and most of the best land in many hungry countries is devoted to export crops. Conventional development, i.e., development determined by market forces and profit, is therefore clearly a form of plunder – it puts the productive capacity of the Third World into enriching us not them.

### Impact - War

**Growth is the root cause of war – changes national priorities and encourages violence in the name of growth**

**Trainer, ‘02** - Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘If you want affluence, prepare for war’, http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html // JK

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 Growth, competition, expansion…and war. 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. But 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."**

### Impact - Security

**De-development is key to peace and security**

**Trainer, ‘02** - Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘If you want affluence, prepare for war’, http://socialsciences.arts.unsw.edu.au/tsw/D62IfYouWantAffluence.html // JK

The economy underlying the way of life taken for granted in Western industrial-affluent-consumer societies is an imperial system involving extreme injustice, oppression and use of terror. After documenting this situation at some length, attention is given to the general issue of affluence, resource scarcity and peace and security in a world of limited resources, severe inequality and obsession with economic growth and ever-rising living standards. It is argued that peace and security cannot be expected unless the rich and over-consuming countries undertake a fundamental, enormous (and improbable) shift away from their commitments to affluence and growth and towards The Simpler Way.

### Impact – Now Key

**The time for change is now - the Earth is dying and people are suffering; collapse now solves equity and justice**

**Barry, ‘12** – Glen, Ph.D. in Land Resources from the University of Wisconsin-Madison, President and Founder of Ecological Internet, ‘EARTH MEANDERS: On Violence and Earth Revolution’, http://www.ecoearth.info/blog/2012/01/on\_violence\_and\_earth\_revoluti.asp#more // JK

Non-Cooperation, Obstruction, Sabotage, Insurgency The timing for Earth Revolution is so right: Earth is dying, people are suffering, species are going, freedom is failing, uber-inequity reigns, economic injustice is the norm, yet people are awakening. There has never been such high hope regarding the prospects of achieving global human and economic rights, equity and justice, and of the need to sustain ecology. And given the terrible state of global ecology, equity, justice, freedom, and rights – governments have in fact abdicated. Only profound, revolutionary, gut-wrenching social, economic, political and personal change will save Earth, humanity and all life from ecology collapse and an end to being. Failure to accept revolutionary change tactics means we are accepting ecosystems and society will collapse, and you just want to enjoy living excessively awhile longer. Surely it is not rational to fail to pursue revolution because it may become violent, when violence orders of magnitude greater exists now daily under the status quo growth machine, and will only intensify as apocalyptic end of the world approaches. We should pursue Earth Revolution using aggressive civil disobedience and non-violently as long as we can and they are effective. But the successes achieved have thus far been tiny compared to what is required to abet ecocidal trends. If accommodation and compromise continue to be rebuffed, and Earth is dying, and thus our very survival depends upon ecosystems which are being killed by ecocidal evil, we have an obligation to look at other well-known uncivil disobedience, non-cooperation, sabotage, and insurgency tactics – as well as emerging transnational protest opportunities presented by the Internet – to bring about social change for a living Earth.

### Impact– Biodiversity

**Dedev key to sustain biodiversity**

**Trainer, ‘12** – Ted, Ph. D in Social Sciences from the University of New South Wales, Senior Lecturer in the school of Social Sciences, ‘BUT CAN’T TECHNOLOGICAL ADVANCE SOLVE THE PROBLEMS?’, http://simplicityinstitute.org/wp-content/uploads/2011/04/LimitsOfTechnologyTrainer.pdf // JK

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 dieoff 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.

### Impact - Environment

**Growth offsets environmental improvements**

**Fotopoulos, ‘02** - Takis Fotopoulos, Senior Lecturer in Economics at the Polytechnic of North London, Political philosopher and economist, The International Journal of INCLUSIVE DEMOCRACY, vol.3, no.1, ‘Is degrowth compatible with a market economy?’, http://www.inclusivedemocracy.org/journal/vol3/vol3\_no1\_Takis\_degrowth.htm // JK

The rationale of the degrowth project is the familiar radical Green one. Growth for growth’s sake is unsustainable as it pushes the limits of the biosphere. Although there have been some improvements in ecological efficiency they have been offset by growth. As a result, the ecological crisis, particularly as far as the greenhouse effect is concerned which threatens with a catastrophic climatic change, has been worsening all the time. It is now well established that continuous expansion has been at the expense of the quality of life ―in terms of clean water, air and the environment in general— if not of life itself, first of animals, and then increasingly of human beings themselves. Therefore, degrowth, in terms of downscaling our economy, seems necessary and desirable. In fact, Latouche points out, a downscaling policy could be put into effect almost immediately in areas like the following which “are crying out for downscaling”: reducing or removing the environmental impact of activities that bring no satisfaction; reviewing the need for excessive movement of people and commodities across the planet; relocalising our economies; drastically reducing pollution and other negative effects of long-distance transport; questioning the need for so much invasive, often corrosive, advertising[4].

### AT: Tech Solves

**It’s an opportunity cost – ecological stability cannot happen in a world of economic growth**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, June 1, ‘The Simpler Way perspective on the global predicament’, [http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament //](http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament%20//) JK

Conclusions on our situation. These considerations of sustainability, global economic justice and social cohesion show that our predicament is extreme and that it cannot be solved in consumer-capitalist society. This society cannot be fixed, because its problems are caused by its fundamental structures and processes. There is no possibility of having an ecologically sustainable, just, peaceful and “spiritually” satisfactory society if we allow market forces and the profit motive to be the major determinant of what happens, or if we seek economic growth and ever-higher “living standards” without limit. Yet most people who claim to be concerned about the fate of the planet, especially green people, refuse to face up to this.

**Tech doesn’t solve – it’ll never be enough**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

“Technical advance will make it all possible.” 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?

**Tech advances don’t solve – makes the problem worse**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, June 1, ‘The Simpler Way perspective on the global predicament’, [http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament //](http://ukiahcommunityblog.wordpress.com/2011/06/01/ted-trainer-the-simpler-way-perspective-on-the-global-predicament%20//) JK

But what about technical advance? When confronted by global sustainability problems most people simply make the knee-jerk assumption that technical advance will solve them and enable us to go on living with ever- increasing levels of affluence. People who work in technical fields, especially energy, are most likely to respond in this way. But the magnitude of the problems rules this possibility out. Perhaps the best-known “tech-fix” optimist, Amory Lovins, believes we could cut the resource and ecological costs per unit of economic output to one quarter of their present levels. But this would be far from sufficient. Let us assume that present resource and ecological impacts must be halved (some of the above figures indicate that they must be reduced much more than that). Again if we had 9 billion people on the “living standards” Australians would have by 2050 given 3% growth then total world economic output would be 20 times as great as it is now. How likely is it that we could have 20 times as much producing and consuming going on while we cut resource and ecological impacts to half their present levels, i.e., a factor 40 reduction? Only 23 years later a factor 80 reduction would have to have been achieved. Remember that despite the wizard technical advances being made just about all global problems are becoming worse at an alarming rate. (For a more detailed discussion of the limits to technical solutions see Trainer 2011, and the critical analyses of the potential of renewable energy noted above.)

**Growth is unsustainable and tech won’t solve**

**Alexander, ‘12** – Samuel, Ph. D from Melbourne Law School, lecturer at the Office for Environmental Programs, Founder of the Simplicity Collective, ‘TED TRAINER AND THE SIMPLER WAY’, http://energybulletin.net/sites/default/files/TedTrainerandTheSimplerWay.pdf // JK

4. THE LIMITS OF TECHNOLOGY AND RENEWABLE ENERGY At this point it is worth looking more closely at Trainer’s critical perspectives on technology and renewable energy, because his claims on these subjects contradict widely held assumptions. Most people, including most environmentalists, seem to believe that Western style lifestyles can indeed be sustained and even globalised, provided the world transitions to systems of renewable energy and produces commodities more cleanlyand efficiently. This assumption is reflected especially clearly in international political discourse on environmental issues (e.g. UNDP, 2007/8), which consistently pushes the message that we can decouple economic growth from ecological impact, or even that we need more economic growth in orderto fund environmental protection initiatives and thus save the planet (Beckerman, 2002). Trainer casts considerable doubt on the possibility ofany technological ‘fix’ to ecological problems. 4.1. Technology Cannot Sustain the Growth Paradigm Trainer’s general point on technology is that the extent of ecological overshoot is alreadyso great that technology will never be able to solve the ecological crises of our age,certainly not in a world based on economic growth and with a growing global population. Amory Lovins (1998) is probably the best known advocate of technological solutions to ecological problems, most famous for his ‘factor four’ thesis. He argues that if we exploit technology we could have four times the economic output without increasing environmental impact (or maintain current economic output and reduce environmental impact by a factor of four). But as we have already seen, if the rich world continues to grow at 3% per year until 2070 and by that stage the poorest nations have attained similarly high living standards – which is the aim of the global development agenda– total world economic output(and impact)could well be as much as 60 times larger than it is today. If we assume that sustainability requires that fossil fuel use and other resource consumption must behalf of what they are today (and the greenhouse problem would require a larger reduction than this), then what is needed is something like a factor of 120 reduction in the per unit impact of GDP, not merely a factor 4 reduction (Trainer, 2007: 117). Again, even allowing for some uncertainty in these calculations, the claim that technological solutions can solve the ecological crises and sustain the growth paradigm is **simply not credible**. Trainer has shown that the absolute decoupling necessary is just beyond what is remotely possible. The final nail in the coffin of techno optimists is the fact that despite decades of extraordinary technological advance, the overall ecological impact of the global economy is still increasing (Jackson, 2009: Ch.4), making even a factor four reduction through technological advance seem wildly optimistic.

### AT: Sequestration

**Sequestration doesn’t solve**

**Huesemann, ‘04** – Michael, Ph. D in Biotechnologies from Rice, Research Scientist, Author of *TechnoFix – Why Technology Won’t Save Us or the Environment*, ‘CAN ADVANCES IN SCIENCE AND TECHNOLOGY PREVENT GLOBAL WARMING?’, SpringerLink // JK

But even if carbon sequestration in underground formations were completely safe and the storage capacity virtually unlimited, the geologic sequestration of all CO2 that is currently emitted from fossil-fuel-ﬁred power plants in the United States would reduce US carbon emissions by up to one-third (Halmann and Steinberg, 1999) as most CO2 is emitted from widely dispersed sources (e.g., houses, businesses, and automobiles) from which collection of CO2 is not feasible. Thus, unless hydrogen produced via decarbonization of fossil fuels in centralized power plants replaces the large quantities of fossil fuels that are currently used for transportation and space heating (Hileman, 1997; Hoffert et al., 2002; Rifkin, 2002), the role of geologic carbon sequestration as well as ocean sequestration (see discussion later) will be very limited in mitigating global climate change.

### AT: Renewable Energy

**Renewables don’t solve – too costly**

**Alexander, 5/29** – Samuel, Ph. D from Melbourne Law School, lecturer at the Office for Environmental Programs, Founder of the Simplicity Collective, ‘Can Renewable Energy Sustain Consumer Societies?’, http://simplicitycollective.com/can-renewable-energy-sustain-consumer-societies // JK

Trainer has also levelled a narrower critique of technological solutions, which focuses on renewable energy. This is not the place to review in detail Trainer’s arguments and research, which would be a laborious task given the meticulous and necessarily dry nature of his analysis of the evidence. For the facts and figures, readers are referred to Trainer’s latest essay. But the critical findings of his technical research can be easily summarised. After examining the evidence on varieties of solar, wind, biomass, hydrogen, etc., as well as energy storage systems, Trainer concludes that the figures just do not support what almost everyone assumes; that is to say, they do not support the argument that renewable energy can sustain consumer societies. This is because the enormous quantities of electricity and oil required by consumer societies today simply cannot be converted to any mixture of renewable energy sources, each of which suffer from various limitations arising out of such things as intermittency of supply, storage problems, resource limitations (e.g. rare metals, land for biomass competing with food production, etc.), and inefficiency issues. Ultimately, however, the cost is the fundamental issue at play here. Trainer provides evidence showing that existing attempts to price the transition to systems of renewable energy are wildly understated. This challenging conclusion, however, only defines the magnitude of the present problem. If we were to commit ourselves to providing nine or ten billion people with the energy resources currently demanded by those in the richest parts of the world, then the problems and costs become greater by orders of magnitude. The challenges are exacerbated further by the existence of the “rebound effect,” a phenomenon that often negates the expected energy use reductions of efficiency improvements. At times efficiency improvements can even be the catalyst for increased energy consumption, a phenomenon known as the “Jevons” paradox. Going directly against the grain of mainstream thinking on these issues, Trainer is led to conclude that renewable energy and efficiency improvements will never be able to sustain growth-based, consumer societies, primarily because it would be quite unaffordable to do so.

**Renewables don’t solve**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘Renewable Energy: No Solution For Consumer Society’, http://www.countercurrents.org/trainer240411.htm // JK

In Chapter 10 of Renewable Energy I argue that there is no possibility of solving the many huge global problems confronting us unless the commitment to affluence and growth is abandoned. As the foregoing notes indicate, consumer-capitalist society is grossly unsustainable. It involves rates of resource use and environmental impact that are far beyond sustainable levels, and could never be extended to all the world’s people.

**Renewables won’t save us**

**Trainer, ‘12** – Ted, Ph. D in Social Sciences from the University of New South Wales, Senior Lecturer in the school of Social Sciences, ‘BUT CAN’T TECHNOLOGICAL ADVANCE SOLVE THE PROBLEMS?’, http://simplicityinstitute.org/wp-content/uploads/2011/04/LimitsOfTechnologyTrainer.pdf // JK

Many renewable energy technologists make this claim. However there is a strong case that it is mistaken. Trainer (2012a) sets out a numerical case that to supply 2050 world energy demand via renewables would require investment totals that are at least 10 times the present proportion of GDP that goes into energy. (For a short summary of the limits to renewables see Trainer, 2012b.) This is not an argument against renewable energy sources; we must move to full dependence on them as soon as possible. But it is an argument that we cannot run an energy intensive affluent society on them, let alone one that insists on limitless growth.

**Renewable energy doesn’t solve and makes the problem worse**

**Alexander, ‘12** – Samuel, Ph. D from Melbourne Law School, lecturer at the Office for Environmental Programs, Founder of the Simplicity Collective, ‘TED TRAINER AND THE SIMPLER WAY’, http://energybulletin.net/sites/default/files/TedTrainerandTheSimplerWay.pdf // JK

This challenging conclusion, however, only defines the magnitude of the present problem. If we were to commit ourselves to providing 9 or 10 billion people with the energy resources currently demanded by those in the richest parts of the world, then the problems and costs become greater by orders of magnitude. The challenges are exacerbated further by the existence of the ‘rebound effect,’ a phenomenon that often negates the expected energy use reductions of efficiency improvements (see Holm and Englund, 2009; Jackson, 2009: Ch. 4). At times efficiency improvements can even be the catalyst for increased energy consumption, a phenomenon known as the ‘Jevons’ paradox (see e.g. Polimeni et al, 2009). Going directly against the grain of mainstream thinking on these issues, Trainer is led to conclude that renewable energy and efficiency improvements will never be able to sustain growth based consumer societies, primarily because it would be quite unaffordable to do so.

### AT: Hydrogen

**Hydrogen loses 75% of energy before it actually gets used – fails as a renewable energy**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘Renewable Energy: No Solution For Consumer Society’, http://www.countercurrents.org/trainer240411.htm // JK

Hydrogen There are weighty reasons why we are not likely to have a hydrogen economy. If you make hydrogen from electricity you lose 30% of the energy that was in the electricity. If you then compress, pump, store and re-use the hydrogen the losses at each of these steps will result in something like only 25% of the energy generated being available for use, e.g., to drive the wheels of a fuel-cell powered car.

### AT: Quality increasing

**Even if growth could theoretically solve, it would take hundreds of years – our impacts occur in the interim**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

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.

### AT: Current Movements

**Current movements aren’t enough – collapse is necessary**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

The failure of the Greens Despite the overwhelming case against growth, and the argument that there is no possibility of solving the environment problem unless we shift to a zero-growth economy, green movements and political parties have almost totally ignored the issue. The original German Green Party saw the need for vast and radical system change away from consumercapitalist society. However, now almost all green effort goes into merely trying to reform that society, so that its damage to the environment will be reduced somewhat, and virtually no green campaigning is directed at moving towards a kind of society that does not inevitably and increasingly destroy the environment. Almost none of their attention is given to the topic of growth. (For instance Geoff Mosley’s recent book details the continued refusal over many years of the Australian Conservation Foundation to deal with it. Mosley, 2010.) Similarly Green political parties will not discuss economic or population growth and instead focus on reforms which never challenge growth and affluence. Green people are among those who make the strongest claims that technology can solve the problems eliminating any need to face up to system change...and the politicians are at fault for not implementing the available solutions. The reason for this failure/refusal is of course that if they spoke up against the pursuit of growth and affluence in a society that is fiercely obsessed with these goals, they would quickly lose their subscribers.

## AFF—Transition Fails

### Transition Bad

**No survivors in a world of Transition—civilization would collapse and we would all die**

**Smith & Sauer-Thompson, ‘98** – Joseph Wayne, Ph. D in Geography from Cambridge, Senior Research Fellow in Geography at the University of Adelaide in Australia, Gary, Lecturer in Philosophy at Flinders University of South Australia, ‘Civilization's Wake: Ecology, Economics and the Roots of Environmental Destruction and Neglect’, Ebsco // JK

RAGNAROK: THE END OF THE WORLD In ancient Norse mythology Ragnarok or Ragnarokk (Ragnarokkr, from regin, the gods + rokkr, twilight; German equivalent Gotterdammerung) was the final cataclysmic battle between the gods (the Aesir) and the forces of evil. Apocalyptic scenarios such as this one are common in the great world religions. Usually, as in Judeo-Christianity, the forces of good triumph without even raising a sweat because the good guys are infinitely powered while the bad guys are not. Victory was guaranteed before the battle ever took place, by logical necessity. Norse mythology (what is now called Asatru or Odinism—consult the World Wide Web) has no such rosy picture of reality. The forces of good will be defeated and the world destroyed. Neither good nor evil shall triumph but both will destroy each other. Their destruction though will enable a new world to be born, growing from the decaying ruins of the old. Now as the reader is no doubt aware, our book shop shelves sag with the weight of popular science books telling us that quantum mechanics and general relativity confirm the metaphysics of various Oriental philosophies. This may be so, although none of these authors tell us what happens when quantum mechanics and general relativity theory are falsified and replaced, as scientific theories of this nature invariably are. But could it not be argued that Norse mythology also has its merits, as an ecological eschatology? Many works of radical environmentalism would seem to fit such a pattern. Joel Jay Kassiola in The Death of Industrial Civilization (1990) believes that industrial civilization will collapse but this will not mean the end of the world as a new "transindustrial society" will arise like a phoenix from the ashes and soot of the old world. Ted Trainer (1995a) believes that the affluent society is not sustainable and that for the world's population to be sustained, a movement must be made now to a conserver society which is a much less affluent, simpler, more cooperative and self-sufficient way of living. It is an implication of this view that if the West does not move towards this, a global battle for resources will occur. This shredding of the world will mean that a violent collapse of technoindustrial society will occur with ecological necessity forcing us to adopt a conserver lifestyle. David Price (1995) sees ecological scarcity leading to a collapse of civilization, with starvation, social chaos and disease culling the human population. He describes the world of survivors: These people might get by, for a while, by picking through the wreckage of civilization, but soon they would have to lead simpler lives, like the hunters and subsistence farmers of the past. They would not have the resources to build great public works or carry forward scientific inquiry. They could not let individuals remain unproductive as they wrote novels or composed symphonies. After a few generations, they might come to believe that the rubble amid which they live is the remains of cities built by gods. Or it may prove impossible for even a few survivors to subsist on the meagre resources left in civilization's wake. The children of the highly technological society into which more and more of the world's peoples are being drawn will not know how to support themselves by hunting and gathering or by simple agriculture. In addition, the wealth of wild animals that once sustain hunting societies will be gone, and topsoil that has been spoiled by tractors will yield poorly to the hoe. A species that has come to depend on complex technologies to mediate its relationship with the environment may not long survive their loss (Price, 1995, p. 316).

### Collapse doesn’t solve

**You don’t solve – even collapse of the U.S. economy wouldn’t be enough to prevent ecological breakdown**

**Trainer, ‘10** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘De-growth – is not enough’, http://www.inclusivedemocracy.org/journal/vol6/vol6\_no4\_trainer\_degrowth\_not\_enough.htm // JK

We need less than zero-growth **Another huge oversight in the de-growth literature is the failure to recognize that if we in rich countries immediately adopted zero growth economies the planet would still be headed for catastrophic ecological breakdown**. The problems cannot be solved unless there is a vast reduction in the amount of economic activity taking place on the planet. The many basic ecological indicators are making it clear that we are so far beyond sustainable levels of production, consumption, resource use and consequent ecological impact that sustainability cannot be achieved unless these rates are reduced to small fractions of their current levels.

### AT: Leads to Mindset Shift

**You don’t solve – we need an entire cultural and mentality shift to transition away from the system**

**Trainer, ‘11** – Ted, Ph. D of Social Sciences from the University of New South Wales, Senior Lecturer in the School of Social Sciences, ‘The radical implications of a zero growth economy’, http://www.paecon.net/PAEReview/issue57/Trainer57.pdf // JK

Above all, if there is to be no growth there can be no role for market forces. Many people who oppose growth do not seem to realise this. The market is about maximising; i.e., about producing, selling, and investing in order to make as much money as possible from the deal, and then seeking to invest, produce and sell more, in order to again make as much money as possible. In other words there is an inseparable relation between growth, the market system and the accumulation imperative that defines capitalism. If we must cease growth we must scrap the market system. • **The above changes could not be made unless there was also a profound cultural change, involving nothing less than the abandonment of the desire to gain**. For more than two hundred years our Western society has been focussed on the quest to get richer, to accumulate wealth and property. (The point is focal in the writings of Polanyi, 1944, and Tawney 1922, in the emergence of capitalist society from Medieval society.) This is what drives all economic activity, such as the innovative and development behaviour of firms and the behaviour of individuals and firms in the market, and it is at the core of national policy. People work to get as much money as possible. Firms strive to make as much profit as possible and to get as big as possible. People trade in order to end up richer than they were. Nations strive to become richer all the time. • The logically inescapable point here is that in a zero-growth economy there could be no place whatsoever for this psychological motive or economic process. People would have to be concerned to produce and acquire only that stable quantity of goods and services that is sufficient for a satisfactory quality of life, and to seek no increase whatsoever in savings, wealth, possessions etc. It would be difficult to exaggerate the magnitude of this cultural transition. **A zero-growth economy cannot exist unless there is enormous change from the mentality that is typical in consumer society and that has been the dominant driving force in Western culture for several hundred years.**

### Transition Destroys the env

**Collapse of the economy causes more environmental damage and dieoff**

**Smith & Sauer-Thompson, ‘98** – Joseph Wayne, Ph. D in Geography from Cambridge, Senior Research Fellow in Geography at the University of Adelaide in Australia, Gary, Lecturer in Philosophy at Flinders University of South Australia, ‘Civilization's Wake: Ecology, Economics and the Roots of Environmental Destruction and Neglect’, Ebsco // JK

Sane Society (1956) described how it was possible for an entire society to be "insane." Modern technology has given us the capacity to enrich everybody's life with the best of past and present literature and culture but "these media of communication, supplemented by advertising, fill the minds of men with the cheapest trash, lacking in any sense of reality, with sadistic fantasies which a halfway cultured person would be embarrassed to entertain even once in a while" (Fromm, 1956, p. 5). We believe that a telling form of this systems-irrationality is seen in the environmental arena. Due to the power/interest structures of global capitalism and the juggernaut-like momentum of the global economy (Smith et al., 1997) it is most unlikely that any of the radical changes to society and the economy proposed by environmentalists—especially changes in philosophies and world views—will be adopted in time if the limits to growth literature is correct. Consequently we have come to believe that human civilization—primarily Western technoindustrial urban society—will self-destruct, producing massive environmental damage, social chaos and megadeath. This pessimistic futurology has been discussed by us in a number of books (Lyons et al., 1995; Smith et al., 1997). Here we restate our general argument using more recent sources.

## AFF--Growth is Good

### Growth solves environment

**Growth is SO GOOD FOR THE ENVIRONMENT—Scientific expertise is on OUR side—only hippies are on yours**

**Anderson, ‘04** – Ph. D in Economics from the University of Washington, President of PERC (Property and Environment Research Center), Senior Fellow at the Hoover Institution, ‘Cooling the Global Warming Debate’, http://www.perc.org/articles/article446.php // JK

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. Global-warming policy analysts agree that greenhouse gas regulations such as those proposed at Kyoto would have negative impacts on the economy. Therefore, as McCormick warns, we should take great care that regulations in the name of global warming "not kill the goose that lays the golden eggs."

**Growth solves the environment – better efficiency**

**Barker, ‘05** – John, Ph. D in Biology, Director of Gaia Population Watch, ‘Is Economic Growth good for the Environment? An approach to this question using the Environmental Kuznets Curve Hypothesis’, http://www.population-growth-migration.info/essays/economyk.html // JK

The role of technology and changes in relative importance of different components of the economy As a country becomes wealthier it can afford to spend more on research and development, leading to the development of improved environmental technologies. Here public spending on environmental research and development acts as a catalyst for private investment in developing new technologies. 'Dirty' and obsolete technologies are replaced by upgraded new and cleaner technologies. The consequence of such changes is that “a given amount of goods can be produced with successively reduced burdens on natural resources and the environment” (Dinda, ibid). In other words, methods of raw material extraction and manufacture of goods from these raw materials, become more efficient, as do methods of pollution abatement. This line of argument leads to the subject of 'dematerialization' which we take up in the next section of this essay.

### Growth Prereq to environment

#### Must continue to spend to maintain the global economy growth key to maintaining all progress

**Reich 10** (ROBERT B. REICH,Chancellor’s Professor of Public Policy at the University of California at University of California at Berkeley, “Why Growth is Good” Tuesday, August 17, 2010 <http://robertreich.org/post/968048444>(Pitman)

Economic growth is slowing in the United States. It’s also slowing in Japan, France, Britain, Italy, Spain, and Canada. It’s even slowing in China. And it’s likely to be slowing soon in Germany. If governments keep hacking away at their budgets while consumers almost everywhere are becoming more cautious about spending, global demand will shrink to the point where a worldwide dip is inevitable. You might ask yourself: So what? Why do we need more economic growth anyway? Aren’t we ruining the planet with all this growth — destroying forests, polluting oceans and rivers, and spewing carbon into the atmosphere at a rate that’s already causing climate chaos? Let’s just stop filling our homes with so much stuff. The answer is economic growth isn’t just about more stuff. Growth is different from consumerism. Growth is really about the capacity of a nation to produce everything that’s wanted and needed by its inhabitants. That includes better stewardship of the environment as well as improved public health and better schools. (The Gross Domestic Product is a crude way of gauging this but it’s a guide. Nations with high and growing GDPs have more overall capacity; those with low or slowing GDPs have less.) Poorer countries tend to be more polluted than richer ones because they don’t have the capacity both to keep their people fed and clothed and also to keep their land, air and water clean. Infant mortality is higher and life spans shorter because they don’t have enough to immunize against diseases, prevent them from spreading, and cure the sick.

#### Growth is Key to Any social change

**Reich 10** (ROBERT B. REICH,Chancellor’s Professor of Public Policy at the University of California at University of California at Berkeley, “Why Growth is Good” Tuesday, August 17, 2010 <http://robertreich.org/post/968048444(Pitman)>

How a nation chooses to use its productive capacity – how it defines its needs and wants — is a different matter. As China becomes a richer nation it can devote more of its capacity to its environment and to its own consumers, for example. The United States has the largest capacity in the world. But relative to other rich nations it chooses to devote a larger proportion of that capacity to consumer goods, health care, and the military. And it uses comparatively less to support people who are unemployed or destitute, pay for non-carbon fuels, keep people healthy, and provide aid to the rest of the world. Slower growth will mean even more competition among these goals. Faster growth greases the way toward more equal opportunity and a wider distribution of gains. The wealthy more easily accept a smaller share of the gains because they can still come out ahead of where they were before. Simultaneously, the middle class more willingly pays taxes to support public improvements like a cleaner environment and stronger safety nets. It’s a virtuous cycle. We had one during the Great Prosperity the lasted from 1947 to the early 1970s. Slower growth has the reverse effect. Because economic gains are small, the wealthy fight harder to maintain their share. The middle class, already burdened by high unemployment and flat or dropping wages, fights ever more furiously against any additional burdens, including tax increases to support public improvements. The poor are left worse off than before. It’s a vicious cycle. We’ve been in one most of the last thirty years. No one should celebrate slow growth. If we’re entering into a period of even slower growth, the consequences could be worse.

## AFF--Random

### AT: Social Equality

**This doesn’t matter – growth solves equality**

**Holcombe, 6/12** – Randall, Ph. D in Economics from Virginia Tech, Research Fellow at The Independent Institute, Senior Fellow at the James Madison Institute, DeVoe Moore Professor of Economics at Florida State University, ‘Is There a Trade-Off Between Economic Growth and Equality?’, http://blog.independent.org/2012/06/12/is-there-a-trade-off-between-economic-growth-and-equality/ // JK

My own view is that I do not accept this trade-off. I don’t see any value in equality per se. It is the result of differences in capabilities, ambitions, and indeed, a bit of luck. I am sympathetic to the plight of the poor, but because they are poor, not because they are at the bottom of an unequal distribution of income or wealth. Because I see strong evidence that economic growth helps out people regardless of where they fall in the distribution of income, public policy should be pro-growth, and ignore equality issues.