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## 1NC

### Uniqueness

#### The transition is already happening but the longer we ignore it the worse the impacts become

**Pedersen 09** (Peter David Pedersen, is the chief executive of E-Square Inc., one of Japan's leading sustainability think tanks and consultancies. He introduced the concept of LOHAS (Lifestyles of Health And Sustainability) to Japan in 2002. April 15, 2009 “Homo sociens and the New Ecological Growth Economy” http://www.policyinnovations.org/ideas/commentary/data/000121) // CG

A new economy is on the doorstep. It's not the economy we used to know as "the new economy." It's not the information-technology-driven growth of the last few decades, although that makes up part of the new economy. A new economy is rapidly emerging, one which will transform the ways that people live and do business. The name of the new new economy is the "ecological growth economy." This is neither a bad joke nor an anachronism. It is the emerging new reality. It is also the precondition for the continuation of human progress and the survival of millions of other species on Earth. We have an obvious choice: We can speed up the realization of the ecological growth economy now, or our children and theirs will suffer for centuries. It appears to be an easy choice, doesn't it? We can choose human progress over suffering. And yet, we are not making this choice at sufficient speed or scale today. Ignorance, institutional inertia, vested interests, and greed are the main reasons for our far-too-slow action. However, as sentient creatures (Homo sapiens), humans are equipped with knowledge, good will, and a degree of wisdom. A majority of people around the Earth today are realizing that we cannot survive without embracing the ecological growth economy. Most people are willing to join forces and are willing to make certain sacrifices in lifestyle to achieve an economy that will allow the continuation of human progress into future generations. Fortunately, an increasing number of people are making great efforts to bring about this new economy.

### Link

#### **The transportation sector prevents a steady state economy**

Blackwelder 10 [Brent Blackwelder – President of Friends of Earth and Founder of American Rivers, August 2010, “Steady State Transportation: Closing the Door on the Dirty Oil Era”, <http://steadystate.org/steady-state-transportation-closing-the-door-on-the-dirty-oil-era/>]

To achieve optimal economic scale and a true balance with nature in a steady state economy (i.e., healthy ecosystems and a healthy economy), boldness is required, and the transportation sector is a good place to start. Ending the use of oil to power vehicles, from planes to trains to automobiles, is a must. But the power of the highway lobby and the momentum of the global jet-setting economy’s demands make this objective appear improbable. Some encouraging signs of change, however, provide the basis for making big demands on Congress, state legislatures, and the executive branch. For example, public support for spending the preponderance of federal transportation dollars on road construction (instead of public transportation) may be cracking significantly. On July 25th the Chicago Tribune reported that for the first time, both suburban and urban citizens in the Chicago metro area think that more money ought to be spent on transit than on highways. Another promising sign is the growth in U.S. transit ridership. Since 1996 transit ridership has increased by an average of 2.6% annually, including a 3.3% increase in 2009.Recent economic analyses highlight the costliness of oil and automobile usage, and evidence from these analyses can drive big shifts in policy. For instance, the U.K. Department of Transport has found that for each British pound spent to reduce car usage, there are £10 of benefits in the economy from fuel savings, reduced congestion costs, and lower pollution levels. But America lags far behind other nations in rethinking transportation systems – a quick comparison of Atlanta to Amsterdam demonstrates the gap. In Atlanta 95% of residents commute to work by car. In Amsterdam 40% commute by car, 35% bike or walk, and 25% go by transit. The series of oil spills in the U.S. this year should energize efforts in city after city to revamp transportation and breathe new life into automobile alternatives.

### IL

#### 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.

#### environmental 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.

### TI

#### 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.

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## Uniqueness

#### Ext. The transition is already happening but the longer we ignore it the worse the impacts become

**Pedersen 09** (Peter David Pedersen, is the chief executive of E-Square Inc., one of Japan's leading sustainability think tanks and consultancies. He introduced the concept of LOHAS (Lifestyles of Health And Sustainability) to Japan in 2002. April 15, 2009 “Homo sociens and the New Ecological Growth Economy” http://www.policyinnovations.org/ideas/commentary/data/000121) // CG

### Sustainability

#### **Economic collapse is inevitable with exponential growth – credible computer models prove.**

**MacKenzie 12** (Deobra, a consultant for the New Scientist. “Boom And Doom: Revisiting Prophecies Of Collapse.” Full Date: 1/10/12. Accessed: 6/21/12. <http://www.countercurrents.org/mackenzie100112.htm>)

At the beginning of the 1970s, a group of young scientists set out to explore our future. Their findings shook a generation and may be even more relevant than ever today. The question the group set out to answer was: what would happen if the world’s population and industry continued to grow rapidly? Could growth continue indefinitely or would we start to hit limits at some point? In those days, few believed that there were any limits to growth – some economists still don’t. Even those who accepted that on a finite planet there must be some limits usually assumed that growth would merely level off as we approached them. These notions, however, were based on little more than speculation and ideology. The young scientists tried to take a more rigorous approach: using a computer model to explore possible futures. What was shocking was that their simulations, far from showing growth continuing forever, or even levelling out, suggested that it was most likely that boom would be followed by bust: a sharp decline in industrial output, food production and population. In other words, the collapse of global civilisation. These explosive conclusions were published in 1972 in a slim paperback called The Limits to Growth. It became a bestseller – and provoked a furious backlash that has obscured what it actually said. For instance, it is widely believed that Limits predicted collapse by 2000, yet in fact it made no such claim. So what did it say? And 40 years on, how do its projections compare with reality so far? The first thing you might ask is, why look back at a model devised in the days when computers were bigger than your fridge but less powerful than your phone? Surely we now have far more advanced models? In fact, in many ways we have yet to improve on World3, the relatively simple model on which Limits was based. “When you think of the change in both scientific and computational capabilities since 1972, it is astounding there has been so little effort to improve upon their work,” says Yaneer Bar-Yam, head of the New England Complex Systems Institute in Cambridge, Massachusetts. It hasn’t happened in part because of the storm of controversy the book provoked. “Researchers lost their appetite for global modelling,” says Robert Hoffman of company Whatlf Technologies in Ottawa, Canada, which models resources for companies and governments. “Now, with peak oil, climate change and the failure of conventional economics, there is a renewed interest.” The other problem is that as models get bigger, it becomes harder to see why they produce certain outcomes and whether they are too sensitive to particular inputs, especially with complex systems. Thomas Homer-Dixon of the University of Waterloo in Ontario, Canada, who studies global systems and has used WorId3, thinks it may have been the best possible compromise between over-simplification and unmanageable complexity. But Hoffman and Bar-Yam’s groups are now trying to do better. World3 was developed at the Massachusetts Institute of Technology. The team took what was known about the global population, industry and resources from 1900 to 1972 and used it to develop a set of equations describing how these parameters affected each other. Based on various adjustable assumptions, such as the amount of non-renewable resources, the model projected what would happen over the next century. The team compares their work to exploring what happens to a ball thrown upwards. World3 was meant to reveal the general behaviour that results – in the case of a ball, going up and then falling down – not to make precise predictions, such as exactly how high the ball would go, or where and when it would fall. “None of these computer outputs is a prediction,” the book warned repeatedly. Assuming that business continued as usual, World3 projected that population and industry would grow exponentially at first. Eventually, however, growth would begin to slow and would soon stop altogether as resources grew scarce, pollution soared and food became limited. “The Limits to Growth said that the human ecological footprint cannot continue to grow indefinitely, because planet Earth is physically limited,” says Jørgen Randers of the Norwegian School of Management in Oslo, one of the book’s original authors. What’s more, instead of stabilising at the peak levels, or oscillating around them, in almost all model runs population and industry go into a sharp decline once they peak. “If present growth trends in world population, industrialisation, pollution, food production and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next 100 years. The most probable result will be a sudden and rather uncontrollable decline in both population and industrial capacity,” the book warned. This was unexpected and shocking. Why should the world’s economy collapse rather than stabilise? In World3, it happened because of the complex feedbacks between different global subsystems such as industry, health and agriculture. More industrial output meant more money to spend on agriculture and healthcare, but also more pollution, which could damage health and food production. And most importantly, says Randers, in the real world there are delays before limits are understood, institutions act or remedies take effect. These delayed responses were programmed into World3. The model crashed because its hypothetical people did not respond to the mounting problems before underlying support systems, such as farmland and ecosystems, had been damaged. Instead, they carried on consuming and polluting past the point the model world could sustain. The result was what economists call a bubble and Limits called overshoot. The impact of these response delays was “the fundamental scientific message” of the study, says Randers. Critics, and even fans of the study, he says, didn’t get this point. The other message missed was not that humanity was doomed, but that catastrophe could be averted. In model runs where growth of population and industry were constrained, growth did level out rather than collapse – the stabilised scenario (see graph, right inset). Yet few saw it this way. Instead, the book came under fire from all sides. Scientists didn’t like Limits because the authors, anxious to publicise their findings, put it out before it was peer reviewed. The political right rejected its warning about the dangers of growth. The left rejected it for betraying the aspirations of workers. The Catholic church rejected its plea for birth control. Critical points The most strident criticisms **came from economists, who claimed Limits underestimated the power of the technological fixes humans would surely invent. As resources ran low, for instance, we would discover more or develop alternatives.** Yet the Limits team had tested this. In some runs, they gave World3 unlimited, non-polluting nuclear energy – which allowed extensive substitution and recycling of limited materials – and a doubling in the reserves of nonrenewables that could be economically exploited. All the same, the population crashed when industrial pollution soared. Then fourfold pollution reductions were added as well: this time, the crash came when there was no more farmland. Adding in higher farm yields and better birth control helped in this case. But then soil erosion and pollution struck, driven by the continuing rise of industry. Whatever the researchers did to eke out resources or stave off pollution, exponential growth was simply prolonged, until it eventually swamped the remedies. Only when the growth of population and industry were constrained, and all the technological fixes applied, did it stabilise in relative prosperity. The crucial point is that overshoot and collapse usually happened sooner or later in World3 even if very optimistic assumptions were made about, say, oil reserves. “The general behaviour of overshoot and collapse persists, even when large changes to numerous parameters are made,” says Graham Turner of the CSIRO Ecosystem Sciences lab in Crace, Australia. This did not convince those who thought technology could fix every problem. And with so much criticism, the idea took hold that Limits had been disproved. That mantra has been repeated so often that it became the received wisdom, says Ugo Bardi of the University of Florence in Italy, author of a recent book about Limits. “The common perception is that the work was discredited scientifically. I heard it again at a meeting last April,” says Homer-Dixon. “It wasn’t.” It wasn’t just confusion. “Misunderstanding was enhanced by a media campaign very similar to the one that has been recently directed against climate science,” says Bardi. One of the most common myths is that Limits predicted collapse by 2000. Yet as a brief glance at the “standard run” shows, it didn’t (see graph, right). The book does mention a 1970 estimate by the US Bureau of Mines that the world had 31 years of oil left. The bureau calculated this by dividing known reserves by the current rate of consumption. Rates of consumption, however, were increasing exponentially, so Limits pointed out that in fact oil had only 20 years left if nothing changed. But this calculation was made to illustrate the effects of exponential growth, not to predict that there were only 20 years of oil left. When Matthew Simmons, a leading oil-industry banker, finally read Limits in the 1990s, he was surprised to find none of the false predictions he had heard about. On the contrary, he concluded, population and energy growth largely matched the basic simulation. He felt Limits got so much attention, then lost it, partly because the oil shock of 1973 focused minds on resource shortages that were then largely resolved. There have been other recent re-appraisals of the book. In 2008, for instance, Turner did a detailed statistical analysis of how real growth compares to the scenarios in Limits. He concluded that reality so far closely matches the standard run of World3. Does that mean we face industrial collapse and widespread death? Not necessarily. A glance at Turner’s curves shows we haven’t yet reached the stage of the standard run, later this century, when such events are predicted. In the model, overshoot and collapse are preceded by exponential growth. Exponential growth starts out looking just like linear growth, says Bar-Yam: only later does the exponential curve start heading skywards. After only 40 years, we can’t yet say whether growth is linear or exponential. We already know the future will be different from the standard run in one respect, says Bar-Yam. Although the actual world population up to 2000 has been similar, in the scenario the rate of population growth increases with time – one of the exponential drivers of collapse. Although Limits took account of the fact that birth rates fall as prosperity rises, in reality they have fallen much faster than was expected when the book was written. “It is reasonable to be concerned about resource limitations in fifty years,” Bar-Yam says, “but the population is not even close to growing [the way Limits projected in 1972].” The book itself may be partly responsible. Bar-Yam thinks some of the efforts in the 1970s to cut population growth were at least partly due to Limits. “If it helped do that, it bought us more time, and it’s a very important work in the history of humanity,” he says. Yet World3 still suggests we’ll hit the buffers eventually. The original Limits team put out an updated study using World3 in 2005, which included faster-falling birth rates. Except in the stabilising scenario, World3 still collapsed. Otherwise, the team didn’t analyse the correspondence between the real world and their 1972 scenarios in detail – noting only that they generally match. “Does this correspondence with history prove our model was true? No, of course not,” they wrote. “But it does indicate that assumptions and conclusions still warrant consideration today.” This remains the case. Forty years on from its publication, it is still not clear whether Limits was right, but it hasn’t been proved wrong either. And while the model was too pessimistic about birth and death rates, it was too optimistic about the future impact of pollution. We now know that overshoot – the delayed response to problems that makes the effects so much worse – will eventually be especially catastrophic for climate change, because the full effects of greenhouse gases will not be apparent for centuries.

#### Collapse is inevitable – empirics prove – the only avenue for survival is embracing collapse

**Gowdy, 5** (John, Department of Economics, Rensselaer Polytechnic Institute, “**Avoiding self-organized extinction: Toward a co-evolutionary economics of sustainability,”** **International Journal of Sustainable Development and World Ecology, February 2007, Volume 14, Issue 1, pg. 27-36, Proquest, Tashma)**

But past societies collapsed local ecosystems and now humans are in danger collapsing global systems. Still it would be foolish to predict the imminent collapse of global capitalism. Such predictions have been made many times before and yet the system rolls on apparently unaffected by any of the potential calamities listed above. Yet if we ask not 'when' but 'whether' the current world system will collapse, the answer would seem to be a clear 'yes.' That answer comes not only from an examination of the current consensus on twenty-first century scenarios on climate change, fossil fuel exhaustion and the diffusion of weapons of mass destruction technology, but also on a growing body of research on past societies that have exhibited the same general pattern as our own. So what can be done, if anything, to make the radical changes needed to avoid social collapse? Are current suggestions for sustainability policies feasible? The answer has to be a cautious 'no'. But there is a glimmer of hope if the neo-liberal worldview driving public policy catches up with contemporary economic theory. Sustainability and incremental policies - A wellestablished theory in economics is the theory of the second best (Lipsey and Lancaster 1956). Basically this theorem states that if the conditions for efficiency are violated in several markets, correcting the conditions in one market alone will likely move the economy further away from an efficient solution. Applied to sustainability it means that changing one thing alone will not move us closer to sustainability and may move us further away. For example, greatly improving energy efficiency would have the effect of reducing demand and lowering energy prices, so that more energy would be used (this is the rebound or Jevons effect). Sustainable consumption - It is argued above that, because of demonstration effects and habituation, higher incomes do not make people happier. However, just because economic growth does not make us happier this does not mean that stopping growth will not affect our happiness. Many of us have become habituated to a steady stream of new products. Like any addiction we need more and more of the fix just to keep us in the same place. Moving to no-growth or steady state economy requires policies to address the psychological dependence on consumption being fostered by the global marketplace. A first step would be to strictly control advertising designed to foster a culture of consumption. Sustainability and the illusion of the steady state- In the current context of globalization and economic 'rationalization', for one country to slow or stop economic growth would amount to unilateral disarmament. When economic growth slows, so does capital formation, meaning that a nongrowing country's capital stock would quickly become outdated and non-competitive. Neither should the link between military power and economic growth be ignored. The world is now a single socio-economic system and as long as nations compete with each other for markets and military power it may not be desirable for one country or even one large region to move to a steady state economy. Added to this is the growth imperative of empires, including contemporary Western capitalism. When past empires ceased to grow, a variety of related destructive forces came into play. Do cultures have free will? A dominant pattern of cultural evolution since the advent of agriculture is overshoot and collapse. Cultures seem to become locked into patterns of behaviour that were successful in early stages of development but dysfunctional in later stages. Over time cultures build up a complex superstructure of material capital, learned patterns of behaviour, and ethical systems. 'Sunk costs' include not only capital and technology but also social systems of beliefs justifying the established way of doing things. These social systems reinforce the power elites that invariably control complex societies. Those who have the most to lose by dramatic changes have the power to reward those who accept the status quo and punish those who do not. Those few cultures, such as Tikopia, that were able to change course did so because they were apparently able to modify behavioural incentives to reward sustainable behaviour. Two kinds of societies that were able to do this are egalitarian societies with small populations that worked by bottom up consensus and top-down hierarchical societies like Tokugawa, Japan that could impose sustainability by decree (Diamond 2005). Neither of these models is feasible in today's global market economy of competing nations. These concluding comments may seem pessimistic but the history of the collapse of past societies - and the mounting evidence of our own unsustainability- strongly suggests that piecemeal change will not be enough. It is better to face the future realistically from where we are rather than to pretend that limited measures within a businessas-usual framework will get us through the population and resource bottleneck of the current century.

#### Growth over – four barriers that can’t be overwhelmed

**Clark, ’11** (Richard, former instructor at S.F. State University, “The End of Economic Growth,” http://www.opednews.com/articles/1/The-End-of-Economic-Growth-by-Richard-Clark-110317-514.html, 3/17, bgm)

**The economic "growth" of the past consisted of the expansion of the overall size of the economy (with ever more people being served and ever more money changing hands).**  It also had to do with the quantities of energy and material goods flowing through it. **The economic crisis that began in 2007-2008 was both foreseeable and inevitable, and it marks a permanent, fundamental break from past decades**--a period during which most economists adopted the unrealistic view that perpetual economic growth is necessary and also possible to achieve. **But there are now fundamental barriers to ongoing economic expansion, and the modern world is increasingly colliding with those barriers. This is not to say the U.S. or the world as a whole will never see another quarter or year of growth relative to the previous quarter or year. However, when the bumps are averaged out, the general trend-line of the economy (measured in terms of production and consumption of real goods) will be level or downward rather than upward, from now on. It will simply not be possible** for any region, nation, or business **to continue growing in any sustained way. Whatever growth does take place, temporarily, will be achieved at the expense of other regions, nations, or businesses. Another way to say this is that the global economy is now playing a zero-sum game with Mother Nature, in which an ever-shrinking pot will be divided up among the winners. Why is economic growth ending? Financial pundits point to profound problems internal to the economy--including overwhelming, un-repayable levels of public and private debt, and the bursting of the real estate bubble--as immediate threats to the resumption of economic growth. Their assumption,** however, **is that eventually, once these problems are properly dealt with, growth can and will pick up again. But the pundits fail to see factors external to the financial economy that make a resumption of conventional economic growth an impossibility. In other words, this is not a temporary condition, it is permanent. Four obstacles to further economic growth The depletion of important resources including fossil fuels and minerals; The proliferation of environmental impacts arising from both the extraction and use of resources** (including the burning of fossil fuels)--**leading to snowballing costs from both these impacts and the efforts to clean them up; Financial disruptions due to the inability of our existing monetary, banking, and investment systems to adjust to both resource scarcity and soaring environmental costs The inability of these same systems** (in the context of a shrinking economy) **to cope with the enormous piles of government and private debt that have been generated over the past couple of decades and that will apparently continue to be generated. Despite the tendency of financial commentators to focus only on the last two of these four obstacles, it is possible to point to literally thousands of events in recent years that illustrate how all four are interacting, and are hitting home with ever more force.** For example, **consider** just one such event: **The Deepwater Horizon oil catastrophe of 2010 in the Gulf of Mexico**

### Ecology

#### Growth is unsustainable, 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

### No More Growth – China

#### Chinese growth collapse will be the last straw – growth over

**Heinberg, ’11** (Richard, 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, “The China Bubble: Economic Growth’s Last Stand?” 6/6, http://www.postcarbon.org/article/350809-the-china-bubble-economic-growth-s-last, bgm)

**China is no more able to sustain perpetual growth than any other nation. The only questions, really, are when its growth will stall, and by what pace and to what degree its economy will contract. The property bubble is likely to be China’s biggest short-term problem, and it could have knock-on effects on the nation’s banking system. The bubble could start to deflate as soon as next year**, or the year after. Beijing will do what it can to prop up growth and tamp down social strain, and this could buy another couple of years—though there is no guarantee that the effort will succeed. **Over the longer haul (the next 2-10 years), China’s greatest vulnerabilities are in the areas of energy, demographics, and the environment (water, climate, and agriculture). By the period 2016 to 2020, problems in these areas will accumulate and become mutually exacerbating, and it will eventually be impossible for China’s leaders to plug all the leaks in the dike.** Already, **China’s social structure is stressed, as can be seen from the many regional rebellions that take place each year (but that go mostly unreported in world media).** This is the main reason the central government is ruthless with respect to press and Internet freedoms and other civil liberties. **Talk to a businessperson from China and you may hear how the continued expansion of the Chinese economy is inevitable and unstoppable. But peer beneath the surface and you will see roiling, boiling ferment.** We have discussed China at some length, not only because it has become the world’s second-largest national economy and is the world’s foremost energy user, but because it is emblematic. **India, Thailand, Indonesia, Malaysia, and Vietnam are each pursuing somewhat different paths toward the same grail of rapid economic growth, but their strategies and vulnerabilities are sufficiently similar that an understanding of China’s predicament provides useful context for gauging these other countries’ prospects. China is likely the site of world economic growth’s last stand. This nation, together with the other Asian “tigers,” comprises the main engine of expansion that remains after the faltering of the older, more established economies in North America and Europe. When China sputters, the quickening slide of the global economy will be clear and obvious to everyone.**

### No More Growth – Metals/Minerals

#### Metal and mineral peaks will make growth impossible

**Heinberg, ’11** (Richard, 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, “Earth's Limits: Why Growth Won't Return - Metals & Other Minerals,” 3/15, http://www.postcarbon.org/article/278435-earth-s-limits-why-growth-won-t-return, bgm)

**Without metals and a host of other non-renewable minerals, industrial economies could not function. Metals are essential for energy production; for making factory tools, transportation vehicles, and agricultural machinery; and for building the infrastructure** of highways, pipes, and power lines **that enables modern civilization to function.** Hi-tech electronics industries rely on a host of rare metallic and non-metallic minerals ranging from antimony to zinc. All are depleting, and some are already at economically worrisome levels of scarcity. In principle, **there is no sustainable rate of extraction for non-renewable resources: every instance of extraction represents a step toward “running out.” During the twentieth century, though, new mining technologies enabled commercially available supplies of most minerals to increase substantially.** Ore qualities gradually declined as the low-hanging fruit disappeared, but this trend was countered by the investment of increasing amounts of cheap energy in mining and refining. Globalization also helped, as users of non-renewable resources gained access to virgin deposits in countries where labor costs for mining were minimal. Resource substitution and recycling likewise played their parts in keeping mineral and metal prices low and generally declining.[1] **That price trend seems to have reversed. During the past decade, production rates for many industrially important non-renewable resources have leveled off or, in some cases, begun to decline, while prices have risen.**[2] Several recent articles, reports, and studies highlight the predicament of depleting mines, declining ore quality, and rising prices.[3] Data from the U.S. Geological Survey shows that within the U.S. **many mineral resources are well past their peak rates of production.**[4] These include bauxite ( whose production peaked in 1943), copper (1998), iron ore (1951), magnesium (1966), phosphate rock (1980), potash (1967), rare earth metals (1984), tin (1945), titanium (1964), and zinc (1969).[5] As Tom Graedel at Yale University pointed out in a 2006 paper, “**Virgin stocks of several metals appear inadequate to sustain the modern ‘developed world’ quality of life for all of Earth’s people** under contemporary technology.”[6]

### 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.

### AT: Infinite Growth

#### Economic growth is unsustainable and will lead to unavoidable catastrophes

**Shekhar and Saxena, ’09** (Professor Manisha Shekhar, Centre for Strategic Analysis & Research Dept. of Electronics &[Communication](http://ecommerce-journal.com/articles/12807_environment_does_not_allow_further_economic_growth_in_the_world), Dr. M. C. Saxena college of Engg. & Technology, UPTU, Lucknow, India. January 30the, 2009, Ecommerce Journal, “ Environment does not allow further economic growth in the world?” http://ecommerce-journal.com/articles/12807\_environment\_does\_not\_allow\_further\_economic\_growth\_in\_the\_world, MD)

Built into the established economic theories is a supposition that unending economic growth is both possible and desirable. In fact, **growth and increasing consumption are two of the main objectives of capitalism. Yet**, from an environmental perspective, **this excessive focus on economic growth is both undesirable and unrealistic, especially in the rich, industrialized countries. It is impossible for the world economy to grow its way out of poverty and environmental degradation.** Instead, wealth must be redistributed and the world’s economic systems be kept at a sustainable level. **Exponential growth is impossible in the long run. Rather than hoping for everlasting economic growth—which will unavoidably lead to increasing burdens on the earth’s already strained ecosystems—there is a need to find the optimal scale of the economy and then develop sustainable economies.** Such economies would not be static or stagnant: ‘**An economy in sustainable development adapts and improves in knowledge, organization, technical efficiency, and wisdom; and it does this without assimilating or accreting, beyond some point, an ever greater percentage of the matter energy of the ecosystem itself.**

### AT: Innovation Solves

#### Innovation already peaked – it’s rate will decline even as population increases

**Adler, ’05** (Robert, science writer and author @ New Scientist, “Entering a dark age of innovation, http://www.newscientist.com/article/dn7616)

But according to a new analysis, this view couldn't be more wrong: far from being in technological nirvana, we are fast approaching a new dark age. That, at least, is the conclusion of Jonathan Huebner, a physicist working at the Pentagon's Naval Air Warfare Center in China Lake, California. He says the rate of technological innovation reached a peak a century ago and has been declining ever since. And like the lookout on the Titanic who spotted the fateful iceberg, Huebner sees the end of innovation looming dead ahead. His study will be published in Technological Forecasting and Social Change. It's an unfashionable view. Most futurologists say technology is developing at exponential rates. Moore's law, for example, foresaw chip densities (for which read speed and memory capacity) doubling every 18 months. And the chip makers have lived up to its predictions. Building on this, the less well-known Kurzweil's law says that these faster, smarter chips are leading to even faster growth in the power of computers. Developments in genome sequencing and nanoscale machinery are racing ahead too, and internet connectivity and telecommunications bandwith are growing even faster than computer power, catalysing still further waves of innovation. But Huebner is confident of his facts. He has long been struck by the fact that promised advances were not appearing as quickly as predicted. "I wondered if there was a reason for this," he says. "Perhaps there is a limit to what technology can achieve." In an effort to find out, he plotted major innovations and scientific advances over time compared to world population, using the 7200 key innovations listed in a recently published book, The History of Science and Technology (Houghton Mifflin, 2004). The results surprised him. Rather than growing exponentially, or even keeping pace with population growth, they peaked in 1873 and have been declining ever since (see Graphs). Next, he examined the number of patents granted in the US from 1790 to the present. When he plotted the number of US patents granted per decade divided by the country's population, he found the graph peaked in 1915. The period between 1873 and 1915 was certainly an innovative one. For instance, it included the major patent-producing years of America's greatest inventor, Thomas Edison (1847-1931). Edison patented more than 1000 inventions, including the incandescent bulb, electricity generation and distribution grids, movie cameras and the phonograph. Medieval future Huebner draws some stark lessons from his analysis. The global rate of innovation today, which is running at seven "important technological developments" per billion people per year, matches the rate in 1600. Despite far higher standards of education and massive R&D funding "it is more difficult now for people to develop new technology", Huebner says. Extrapolating Huebner's global innovation curve just two decades into the future, the innovation rate plummets to medieval levels. "We are approaching the 'dark ages point', when the rate of innovation is the same as it was during the Dark Ages," Huebner says. "We'll reach that in 2024."

### AT: Restraining US Hege Solves

#### Hege is only a symptom of a larger problem – we must end growth

**Trainer, ’02** (Ted, Senior Lecturer of School of Social Work @ University of New South Wales, “If you want affluence, prepare for War,” Democracy & Nature: The International Journal of Inclusive Democracy, July, Vol. 8 Issue 2, p. 281-299, Kel)

Following are some illustrative references taken from the large literature documenting the nature and functioning of the empire. Much of this evidence indicts the US but this is incidental. **The core problem is the powerful acquisitive drive in the Western mentality which fuels the insatiable quest for greater personal wealth and higher "living standards", greater corporate wealth, and a rising GDP. Given this, nations will compete for scarce resources and one will emerge as dominant, and run the empire in its own interests. In our era the dominant power just happens to be the US. The fundamental long term task is not to restrain US behaviour but to deal with the underlying motivation that comes from deep within Western culture** and that generates imperialism and related problems, such as ecological destruction and resource depletion.

### AT: Growth is Self-correcting

#### This is obviously not true – the fact that nothing is being done to stop growth’s destruction of the biosphere proves that the market doesn’t automatically correct itself.

#### Their scenario probably disproves this – if the market fixed itself then their plan would have been done already.

## Link

#### Ext. **The transportation sector prevents a steady state economy**

Blackwelder 10 [Brent Blackwelder – President of Friends of Earth and Founder of American Rivers, August 2010, “Steady State Transportation: Closing the Door on the Dirty Oil Era”, <http://steadystate.org/steady-state-transportation-closing-the-door-on-the-dirty-oil-era/>]

#### **Transportation infrastructure is the bloodline of economic growth**

Banister et al. 11 [David Banister - Professor of Transport Studies at the School of Geography and the Environment & fellow and tutor at Oxford University, Karen Anderton – M.S. in Environment and Development from the University of Reading, David Bonilla – Senior Research Fellow in Transport, Energy Economics, Dr. Moshe Givoni - Senior Researcher in Transport Policy and Economics, July 6, 2011, “Transportation and the Environment”, <http://www.annualreviews.org/doi/pdf/10.1146/annurev-environ-032310-112100>]

The transport sector has been described as the blood system of society (1) and one that has metaphorically contracted the planet (2). Over the past century, the transport of people, goods, and information has increased enormously, reﬂecting the clear economic and societal beneﬁts of transport. The global economy functions through (international) travel and trade, and there exist important positive feedback loops between transport and the economy, as growth of one stimulates the other (3). As well as allowing other economic sectors to function, transportation (i.e., the infrastructure

#### **Transportation infrastructure promotes unsustainability – de-development is necessary for stable modes of mobility**

Barrett 08 [Mark Barrett – degree in Economics from the University of Wisconsin & Master of Arts in Environment and Management, “Development”, October 2008, <http://www.scribd.com/doc/39295156/Barrett-DeDev>]

It is becoming more and more apparent that the massive energy, transportation, industry, and waste management infrastructure supporting an unsustainable way of life will have to be dismantled, and local decentralized, self-sustaining, integrated models developed (Doyle et al., 2008). At the same time the dismantling of infrastructure will provide an opportunity to restore ecological systems (Doyle et al., 2008). The availability of cheap fossils fuels has meant cheap transportation and enabled globalization but as fossil fuels become more expensive to extract and experience extreme price escalations, transportation, trade, and tourism will decline, and with them, a globalized economy. The creation of different ideas and models arising from the redevelopment of transportation, one of the most significant elements of western industrial civilization, will radically alter societies and social organization. The task of dismantling and recycling vehicles and transportation infrastructure alone will be an enormous challenge

#### **Transportation infrastructure and economic growth require eachother**

Moctezuma 08 [Manuel Moctezuma, October 23, 2008, “Development of Transportation Infrastructure in the Context of Economic Growth”, http://www.iiasa.ac.at/Research/ECG/target-seminars/ecg\_08/Moctezuma.pdf]

Developed road infrastructure is an essential factor facilitating and accelerating economic growth, which will in turn enable the addition of more¶ roads. At the same time, the marginal benefit of adding roads to a large stock of existing capacity might be diminishing. It is thus evident that the¶ co-evolution of economic output and road infrastructure is rather intricate¶ and deserves special attention. The model developed in this paper therefore investigates the interdependency between a country's economic growth and¶ the development of transportation infrastructure in this country. To this end, a co-evolutionary perspective is developed, where the mutual influence of the rate of economic growth and the capacity of transportation infrastructure are explicitly taken into account. This approach enables us to set up an optimal control problem, where the optimal investment rate is determined considering the co-evolutionary dynamics of GDP growth and capacity expansion. This model forms a comprehensive framework for understanding the underlying dynamics and the patterns of economic growth in relation to transport infrastructure.

#### **They affect the rate of growth of eachother**

Moctezuma 08 [Manuel Moctezuma, October 23, 2008, “Development of Transportation Infrastructure in the Context of Economic Growth”, http://www.iiasa.ac.at/Research/ECG/target-seminars/ecg\_08/Moctezuma.pdf]

The model presented here is essentially based on the assumption that there is¶ a strong interdependency between the capacity of transportation infrastructure and economic growth. Adopting this assumption we introduce a model¶ of coevolutionary dynamics that qualitatively describes how the development of transportation infrastructure aects the rate of economic growth¶ and vice versa. The qualitative coevolutionary model is in turn used to¶ construct a control model of development of transportation infrastructure in¶ the context of economic growth

#### **Growth in transportation infrastructure is unsustainable**

Banister et al. 11 [David Banister - Professor of Transport Studies at the School of Geography and the Environment & fellow and tutor at Oxford University, Karen Anderton – M.S. in Environment and Development from the University of Reading, David Bonilla – Senior Research Fellow in Transport, Energy Economics, Dr. Moshe Givoni - Senior Researcher in Transport Policy and Economics, July 6, 2011, “Transportation and the Environment”, <http://www.annualreviews.org/doi/pdf/10.1146/annurev-environ-032310-112100>]

The growth of CO2-intensive transport, mobility and the impact of transport on the environment are reviewed. The recent global exponential growth in transport is unsustainable and must end unless the transport sector can decarbonize. The paper examines solutions for low-carbon transport systems; the behavioral options; possible demand reduction; the role of innovative technologies; and the means by which international agreements on pricing, standards, and regulations can be effectively used. Transport brings enormous beneﬁts to society, and it has been instrumental in the globalization of the world economy, with substantial capital investments in its material infrastructure. Transport¶ governance also needs rethinking to understand the major challenges,¶ to implement major policy changes, and to address the problems of fragmented decision making. Holistic approaches, using ideas from transition management and niche development, are proposed as a framework within which both technological innovation and new patterns of travel and trade can be brought about.

#### **Transportation and sustainability are incompatible**

Kassens 09 [Eva Kassens – professor of Urban and Transport Planning at Michigan State, July 31, 2009, “SUSTAINABLE TRANSPORTATION: AN INTERNATIONAL PERSPECTIVE”, <http://web.mit.edu/dusp/dusp_extension_unsec/projections/issue_9/issue_9_kassens.pdf>]

The need to plan for sustainable transport is evident. Global warming poses significant challenges for cities. The transport sector alone, according to the World Resources Institute (2005), accounts for 24.1% of CO¶ 2¶ emissions worldwide, yet its importance in local commuting, linking the global system of cities, and stimulating economic interactions is crucial. “The solution” for keeping up international, national, regional, and local interactions while fostering sustainable development has yet to be found; no strategy for sustainable transportation systems agreed to by all stakeholders across countries so far exists.

## IL/TI

### Overview

#### Ext. Barry 12 growth causes ecocide and environmental collapse, leading to the extinction of all life

#### Ext. Trainer 10: environmental collapse, resource shortages, poverty, and collapse of social cohesion are all caused by the current economic system

#### Growth unsustainable – leads to endocrine disruption and extinction

**Douthwaite, ‘99** (Richard, council member of Comhar, the Irish government's national sustainability council and a Fellow of the Post Carbon Institute. Visiting lecturer at the University of Plymouth, Critical development theory: contributions to a new paradigm, GoogleBooks, p. 158)

A third reason that the world economy is unsustainable is that some of the chemicals it employs mimic human hormones and disrupt the body’s endocrine system. As a result, the sperm counts of European men have been falling at 3 per cent per year since these chemicals came into use after the Second World War (Swan et al. 1997). The same chemicals are also causing increases in testicular and breast cancer (European Workshop 1996) and are causing fewer boys being born relative to girls. Moreover, a higher proportion of these boys than ever before have defective genitals. In short, the world economic system is undermining humanity’s ability to reproduce itself. If the human race is not sustainable then neither is its economic system.

#### Every species should have equal consideration – ending growth is a moral imperative

**Barry, ’10** (Glen, PhD in Land Resources from UW-Madison and President and Founder of Ecological Internet, “The Rights of Earth,” http://www.ecoearth.info/blog/2010/07/earth\_meanders\_the\_rights\_of\_e.asp, bgm)

The Rights of Earth and all creatures will surely be the next great expansion of revealed truth and natural law. The non-human world – the air, water, land, oceans and their plants and wildlife – provide the living context for all biological existence including, for now, humans. Together these ecosystems, organisms and their ecological processes and patterns combine to create Gaia – a living, self-regulating organism – who’s right to exist is independent of human notions of value. That is birds, plants, trees, wildlife, wetlands and other ecosystems have intrinsic value; and a right to exist independent of human needs and wants. The disease that permeates the human condition is to continue viewing Gaia as mere resources for consumption, rather than being acknowledged as the ecosystems that make all life and the Rights of Man possible. This state of enraged human ecocide must end immediately at all costs. Humans are entirely dependent upon Earth for every aspect of our existence. Continued ignorance, greed, fear, or just giving up because we are overwhelmed are not options. Each of us is now called to be the greatest of the great generations and save Earth from ourselves, by granting and enforcing her rights. Earth has the right to continue evolving. It has the right to be free from human geoengineering technology that further destroys creation. Earth has the right to not have its skin – natural terrestrial ecosystems – peeled from its body. Water – the Earth’s blood – has the right to flow freely creating the conditions for life. Earth has a right to bounteous oceans, to be toxic free, to not drown in carbon and nitrogen. Earth has the right to have it's human load lightened, so that it may heal, and to be ecologically restored to its original condition.

#### Energy means that collapse is inevitable and growth causes all of their impacts – only dedev solves

**Trainer, ’11** (Ted, Senior Lecturer in the School of Social Work at the University of New South Wales, “Why the world can't rely on renewable energy if we want to remain affluent,” http://www.onlineopinion.com.au/view.asp?article=12070, bgm)

The point is, there isn’t one. If the question is how can we provide the energy to keep going the energy-intensive, growth and market driven societies we have in rich countries today, let alone to enable the continuous and limitless pursuit of ever-increasing affluent living standards, then the answer is that it cannot be done. For decades many of us have been trying to get the mainstream to grasp that this quest is suicidal. We Australians now have a productive land footprint that is ten times as big as would be possible for all people in 2050. It is precisely the mania for affluence and ever-greater levels of production, consumption and GDP that is causing all the big global problems, most obviously resource depletion, Third World deprivation, the greenhouse problem, the destruction of the environment, and international conflict.  Such a society cannot be fixed. For instance you cannot reform a growth-based society so that it can have a zero growth economy, let alone one producing at a small fraction of present levels. Sustainability is not achievable without scrapping and replacing several of the fundamental structures of this society. For fifty years mainstream society has refused to face up to this case, and their delusion has been strongly reinforced by the unexamined faith that renewable energy can be substituted for carbon fuels and enable us all to go on pursuing affluence and growth.

### More cards

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

**Lewis, ‘98** (Chris, June 2000. PhD American Studies Univ of Colorado Boulder. “The Paradox of Global Development and the Necessary Collapse of Global Industrial Civilization,” [www.cross-x.com/archives/LewisParadox.pdf](http://www.cross-x.com/archives/LewisParadox.pdf))

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

#### Failure to transition away from growth guarantees extinction.

**Barry, ’11** (Glen, PhD in Land Resources from UW-Madison and President and Founder of Ecological Internet, “Being Green and Meaning It,” http://www.ecoearth.info/blog/2011/01/ecological\_internet\_being\_gree.asp, bgm)

Humanity’s fate is completely one with the natural world. Our genes and cells – like all other species’ – are part of the larger environment and ultimately the global ecological system – Earth System or Gaia, if you will. Earth is alive and her air, water, land and ocean ecosystems self-regulate this organism like our organs do for us. The human boom of clearing natural ecosystems for “development” – which has only been occurring for a few hundred years, an ecological blink of an eye – is destroying our shared ecosystem home. Unless humanity transitions to a social, political and economic state devoted to global ecological sustainability; our future is apocalyptic ecosystem collapse as Earth becomes uninhabitable. The Earth system is being destroyed by industrial capitalism’s emphasis upon growth as the measurement of well-being. As always poor people are being given the shaft by the rich. Ecosystems are treated like candies to be gobbled. And the environment is stopping working. As ecosystems collapse, we are reaching or passing the point where carrying capacities (ability to support life) and their lag times are exceeded, and the ecological fabric of being frays to the point where the whole biosphere dies. Perhaps some bacteria on the ocean floor continue living, and cockroaches and dandelions, but Gaia - an entirely revolutionary, complex, amazing ecological amalgam of naturally evolved life, and their patterns and processes – is gone forever never to return. Maybe there are other Gaias, or this one can repair herself after we leave, but that is inconsequential; because as of now we only know of the one biosphere we share, it is remarkable, and we and all known life are utterly dependent. Anyone with an iota of ecological knowledge and/or common sense can see the way we are treating Earth and her water, oceans, forests, climate and our shared biosphere is needlessly killing us all. Do some reading! Just consider with an open mind: 80% of natural primary forests gone, nearly all fisheries and most large ocean fish over-fished, abrupt climate change, water scarcity, militaristic resource grabs, surging population and over-consumption (albeit inequitable).

### Time-frame 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.

### AT: DeDev => Environmental Collapse

#### Collapse is inevitable with growth – Barry says that the processes necessary to maintain growth are the primary culprits of environmental damage.

#### Commodification of the Earth will eventually collapse the environment and lead to extinction

**Shiva, ’05** (Dr. Vandana, Director of The Research Foundation for Science, Technology and Natural Resource Policy, a network of researchers specializing in sustainable agriculture and development, Znet May 11, http://www.zmag.org/sustainers/content/2005-05/11shiva.cfm)

The second myth that separates affluence from poverty, is the assumption that if you produce what you consume, you do not produce. This is the basis on which the production boundary is drawn for national accounting that measures economic growth. Both myths contribute to the mystification of growth and consumerism, but they also hide the real processes that create poverty. First, the market economy dominated by capital is not the only economy, development has, however, been based on the growth of the market economy. The invisible costs of development have been the destruction of two other economies: nature's processes and people's survival. The ignorance or neglect of these two vital economies is the reason why development has posed a threat of ecological destruction and a threat to human survival, both of which, however, have remained 'hidden negative externalities' of the development process. Instead of being seen as results of exclusion, they are presented as "those left behind". Instead of being viewed as those who suffer the worst burden of unjust growth in the form of poverty, they are false presented as those not touched by growth. This false separation of processes that create affluence from those that create poverty is at the core of Jeffrey Sachs analysis. His recipes will therefore aggravated and deepen poverty instead of ending it. Trade and exchange of goods and services have always existed in human societies, but these were subjected to nature's and people's economies. The elevation of the domain of the market and man-made capital to the position of the highest organizing principle for societies has led to the neglect and destruction of the other two organizing principles - ecology and survival - which maintain and sustain life in nature and society. Modern economies and concepts of development cover only a negligible part of the history of human interaction with nature. For centuries, principles of sustenance have given human societies the material basis of survival by deriving livelihoods directly from nature through self-provisioning mechanisms. Limits in nature have been respected and have guided the limits of human consumption. In most countries of the South large numbers of people continue to derive their sustenance in the survival economy which remains invisible to market-oriented development. All people in all societies depend on nature's economy for survival. When the organizing principle for society's relationship with nature is sustenance, nature exists as a commons. It becomes a resource when profits and accumulation become the organizing principle for society's relationship with nature is sustenance, nature exists as a commons. It becomes a resource when profits and accumulation become the organizing principles and create an imperative for the exploitation of resources for the market. Without clean water, fertile soils and crop and plant genetic diversity, human survival is not possible. These commons have been destroyed by economic development, resulting in the creation of a new contradiction between the economy of natural processes and the survival economy, because those people deprived of their traditional land and means of survival by development are forced to survive on an increasingly eroded nature.

#### Growth requires the creation of new industries, bringing on new forms of environmental destruction.

**Booth, ’95** (Douglas E. Booth, professor of economics at Marquette University, “Economic Growth and the Limits of Environmental Regulation: A Social Economic Analysis”, Review of Social Economy, Vol. 54)

A narrowly economic approach to the environmental problem suggests that environmental decline is the result of cost externalization and that the solution is to simply internalize such costs through appropriate voluntary negotiations, court action, or regulation. A broader social economic approach to the environmental problem suggests that environmental decline is inherent in the capitalist economic growth process. Economic growth requires the creation of new industries that bring with them new forms of environmental destruction. These new industries also foster the formation of organized political interests opposed to environmental regulation. Initial regulatory victories are won by environmentalists at the peak of the Downsian issue-attention cycle, but industry interests recover as public interest in environmental issues wane, and regulatory gridlock results. The problem of environmental decline remains. To bring about true environmental protection requires a transformation of the social economic system as a whole.

### A-To Green Tech

#### CA Trainer 10: specifically says that dedev is our best option and that Green tech won’t be able to solve

### Frontline

#### Green tech can’t solve the environment – Jevons paradox means only dedev solves

**Foster, ’11** (John Bellamy. co-editor of Monthly Review and professor of sociology at the University of Oregon, “Capitalism and Degrowth: An Impossibility Theorem,” Volume 62, Issue 08, January, http://monthlyreview.org/2011/01/01/capitalism-and-degrowth-an-impossibility-theorem, bgm)

An underlying premise of this movement is that, in the face of a planetary ecological emergency, the promise of green technology has proven false. This can be attributed to the Jevons Paradox, according to which greater efficiency in the use of energy and resources leads not to conservation but to greater economic growth, and hence more pressure on the environment.5 The unavoidable conclusion—associated with a wide variety of political-economic and environmental thinkers, not just those connected directly to the European degrowth project—is that there needs to be a drastic alteration in the economic trends operative since the Industrial Revolution. As Marxist economist Paul Sweezy put it more than two decades ago: “Since there is no way to increase the capacity of the environment to bear the [economic and population] burdens placed on it, it follows that the adjustment must come entirely from the other side of the equation. And since the disequilibrium has already reached dangerous proportions, it also follows that what is essential for success is a reversal, not merely a slowing down, of the underlying trends of the last few centuries.”6 Given that wealthy countries are already characterized by ecological overshoot, it is becoming more and more apparent that there is indeed no alternative, as Sweezy emphasized, but a reversal in the demands placed on the environment by the economy. This is consistent with the argument of ecological economist Herman Daly, who has long insisted on the need for a steady-state economy. Daly traces this perspective to John Stuart Mill’s famous discussion of the “stationary state” in his Principles of Political Economy, which argued that if economic expansion was to level off (as the classical economists expected), the economic goal of society could then shift to the qualitative aspects of existence, rather than mere quantitative expansion.

#### All their authors are biased

**Trainer, ’07** [Ted, Senior Lecturer in School of Social Work @ University of New South Wales, “Renewable Energy Cannot Sustain A Capitalist Society”, ebsco]

There is an overwhelmingly powerful, never questioned, assumption that all these problems can and will be solved by moving to renewable energy sources. That is, it is generally believed that sources such as the sun and the wind can replace fossil fuels, providing the quantities of energy that consumer society will need, in the forms and at the times that they are needed. Surprisingly, almost no literature has explored whether this is possible. Unfortunately in the task of assessing the validity of this dominant assumption we have not been helped by the people who know most about the field, the renewable energy experts. They have a strong interest in boosting the potential of their pet technology and in not drawing attention to its weaknesses, difficulties and limits. Exaggerated, misleading, questionable and demonstrably false claims are often encountered in the promotional literature. Minor technical advances which might or might not become significant in the long run are announced as miraculous solutions. Doubts regarding the potential of renewable technologies are rarely if ever heard from within these fields. This enthusiasm is understandable in view of the need to attract public support and research funding, but it means that contributions by those most familiar with these fields to the critical assessment of the potential and limits of renewables are quite rare. In developing the following review, considerable difficulty has been encountered from people hostile to having attention drawn to the weaknesses in their technologies and proposals (including threats of legal action if data they have provided in personal communications is used). Sources eager to provide information tend to dry up when they realize that limits are being explored. In addition some of the crucial information will not be made public by the private firms developing the new systems. For example it is almost impossible to get information on actual windmill output in relation to mean wind speeds at generating sites.

#### Tech can’t solve – efficiency gains are offset by higher levels of production and consumption

**Simms et al 10** (Andrew, policy director of nef (the new economics foundation) the award-winning UK think-and-do tank, and head of nef's Climate Change Programme, Dr. Victoria Johnson, researcher for the climate change and energy programme at nef, MSc (awarded with distinction) in Climate Change from the University of East Anglia and PhD in Atmospheric Physics at Imperial College, London and Peter Chowla, Policy and Advocacy Officer at the Bretton Woods Project, “Growth isn’t possible,” New Economics Foundation, January 25)

Despite the recognition that consumption levels need to decline in developed nations, governments and businesses are reluctant to address the restriction of consumption. Yet, **without limits to consumption**, improvements in efficiency are often offset by the ‘rebound effect’.125 For example, a recent report published by the European Commission’s Joint Research Centre (JRC) showed an increase in energy use across all sectors – residential, service and industry – in recent years, despite improvement in energy efficiency.126 For example, in the domestic sector while new measures have led to some improvements, particularly in the case of ‘white goods’ (e.g. refrigerators, washing machines, dishwashers), the increasing use of these products and other household appliances, such as tumble driers, air conditioning and personal computers, has more than offset savings. The ‘rebound effect’ was an observation made by William Stanley Jevons in his book The Coal Question, published in 1865.127 Here, Jevons contended that although technological advancement improves the overall efficiency (E) with which a resource is used, efficiency gains rebound or even backfire, causing higher production and consumption rather than stabilisation or reduction. Since improvements generally reduce the cost of energy per unit, economic theory predicts that this has the effect of triggering an overall increase in consumption. If a car, for instance, can drive more kilometres on a litre of petrol, the fuel costs per kilometre fall, and so will the total costs per kilometre. The price signal acts to increase consumption and, thus, part of the efficiency gains is lost. One area where the rebound effect is prominent is domestic energy consumption. An analysis of energy consumption before and after installation of energy savings measures found that only half of the efficiency gains translate into actual reductions in carbon emissions.128 This is supported by more recent analysis of the effectiveness of England’s Home Energy Efficiency Scheme (Warm Front). While there are appreciable benefits in terms of use of living space, comfort, quality of life, physical and mental well-being, the analysis found that there was little evidence of lower heating bills.129 This has also been observed in Northern Ireland.130 In other words, improvements in energy efficiency are offset by increased levels of thermal comfort. An more in-depth economy-wide assessment of the rebound effect carried out on behalf of the UK Energy Research Council in 2007 found that rebound effects are not exclusive to domestic energy consumption.131 They can be both direct (e.g., driving further in a fuel-efficient car) and indirect (e.g., spending the money saved on heating on an overseas holiday). Findings from the research suggest that while direct rebound effects may be small – less than 30 per cent for households for example, much less is known about indirect effects. Additionally, the study suggests that in some cases, particularly where energy efficiency significantly decreases the cost of production of energy intensive goods, rebounds may be larger. A further rebound effect is caused by ‘time-saving devices’.132 With the current work-and-spend-lifestyle implicit to industrialised societies, there is an increase in the demand for time-saving products. Although these devices save time, they also tend to require more energy, for example, faster modes of transport. How much energy savings are eaten up by the rebound effect is surrounded by lively debate. Estimates range from almost nothing in the energy services133 to being of sufficient strength to completely offset any energy efficient savings.134,135 There are a number of empirical analyses, however, that suggest that the rebound effect may be real and significant (Table 2).136 The majority of work investigating the rebound effect has focused on a few goods and services.137 However, the few studies that explore the macroeconomic impact of the rebound effect, find it to be significant. For example, using a general equilibrium model, one study by environmental economist Toyoaki Washida assessed the Japanese Economy.139 On testing a variety of levels of CO2 tax, the rebound effect was found to be significant (between 35–70 per cent of the efficiency savings).

### AT: Ethanol

#### Ethanol production takes too much energy to make it a viable replacement

**Heinberg, ’11** (Richard, 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, “Won’t Innovation, Substitution, And Efficiency Keep Us Growing?” http://www.countercurrents.org/heinberg230311.htm, bgm)

But from an economic point of view the biggest problem with corn ethanol was its low energy return. The amount of energy required to grow the crop, harvest and collect it, and distill it into nearly pure alcohol was perilously close to the amount of energy that the fuel itself would yield when burned in an engine. This meant that ethanol wasn’t really much of an energy source at all; making it was just a way of taking existing fuels (petroleum and natural gas) and using them (in the forms of tractor fuel, fertilizer, and fuel for distillation plants) to produce a different fuel that could be used for the same purposes as gasoline. Experts argued back and forth: one critic said the energy balance of corn ethanol was actually negative (less than 1:1)—meaning that ethanol was a losing proposition on a net energy basis.[3] But then a USDA study claimed a positive energy balance of 1.34:1.[4] Other studies yielded slightly varying numbers (the differences had to do with deciding which energy inputs should be included in the analysis).[5] From a broader perspective, this bickering over decimal-place accuracy was pointless: in its heyday, oil had enjoyed an EROEI [energy returned on energy invested] of 100:1 or more, and it is clear that for an industrial society to function it needs primary energy sources with a minimum EROEI of between 5:1 and 10:1.[6] With an overall societal EROEI of 3:1, for example, roughly a third of all of that society’s effort would have to be devoted just to obtaining the energy with which to accomplish all the other things that a society must do (such as manufacture products, carry on trade, transport people and goods, provide education, engage in scientific research, and maintain basic infrastructure). Since even the most optimistic EROEI figure for corn ethanol is significantly below that figure, it is clear that this fuel cannot serve as a primary energy source for an industrial society like the United States. The problem remains for so-called second- and third-generation biofuels—cellulosic ethanol made from forest and crop wastes and biodiesel squeezed from algae. Extraordinary preliminary claims are being made for the potential scalability and energy balance of these fuels, which so far are still in the experimental stages, but there is a basic reason for skepticism about such claims.

### AT: Nuclear

#### Stopping growth is the only solution – we’d need to build a nuclear power plant a day to offset warming

**Cohen 10** (Dave, columnist for Association for the Study of Peak Oil and Gas, “Economic Growth And Climate Change — No Way Out?” February 2, http://peakwatch.typepad.com/peak\_watch/2010/02/economy-and-climate-no-way-out.html)

To reach stabilization, what is required is decarbonization that is at least as fast as the economy’s rate of return. Taking the 2005 value for η of 2.1% per year, stabilization of emissions would require an equivalent or greater rate of decarbonization. 2.1% of current annual energy production corresponds to an annual addition of approximately 300 GW of new non-carbon emitting power capacity—approximately one new nuclear power plant per day. The Radical Hypothesis assumes that η will always be positive and growing, thus rejecting the premise of (5). This standard view assumes that not only is it possible to reach CO2 stabilization, whereby decarbonization is at least as fast as the economy’s rate of return, but it is also possible for decarbonization to outpace growth in η to support future economic expansion, as shown in the IEA's Figure 2 above. This view is not contradicted by anything in Garrett's model, but requires a seemingly impossible rate of decrease in carbon intensity (one nuclear power plant per day). Outside this improbable event, we get some version of business as usual (dη/dt > 0) or an economy that is not growing (dη/dt < 0). Thus Garrett's work supports my conclusion that a growing economy is incompatible with falling emissions. His model also supports (albeit indirectly) my conclusion that emissions (and thus the economy) will not be growing in a "peak oil" scenario. Thus he says in the press release "Stabilization of carbon dioxide emissions at current rates will require approximately 300 gigawatts of new non-carbon-dioxide-emitting power production capacity annually - approximately one new nuclear power plant (or equivalent) per day," Garrett says. "**Physically, there are no other options without killing the economy**"... "If society consumed no energy, civilization would be worthless," he adds. "It is only by consuming energy that civilization is able to maintain the activities that give it economic value. This means that if we ever start to run out of energy, then the value of civilization is going to fall and even collapse absent discovery of new energy sources." Garrett's study was "panned by some economists and rejected by several journals" before being published. An economist who reviewed the paper—I wonder if he understood it?—wrote that "I am afraid the author will need to study harder before he can contribute." In my view, this hostility relates directly to these sacred, and thus incontrovertible assumptions— The economy will always be growing (d ln η/dt > 0 in Garrett's model) Technology will always fix all problems, including the climate problem (S ≥ 1, Garrett's (14)) It is generally impossible to prove a negative, as I discussed in The Secretary of Synthetic Biology. Thus I can not prove any of the following propositions. SETI will never detect a signal from an alien civilization The rate of return η will not be greater than zero forever The rate of decarbonization −d ln c/dt will never exceed the rate of return η This a priori limit on our current knowledge is unfortunate in the climate debate in so far as it makes it impossible for those skeptical of the consensus view to disprove unreasonable assumptions (#1 and #2 above). All we can do is cast a long shadow of doubt and hope for the best. As in many things, only time will tell who was right and who was wrong. 6. Conclusions The main conclusions of this essay subvert standard views of how the future looks if humankind chooses to make a serious effort to mitigate anthropogenic climate change. Historical data suggest that only recessions decrease anthropogenic CO2 emissions. Otherwise, if the global economy is growing, so are emissions. The consensus view, which I have called The Radical Hypothesis, presumes that at some future inflection point, the global economy will continue to grow while emissions shrink. Since nothing in our experience suggests the Radical Hypothesis is correct, and in so far as knowledgeable people can agree that it will be very hard to achieve the technological breakthroughs required to stabilize CO2 in atmosphere at acceptable levels (e.g. 450 ppmv), the most plausible way to achieve such targets, all else being equal, is a planned, orderly contraction of the global economy. Mankind would endeavor to both decarbonize the energy inputs to the economy and decrease those inputs. This implies that the global economy, as modeled by Tim Garrett, would be shrinking. The mere assumption that technological progress will be sufficient to achieve the desired stabilization of greenhouse gases in the atmosphere does not guarantee success. This assumption, like the future economic growth that depends on it, is incontrovertible only because of the faith placed in it, i.e. it must be accepted without proof or verification. It is all well & good to say with great conviction that "failure is not an option" but in the real world, failure is definitely a possibility, so risks grow. Worse yet, unquestioning faith in the impossibility of failure retards efforts achieve the necessary (but still unrealized) technologies required to reduce emissions, for if technological progress—Pielke, et. al call this "spontaneous" innovation—is guaranteed (i.e. comes "for free"), we need not try very hard to make technological progress happen. What I have called The Assumption of Technological Progress should be tossed out in so far as it is no longer in humanity's best interests to maintain it.

### AT: Wind

#### Wind energy can’t replace petroleum

**Trainer, ’11** (Ted, Senior Lecturer in the School of Social Work at the University of New South Wales, “Renewable Energy: No Solution For Consumer Society,” 4/24, http://www.countercurrents.org/trainer240411.htm, bgm)

An examination of wind maps indicates that the annual quantity of wind energy that is available could well be considerably greater than demand, but the important question is what fraction of this can be harvested in view of the variability problem; that is, sometimes there is little or no wind. In the past it was usually assumed that for this reason wind might be able to contribute up to 25% of demand. However, the Germans with far more wind mills than any other country, and the Danish with the world’s highest ratio of wind output to electricity consumption, have run into problems “integrating” wind into the grid while wind is supplying only about 5% of demand[2]. (Denmark’s output is equivalent to c.18% of demand but most of this is not used locally and is exported.) A mill at a good site might run over time at 33% of its maximum or “peak” capacity, but this should not be taken as a performance likely from a whole wind system. Sharman reports that even in Denmark in 2003 the average output of the wind system was about 17% of its peak capacity and was down to around 5% for several months at a time. The E.On Netz report for Germany, the country with more wind mills than any other, also says that in 2003 system capacity was 16%, and around 5% for months. They stress that 2003 was a good wind year. Another significant problem is that because the wind sometimes does not blow at all, in a system in which wind provided a large fraction of demand there might have to be almost as much back-up capacity from other sources as there is wind generating capacity. E.On Netz has emphasised this problem with respect to the German experience. So if we built a lot of wind farms we might have to build almost as many coal, gas or nuclear power stations to turn to from time to time. This means that renewable sources tend to be alternative rather than additive. We might have to build two or even four separate systems (wind, PV, solar thermal and coal/nuclear) each capable of meeting much or all of the demand, with the equivalent of one to three sitting idle all the time. This would obviously be very expensive. In addition, electricity distribution grids would have to be reinforced and extended, especially to cope with the new task of enabling large amounts of power to be sent from wherever the winds were high at that time. Centralised coal or nuclear generators do not have this problem. These costs must be added to get the full cost of renewable systems.

## A-To

### DeDev Solves Frontline

#### A: Their solvency arguments are largely irrelevant in a world where we win our inevitability and extinction claims. Even if the transition is unlikely, we are better off trying to save the Earth than continuing the growth fantasy a little longer.

#### Dedev shifts values – realizations of limits of growth

**Kassiola, ’90** (Joel, Professor of Political Science, Brooklyn College, 1990, The Death of Industrial Civilization, p. 196)

To sum up the main thrust of this chapter, I believe that the current **industrial crisis centering on the limits to growth can be instrumental in getting citizens** of advanced industrial societies **to recognize the erroneous nature of the dominant** postindustrial social **paradigm**, its way of life, **and values**. As a consequence, this **crisis will stimulate** these **citizens to be conscious of their society’s deficiencies inspiring the destruction of the limitless growth illusion as well as the illusory materialist reductionism of humanity, society, and politics**. What I have in mind here is that **the entire growth-addictive conceptual apparatus that supports postindustrial society, the industrial ideology containing the Hobbesian conception of humanity, liberalism, materialism, and competitiveness**—all **must be destroyed as well. Such a cleansing** process **will pave the way to begin the necessary transformation of postindustrial society to a transindustrial one**; one **not burdened by** these **weaknesses that are** potentially **fatal to our planet and all of its inhabitants**.

#### Collapse is key – must feel the pain before we can make a change

**Kassiola, ’90** (Joel, Professor of Political Science, Brooklyn College, 1990, The Death of Industrial Civilization, p. 174-5)

Nevertheless, change of consciousness alone is not sufficient to bring about a successful social transformation; such consciousness change must lead to effective political action. As Orwell understood, the former is necessary to the latter. However, as Slater and Marcuse both emphasize, **before any change in either consciousness or social life can occur, there must be recognition of a problem, of negative outcomes** (such as servitude), **of a dilemma necessitating a choice, or, I would add, of the fantastic and manipulatory nature of our postindustrial social goods. Successful social remedies to postindustrial ailments require recognition of conditions demanding treatment. To continue the medical analogy, a social analogue to pain is needed to sensitize us to the presence of some disorder.** No matter how shocking and disorienting the initial recognition may be, we must not succumb to the temptation (as some individuals do regarding threats to their own health) of burying our heads in the sand and practicing denial. **We may view the actual limits to growth**, the scholarly literature providing evidence and demanding social change, and the social movements for postindustrial transformation—the latter two emerging in the 1970s—as **performing the political equivalent of warning signs of a medical malady: in need of early and extensive treatment.**

### 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.

### AT: Elite Backlash

#### No elite backlash – revolution comes from middle and upper classes

**Kassiola, ‘90** (Joel, Professor of Political Science, Brooklyn College, The Death of Industrial Civilization, pp. 191-2)

One important conclusion of the relative deprivation theory is that **poverty per se does not cause revolution**—**if it did,** revolution and **revolutionary activities would be a constant set of phenomena** on the world scene or, at least, far more frequent than they are. From this revolutionary perspective, rather than the issue being why there is so much political violence in the world, the pressing social issue should be why there is so little political violence relative to the enormous extent and severity of destitution in the world. Actually, **it is the failure of materially affluent societies to fulfill the rising expectations of materially richer people—not the abject poor—which leads to dissatisfaction and revolutionary efforts**. This suggests that **one should expect transformational sentiments and action to come from a dissatisfied middle and** even **upper class rather than** from **the more** objectively and materially **deprived lower** or **underclass**. Whether such a transformational middle or upper class does emerge remains to be seen, but **the early signs of industrial middle-class members supporting new social movements for change like the Greens and their alternative anti-industrial values such as postmaterialism or voluntary simplicity** would seem to **confirm this theoretical anticipation**.86

#### Elite backlash fails – too much resistance

**Kassiola, ‘90** (Joel, Professor of Political Science, Brooklyn College, The Death of Industrial Civilization, p.194)

Moreover, **as a result of disappointment**, Wildean tragedy, and value erosion, **the postindustrial elite** (the current members of the beneficiary class within the dominant, postindustrial social paradigm and structure) **might come to a realization unique in history**. The **elite, postindustrial consciousness may be shocked into change by** increasingly **conspicuous limits to growth as well as** by **the profoundly challenging nature of the limits-to-growth literature: the futility, insecurity, and disaster looming in our foreseeable future** (unlike the predicted long-range disaster of our sun burning up in several billion years), and **a future filled with the preoccupation of seeking to maintain their relative advantages and ceaselessly fend off all of the others seeking to replace them**. The enjoyment of **the elite’s present success seems short-lived, unstable, and** increasingly **inadequate relative to** both the concern and **effort expended in attaining such “success**” in the first place, **and** the **rising costs of maintaining their** celebrated **position** on top.

### AT: Growth = Human Nature/Biological

#### History proves that excess consumption and market principles aren’t inevitable

**Miller, ’99** (Will, Professor of Philosophy at Vermont University, “Social Change and Human Nature,” Monthly Review, 50(9), http://www.monthlyreview.org/299mill.htm)

It is not without reason that economics has come to be known as the dismal science. Mainstream **economists since Adam Smith have assumed that all human relations are ultimately those of the marketplace, of buying and selling, of control and exploitation of the suffering, vulnerability and desperation of others. The current dominance of private property relations—where land, resources and tools are exclusively controlled by a small minority of individuals for their private perpetual reward—is projected backward over the whole span of human history. However useful this projection may be for justifying existing market society, it is strikingly poor anthropology, dubious history, and third-rate psychology.** But it seems actual human history has had a much different bent. **For our first few hundred thousand years on this planet**—according to current evidence—**humans lived in small groups organized around mutually beneficial social relations, with resources held in common as social property. Social equality and voluntary divisions of labor endured for millennia as the basis for human communal life.** With essentially social incentives, everyone who could contributed to the commonwealth for the use of all. In the long sweep of this history the emergence of dominant classes—chiefs, kings, aristocracies of birth and wealth—is a very recent event, perhaps no more than 10,000 years ago, or less, depending on which culture is considered. From time to time, small human communities organized in such communal ways continue to be 'discovered,' communities that have been spared being "civilized" by conquest at the hands of more "advanced" class societies.

#### The ‘human nature’ argument is an ahistorical consumerist lie

**Hamilton, ’02** (Clive, Professor of Public Ethics at the Australian National University, Growth Fetish, p. 121)

Several arguments are used in support of the belief that growth is inevitable. They are the arguments that will be used to suggest that the “post-growth society’ advocated in this book is utopian. The economics texts share at least one thing with popular wisdom—**that human desire is insatiable** and people will always want to increase their incomes. This **is obviously a culturally specific belief that has been presented as ‘human nature’. Anyone with a knowledge of pre-industrial societies knows that,** while greed has a very long history, **the idea that human desire for material goods is inherently limitless is contradicted by anthropological facts**, including (as discussed in Chapter 8) some anthropological facts of the 21st century. **But perhaps a more compelling explanation for the fact that so many people believe that economic growth is inevitable is simply that nature is so often intoned, and all authoritative people seem to believe it. So rarely is the inevitability of growth questioned that most people immediately become defensive when asked to follow the position through.** Maybe the belief in **the inevitability of growth is the counterpart of the consumerist dream:** it is convenient to believe that growth will never end because such a belief opens up the possibility of unrestrained expansion in our lifetimes, thus validating our guilty acquisitiveness.

#### Non-capitalist and non-competitive games and life can exist outside of capitalism. It is not natural but a socially taught and constructed formation.

**Kohn, ’86** (Alfie, M.A. from U Chicago, “No Contest: A Case Against Competition,” New Age Journal Sept/Oct, p 18-20, bb)

As with a range of other unsavory behaviors, we are fond of casually attributing competition to something called "human nature." Since this account is so popular, you might expect that there is considerable evidence to support it. In fact, it is difficult to find a single serious defense of the claim--let alone any hard data to back it up. It is not difficult at all, however, to come up with reasons to **doubt** that **competition is inevitable**. We in the United States often assume that our desperate quest to triumph over others is universal. But half a century ago Margaret Mead and her colleagues found that **competition was virtually unknown to the Zuni** and **Iroquois** in North America and to the **Bathonga** of South Africa. Since then, cross-cultural observers have con­firmed that our society is the exception rather than the rule. From the **Inuit** of Canada to the **Tangu** of New Guinea, from **kihbutzniks** in lsrael to **farmers in Mexico,** **cooperation is prized** and competition generally avoided. Working with seven to nine-year olds, psychologists Spencer Kagan and Millard Madsen found that **Mexican children** quickly **figured** out **how to cooperate on an experimental game, while** those from the **U**nited **S**tates **could not**. In fact, 78 percent of the Anglo-American children took another child’s toy away “for apparently no other reason than to prevent the other child from having it.” Mexican chil­dren did so only half as often. Such findings strongly suggest that **competition is** a matter of **social training and culture** **rather than** a built-in feature of our **nature. Further evidence comes from classroom experiments** in which children have been successfully taught to cooperate. Gerald Sagotsky and his colleagues at Adelphi Univer­sity, for example, trained 118 pairs of first- through third grade students to work together instead of competing at a variety of tasks. **Seven weeks later** a new experimenter introduced a new game to these children and found that **the lesson** had **stuck** with them. Other researchers have shown that **children taught to play cooperative games will continue to do so on their own time**. And **children and adults alike express** a strong **preference for** the cooperative approach once they see firsthand what it is like to learn or **work or play in an environment that doesn't require winners and losers.**

### AT: Bearden

#### Their Bearden evidence is stupid – he thinks zero point energy is the only way to save us, and he predicted collapse for 2003—it’s either inevitable, or he is an idiot.

**Bearden, ’00** (Lt. Col. Tom, PhD in Nuclear Engineering, “Zero-Point Energy”, April 25, http://www.cheniere.org/correspondence/042500%20-%20modified.htm)

So in my view **we have about three years from now**, counting, **in which we must have changed the scientific mindset and be in a massive production of self-powering electrical power systems taking their energy from the vacuum. Otherwise, we will have overrun the "point of no return" to Armageddon**—an Armageddon of our own making and our own ignorance, and largely contributed to by our organized scientific community. Science has the power to save us or destroy us, and right now it is bent upon the "business as usual" course that will lead to our destruction.

### AT: (Chris) Lewis

#### Oops, your author goes our way – here’s our Lewis card -- Even if they win full weight of their impact--ending global economic growth is still necessary for the survival of humanity

**Lewis, ’98** (Chris, Ph.D, American Studies professor at Colorado-Boulder, "The Paradox of Global Development and the Necessary Collapse of Modern Industrial Civilization," in *The Coming Age of Scarcity: Preventing Mass Death and Genocide in the Twenty-First Century,* edited by Michael N Dobkowski and Isidor Wallimann, p. 59-60)

In conclusion, **the only solution** to the growing political and economic chaos caused by the collapse of global industrial civilization is to **encourage the uncoupling of nations and regions from the global economy**. Effort to integrate the underdeveloped countries with this global economy through sustainable development programs such as Agenda 21 will only further undermine the global economy and industrial civilization. Unfortunately, millions will die in the wars and economic and political conflicts created by the accelerating collapse of global civilization. But we can be assured, on the basis of the past history of the collapse of regional civilizations such as the Mayan and the Roman empires, that, barring global nuclear war, human societies and civilizations will continue to exist and develop on a smaller, regional scale. Yes, such civilizations will be violent, corrupt, and often cruel, but, in the end, **less so** than our current global industrial civilization, which is **abusing the entire planet** and threatening the **mass death** and suffering of **all** its peoples and the living, **biological fabric of life on earth**. The paradox of global economic development is that although it creates massive wealth and power for modern elites, it also creates massive poverty and suffering for underdeveloped peoples and societies. The failure of global development to end this suffering and destruction will bring about its collapse. This collapse will cause millions of people to suffer and die throughout the world, but it should, paradoxically, **ensure the survival of future human societies**. **The collapse of global civilization is necessary for the future, long-term survival of human beings**. Although this future seems hopeless and heartless, it is not. We can learn much from our present global crisis. What we learn will shape our future and the future of the complex, interconnected web of life on earth.

### AT: DeDev => Famine

#### This argument is like the reverse – local ag is key to feed the world

**Vivas, ’10** (Esther, member of the Centre for Studies on Social Movements (CEMS) at Universitat Pompeu Fabra, “Food sovereignty: can we feed the world,” Second Conference on Economic Degrowth for Ecological Sustainability and Social Equity, March 26-29th 2010, Barcelona, http://www.degrowth.org/uploads/media/Vivas\_agriculture.pdf, bgm)

But the alternatives exist. **The relocalization of agriculture in the hands of the peasants, will allow us to guarantee a universal access to food. And this has been proven by the results shown in an extended international investigation which lasted four years and which involved more than 400 scientists, carried out by The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), an evaluation project supported by the World Bank, in partnership with the FAO, the UNDP, the UNESCO, government representatives, private, scientific and social institutions, etc., taking as a model the Intergovernmental Panel on Climate Change and the Evaluation of the Ecosystems of the Millennium.** It is interesting to observe how, in spite of the fact that the report was backed up by all of these institutions, **it concluded that the agro-ecological production would provide those least favored, the poorest population, with monetary and alimentary income, at the same time that would provide a surplus for the market, becoming a better guarantee for food and alimentary security than transgenic production.** The report issued by the IAAST supported the local, peasant-like and familiar production, and the redistribution of the land in hands of the rural communities. The report was rejected by agribusiness and filed away by the World Bank, even though 61 governments quietly approved it, with the exception of the United States, Canada, Australia, among others. **A research study by the University of Michigan (2007) positioned itself along the same lines, concluding that agro-ecological farms are highly productive and capable of guaranteeing food and alimentary security all around the globe, on the contrary to industrialized agricultural production and free trade. Their conclusions pointed out, even taking as a reference their most conservative estimates, that organic agriculture could supply at least the same amounts as done currently; although, their researchers considered that, a more realistic estimate would be that ecological agriculture could increase the global production of food by 50%.**

#### Famine is the result of globalized agriculture – the elite can buy exotic foods while poor farmers starve

**Meszaros, ’95** (Istivan, professor emeritus at the University of Sussex, 1995, Beyond Capital, p. 175-176. Section—Second)

In the same way, on another plane, the advancement of the powers of agricultural production did not bring with it the eradication of famine and malnutrition. For doing so would, again, contradict the imperative of 'rational' capital expansion. 'Sentimental' considerations concerning the health — and even the mere survival — of human beings cannot possibly be allowed to disturb or disrupt the 'market-oriented' system's 'hard-headed decision making pro­cesses'. The spontaneous rhythm and recalcitrance of nature are no longer credible excuses for justifying the living conditions of countless millions who had to perish in misery in the last few decades, and so continue to perish today. The priorities that must be pursued, in the interest of capital-expansion and accumulation are fatefully biased against those who are condemned to famine and malnutrition, mostly in the 'Third World' countries. But it is by no means simply the case that the rest of the world population has nothing to fear in this regard in the future. The productive and distributive practices of the capital system in the field of agriculture — from the irresponsible but highly profitable use of chemicals which accumulate as poisonous residues in the soil to the destruction of water tables, and to large scale interference with global weather cycles in vital regions of the planet, by exploiting and destroying the resources of rain forests, etc. — do not promise much good to come for anybody. Thanks to science and technology in their alienated subservience to profitable global marketing strategies, in our times exotic fruits are made available all year round for those, that is, who can afford to buy them, and not for those who produce them under the rule of a handful of transnational corporations. But all this happens against the background of the highly irresponsible productive practices we all watch powerless. The costs involved are nothing short of endangering — in the interest of short-sighted profit maximization only — tomorrow's potato harvests and rice crops for all. Besides, already today the 'advanced productive practices' pursued endanger even the meagre staple food of those who are compelled to labour for 'exportable cash crops', and have to go hungry for the sake of maintaining the health of a crippling 'globalized' economy.

### AT: Hege

#### Chinese economy will make US hegemony unsustainable

**Layne, ’11** (Christopher, Professor and Robert M. Gates Chair in National Security at Texas A & M University's Bush School of Government and Public Service “Bye bye, Miss American Pie, “28.03.2011, http://theeuropean-magazine.com/223-layne-christopher/231-pax-americana)

The epoch of American hegemony is drawing to a close. Evidence of America’s relative decline is omnipresent. According to the Economist, China will surpass the U.S. as the world’s largest economy in 2019. The U.S. relative power decline will affect international politics in coming decades: the likelihood of great power security competitions – and even war – will increase; the current era of “globalization” will end; and the post-1945 Pax Americana will be replaced by a new international order that reflects the interests of China and the other emerging great powers.

#### US hegemonic imperialism will cause devastation on an unprecedented scale, causing global war and unleashing new global holocausts

**Foster, ’03** (John Bellamy, co-editor of Monthly Review and professor of sociology at the University of Oregon, “The new Age of Imperialism,” Monthly Review 55.3)

At the same time, it is clear that in the present period of global hegemonic imperialism the United States is geared above all to expanding its imperial power to whatever extent possible and subordinating the rest of the capitalist world to its interests. The Persian Gulf and the Caspian Sea Basin represent not only the bulk of world petroleum reserves, but also a rapidly increasing proportion of total reserves, as high production rates diminish reserves elsewhere. This has provided much of the stimulus for the United States to gain greater control of these resources--at the expense of its present and potential rivals. But U.S. imperial ambitions do not end there, since they are driven by economic ambitions that know no bounds. As Harry Magdoff noted in the closing pages of The Age of Imperialism in 1969, "it is the professed goal" of U.S. multinational corporations "to control as large a share of the world market as they do of the United States market," and this hunger for foreign markets persists today. Flo rida-based Wackenhut Corrections Corporation has won prison privatization contracts in Australia, the United Kingdom, South Africa, Canada, New Zealand, and the Netherlands Antilles ("Prison Industry Goes Global," www.futurenet.org, fall 2000). Promotion of U.S. corporate interests abroad is one of the primary responsibilities of the U.S. state. Consider the cases of Monsanto and genetically modified food, Microsoft and intellectual property, Bechtel and the war on Iraq. It would be **impossible to exaggerate** how **dangerous this dual expansionism** of U.S. corporations and the U.S. state is to the world at large. As Istvan Meszaros observed in 2001 in Socialism or Barbarism, the U.S. attempt to seize global control, which is inherent in the workings of capitalism and imperialism, is now threatening humanity with the "extreme violent rule of the whole world by one hegemonic imperialist country on a permanent basis...an **absurd and unsustainable** way of running the world order."\* This new age of U.S. imperialism will generate its own contradictions, amongst them attempts by other major powers to assert their influence, resorting to similar belligerent means, and all sorts of strategies by weaker states and non-state actors to engage in "asymmetric" forms of warfare. Given the unprecedented destructiveness of contemporary weapons, which are diffused ever more widely, the consequences for the population of the world could well be **devastating beyond anything ever before witnessed**. Rather than generating a new "Pax Americana" the United States **may be paving the way to new global holocausts.** The greatest hope in these dire circumstances lies in a rising tide of revolt from below, both in the United States and globally. The growth of the antiglobalization movement, which dominated the world stage for nearly two years following the events in Seattle in November 1999, was succeeded in February 2003 by the largest global wave of antiwar protests in human history. Never before has the world's population risen up so quickly and in such massive numbers in the attempt to stop an imperialist war. The new age of imperialism is also a new age of revolt. The Vietnam Syndrome, which has so worried the strategic planners of the imperial order for decades, now seems not only to have left a deep legacy within the United States but also to have been coupled this time around with an Empire Syndrome on a much more global scale--something that no one really expected. This more than anything else makes it clear that the strategy of the American ruling class to expand the American Empire cannot possibly succeed in the long run, and will prove to be its own--we hope not the world's--undoing.

### AT: Freedom

#### Eco-dictatorship is inevitable without dedev

**Naess, ’95** (Arne, Professor Emeritus of Philosophy, Chairman of Philosophy, University of Oslo, Deep Ecology for the 21st Century)

In countries like the United States, **the crisis is** rather **one of lifestyle, of our traditions of thoughtlessness and confusion, of our inability to question deeply what is and is not worthwhile in life. Within fifty years, either we will need a dictatorship to save what is left of the diversity of life forms, or we will have a shift in values, a shift of our total view such that no dictatorship will be needed. It is thoroughly natural to stop dominating, exploiting, and destroying the planet**.

#### Capitalism makes true freedom impossible – corporations are put before the people

**Kovel, ’02** (Joel, Professor of Social Studies at Bard College, The Enemy of Nature, p. 74-76)

Setting aside the moral implications, the presence of this vast shadowland signifies capitalism’s fundamental uncontrollability, and therefore its inability to overcome its crises of ecology and democracy. From this standpoint, the ecological crisis is the effect of globalization viewed from the standpoint of ecosystems, as great waves of capital batter against and erode ecological defences. Similarly, democracy, and not government, is the great victim of globalization. As global capital works its way, the popular will is increasingly disregarded in the effort to squeeze ever more capital out of the system. In the process, the instruments of global capital begin to take on political functions, breaking down local jurisdictions and constituting themselves as a kind of world governing body. But the regime lacks what normal states, even despotic ones, require, namely, some means of legitimation. In the post-aristocratic, post-theocratic world of modernity, democratic advances, even the pseudo-democracy that passes for normal these days, are the necessary glue that holds societies together. Capital’s inability to furnish this as it moves toward its realization in the global society has made its operation increasingly look like a global coup d’etat. This is the great political contradiction of our time, and drives the present surge of resistance.

### AT: Loose Nukes

#### This argument fundamentally doesn’t make sense – nukes are useless in a transitioned society

**Knapp, ’09** (Thomas, media analyst for the Center for a Stateless Society, “Anarchy and The Nuclear Option,” http://c4ss.org/content/756, bgm)

**The costs of constructing a nuclear weapon are huge.** Not only is research and development expensive, but the actual assembly of the weapons requires acquisition of huge amounts of raw material (uranium), processing of that material by large numbers of expensive machines (gas centrifuges), and the attention of skilled technicians who don’t work cheaply. In other words, **only two types of organizations could reasonably be expected to create a nuclear weapon: A state, which can take the cost out of its subjects’ hides whether they like it or not; or a large corporation of the kind which generally only exists under the auspices of the state and which has no profit motive to build such a weapon unless it’s doing so for the state.** Of course, **the nuclear genie is unfortunately already out of the bottle. There are already a lot of weapons out there. It’s reasonable to be concerned that if the state disappeared tomorrow, those weapons might fall into the hands of individuals or groups who could never have built them, and who might be inclined to actually use them rather than merely use them as a “Mutually Assured Destruction” threat to keep cold wars cold. I have two counter-arguments to offer to that reasonable concern. The first is that the danger it alludes to already exists because the weapons already exist. Maintaining the state does not guarantee that these weapons will never be stolen by force, or illicitly sold by those appointed to guard them.** Both possibilities became major concerns during the disintegration of the Soviet Union. For all we know, “private nukes” may already be in play. **The second is that, to the extent that nuclear weapons may fall into non-state hands and be used, the state is the most likely target for their use. Even if the physical target is a civilian population, the justification for their use would be to put pressure on a state to act or react in a given way. To this extent, permitting the continued existence of the state — any state, anywhere — represents an increased risk. Not only does the existence of nuclear weapons not constitute an argument against the stateless society, precisely the opposite is true: Only states or state-privileged organizations are likely to command the resources to build nukes, or to have any motive to do so. Only states or those attacking states have any incentive to use nukes as instruments of warfare. “Private nukes” are not, and never have been, a serious threat except to the extent that the existence of the state makes them one.**

### AT: Racism

#### Globalized capitalism is the root cause of racism

**Young, ’06** (Chair @ NYU; Robert, “Putting Materialism Back into the Race Theory: Toward a Transformative Theory of Race”, redcritique.org)

In this regard, postmodernists collude with the humanists in legitimating the sanctity of the local. Both participate in narrowing cultural intelligibility to questions of (racial) discourse or the (black) subject and, in doing so, they provide ideological immunity for capitalism. It is now very difficult to even raise the issue of class, particularly if you raise the issue outside of the logic of supplementarity—today's ruling intellectual logic which provides a theoretical analog to contemporary neo-liberal political structures. In one of the few recent texts to explore the centrality of class, bell hooks' Where We Stand, we are, once again, still left with a reaffirmation of capitalism. For instance, hooks argues for changes within capitalism: "I identify with democratic socialism, with a vision of participatory economics within capitalism that aims to challenge and change class hierarchy" (156). Capitalism produces class hierarchy and, therefore, as long as capitalism remains, class hierarchy and antagonism will remain. Hence, the solution requires a transformation of class society. However, hooks mystifies capitalism as a transhistorical system and thus she can assert that the "poor may be with us always" (129). Under this view, politics becomes a matter of "bearing witness" to the crimes of capitalism, but rather than struggle for its replacement, hooks call for strategies of "self-actualization" and redistributing resources to the poor. She calls for the very same thing—collectivity—that capitalism cannot provide because social resources are privatized under capitalism. Consequently, Hooks' program for "self-esteem" is an attempt to put a human face on capitalism. Whether one considers the recent work by African-American humanists, or discourse theorists, or even left-liberal intellectuals, these various groups—despite their intellectual differences—form a ruling coalition and one thing is clear: capitalism set the limit for political change, as there is no alternative to the rule of capital. In contrast to much of contemporary race theory, a transformative theory of race highlights the political economy of race in the interests of an emancipatory political project. Wahneema Lubiano once wrote that "the idea of race and the operation of racism are the best friends that the economic and political elite have in the United States" (vii). Race mystifies the structure of exploitation and masks the severe inequalities within global capitalism. I am afraid that, at this point, many contemporary race theorists, in their systematic erasure of materialism, have become close (ideological) allies with the economic and political elites, who deny even the existence of classes. A transformative race theory pulls back into focus the struggle against exploitation and sets a new social priority "in which the free development of each is the condition for the free development of all" (Marx 31).

#### Racism is inevitable under industrial capitalism

**Weinberg, ’02** (Meyer, Professor Emeritus at the W.E.B. DuBois Department of Afro-American Studies, University of Massachusetts at Amherst, “A Short History of American Capitalism,” Ch. 12, http://www.allshookdown.com/newhistory/CH12.htm, bgm)

Racism and violence have long characterized American history. To an extraordinary degree, slavery embodied both trends. **As capitalism developed, neither violence nor racism receded. Indeed, they grew. As we have seen, industrial and farm corporations employed extremely violent methods to oppose unions. And they consciously encouraged racism among their workers to weaken working-class solidarity. Nowhere in the United States—North or South—did organized capitalism take a leading role in opposing racism** or violence against labor. **Instead, it frequently played the foremost role in promoting them.** At no time was this a secret. Rather, **corporations frequently expressed their racial or ethnic preferences when advertising in newspapers for workers.** In one industrial community after another, it was common knowledge that unions would be resisted by every means available, including those that were lethal. **Workers who challenged corporate rules on racial or labor issues were discharged**, while those who embraced such rules could look forward to continued employment. **During most of the history of American capitalism, no government power was available to protect workers from** extreme employer power, including violence and **racism.**

### AT: 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.)

### AT: Quality of Life/Kritik Cards

#### T/ Growth treats people as nothing more than resource inputs

**Boehnert, ’10** (Jody, founder of EcoLabs and PhD candidate at the University of Brighton, “Epistemological Error: A Whole Systems View of Converging Crises,” http://brighton.academia.edu/JodyBoehnert/Papers/171355/Epistemological\_Error\_and\_Converging\_Crises, bgm)

**We are living with dysfunctional mental maps that do not reflect the complexity of systemic conditions. Our framework focuses narrowly on economic indicators and this is how the system is designed to establish value.** An economic system that placed value on ecological stability, resilience, equity, wellbeing or happiness would be designed and managed in a very different manner. **A narrow focus on profit excludes a holistic appraisal of values and encourages short-term thinking and waste of ecological and human 'resources'. Even our language becomes distorted around the narrow focus of profit, as we know that neither nature nor people are inherently 'resources' but have value in their own right outside of their function as a source of profit.** **The nature of the economic system is to grow and consume everything to suit its needs; our language, our values, our ideas about what can and cannot be an economic transaction. The emphasis on profit in an international capitalist system based on infinite growth is that transnational capital will continue to grow and swallow up everything in its wake until there is nothing left to use.** Evidence will take the form of lost species, destroyed rain forests and a stable climate system - complex ecological systems that have evolved over millions of years that are being destroyed in a manner of a few decades.

#### And that robs us of value to life

**Dillon ’99**(Michael, Professor of IR @ Lancaster, “Another Justice” *Political Theory*, Vol. 27, No. 2. April, pp. 165)

Quite the reverse. The subject was never a firm foundation for justice, much less a hospitable vehicle for the reception of the call of another Justice. It was never in possession of that self-possession which was supposed to secure the certainty of itself, of a self-possession that would enable it ultimately to adjudicate everything. The very indexicality required of sovereign subjectivity gave rise rather to a commensurability much more amenable to the expendability required of the political and material economies of mass societies than it did to the singular, invaluable, and uncanny uniqueness of the self. The value of the subject became the standard unit of currency for the political arithmetic of States and the political economies of capitalism. They trade in it still to devastating global effect. The technologisation of the political has become manifest and global. Economies of evaluation necessarily require calculability.3s Thus no valuation without mensuration and no mensuration without indexation. Once rendered calculable, however, units of account are necessarily submissible not only to valuation but also, of course, to devaluation. Devaluation, logically, can extend to the point of counting as nothing. Hence, no mensuration without demensuration either. There is nothing abstract about this: the declension of economies of value leads to the zero point of holocaust. However liberating and emancipating systems of value-rights-may claim to be, for example, they run the risk of counting out the invaluable. Counted out, the invaluable may then lose its purchase on life. Herewith, then, the necessity of championing the invaluable itself. For we must never forget that, "we are dealing always with whatever exceeds measure."

#### Studies show no correlation with quality of life and increased growth

**Trainer, ’10** (Ted, Senior Lecturer of School of Social Work @ University of New South Wales, “SOCIAL COHESION AND BREAKDOWN,” 10/22, http://ssis.arts.unsw.edu.au/tsw/SocBreakdown.html, bgm)

It is well established that increasing economic wealth does not raise the quality of life, so long as wealth is above poverty level. Long ago Easterlin (1972) reviewed more than 30 studies and found that the experienced quality of life does not increase as the GDP increases. Even with a doubling of the US GNP per capita in deflated terms there has been no increase in the experienced quality of life. We are about three times as rich as our grandparents were but it cannot be said that we enjoy life any more. Douthwaite's The Growth Illusion, (1992) argues in detail that economic growth is not increasing the quality of life. In fact he claims it has fallen in Britain since 1955 (pp. 3, 9). Hamilton’s Affluenza and Growth Fetish, and Gustav Speth (2007) and Richard Eckersley (1997) review the extensive and convincing evidence that quality of life does not increase with increasing income. The above list of social problems suggests that in general the experienced quality of life in the rich countries is now actually deteriorating as GDP increases. This theme is extremely important but its significance is largely ignored. The supreme goal of all governments and of just about all people remains increasing monetary wealth – yet it is clear that this does not increase happiness, or any of the factors connected to the quality of life, while it is the main cause of damage to social cohesion and the environment. Politicians do not ask “What policies might best increase the quality of life?” They only ask, “What will maximise the GDP?”, when it has been established for a long time that this will not increase the quality of life. Politics should be driven by concern to improve the quality of life of all, and effort should constantly be going into monitoring the many factors involved and developing better indices. By making growth of GDP the supreme goal of social policy is geared to the interests of those who benefit most from selling things in a market.

### AT: Russia Econ

#### Russia econ low – demographics and .. you guessed it.. vodka. wait thats racist dont read that.

**Weir, 11/3**/11 (Fred, author of Revolution from Above: The Demise of the Soviet System, “Russia's shrinking population mars Putin's superpower ambitions,” http://www.globalpost.com/dispatch/news/regions/europe/russia/111102/russia-population-superpower-health-soviet-union, bgm)

**In 1991, Russia's population was nearly 150 million**. According to the US Census Bureau's international data base it's currently just under 139 million. **Projections show it plunging to 128 million in 2025, and to 109 million in 2050. "Here in Russia we have a European birth rate, but an African death rate,"** said Yury Krupnov, director of the independent Institute of Demography, Migration and Regional Development in Moscow. **"A special feature in Russia is the super-death rate for working age males, which is five times higher than the comparable rate in Europe and has crippling implications for our economic development." The astronomical mortality rate for young Russian men is due to a post-Soviet cocktail of bad news: deteriorating environmental conditions, collapsing health care, rising accidents due to decayed infrastructure and growing social violence. But the single biggest cause**, according to a 2009 article in The Lancet, a respected medical journal, **is the post-Soviet explosion in alcoholism. Extreme even by traditionally hard-drinking Russian standards, alcohol abuse leads to an estimated 600,000 premature deaths each year. Some warn of even more alarming consequences for the future from a population drowning in vodka. "If this tendency continues, Russia will die out,"** said Svetlana Bocherova, chair of Good Without Borders, a Moscow-based family advocacy group. **"By the 2020's the schools will be empty of children. By the next decade there won't be enough workers or soldiers. By 2050, we won't have enough people to call ourselves a country."**

### AT: Growth Key to GMOs 1NC

#### Turn – GM crops are toxic to honeybees

**Cummins, ’07** (Joe, Professor of Genetics at the University of Western Ontario, “Requiem for the Honeybee: Neoniccotinoid insecticides used in seed dressing may be responsible for the collapse of honeybee colonies,” Organic Consumers Association, 24 April 2007, pg. http://www.organicconsumers.org/articles/article\_4972.cfm)

There has been a great deal of concern over the decline of the honeybee across the US, Europe and Australia [1] (The Mystery of Disappearing Honeybees, this series). The United States National Research Council (USNRC) Committee of the Status of Pollinators in North America report [2] focused on the impact of parasites, fungi, bacteria and viruses, but did not pay much attention on the impact of pesticides and genetically modified (GM) crops, which may have lethal or sub-lethal effects on the bee's behaviour or resistance to infection. There have been strong responses to the report. Any suggestion that GM crops and pesticides may be causing the decline of honeybees is met with heated denial from the proponents. Certainly, honeybees are declining both in areas where GM crops are widely grown, and in other areas where GM crops are released in small test plots. Is there a common thread that links both areas? Yes there is, the universal use of systemic pesticide seed dressing in GM crops and conventional crops; in particular, the widespread application of a relatively new class of systemic insecticides - the neonicotinoids - that are highly toxic to insects including bees at very low concentrations. Systemic pesticide seed dressings protect the newly sprouted seed at a vulnerable time in the plant's development. Seed dressings include systemic insecticides and fungicides, which often act synergistically in controlling early seedling pests. The neonicotinoid insecticides include imidacloprid, thiamethoxam, clothianidin, and several others. Imidacloprid is used extensively in seed dressing for field and horticultural crops, and particularly for maize, sunflower and rapeseed (canola). Imidacloprid was detected in soils, plant tissues and pollen using HPLC coupled to a mass spectrometer. The levels of the insecticide found in pollen suggested probable delirious effects on honeybees [3]. For several years since 2000, French and Italian beekeepers have been noticing that imidacloprid is lethal to bees, and the insecticide is suspected to be causing the decline of hive populations by affecting the bee's orientation and ability to return to the hive.

#### Extinction

**Alois & Cheng, ’07** (Paul and Victoria, The Arlington Institute, “Keystone species extinction overview” July 07, arlingtoninstitute.org/wbp/species-extinction/443)

Bees are central to the systems that support food production for human beings.\ k An international study of 115 food crops grown in over 200 countries showed that 75% of the crops were pollinated by animals, especially by bees. According to the International Bee Research Association, bees pollinate 80% of the food grown in the United Kingdom. Bees play such an integral role in maintaining many of the planet’s ecosystems that Albert Einstein once said, “If the honeybee goes extinct, we have four more years on Earth.” Both domesticated bees and wild bees contribute significantly to global pollination, but unfortunately both are facing threats to their survival. Domesticated bees serve a vital economic function. Farmers can no longer just depend on wild bees to adequately pollinate their crops, so they must rent domesticated bees for that purpose in the spring. Without a sufficient supply of domesticated bees, crops simply would not be able to reproduce. The total economic value of domestic bees in the world is unknown, but in North America alone they support tens of billions of dollars of agricultural products.

### AT: Growth Key to GMOs 2NC

#### Turn – GM crops increase pesticide use

**Vidal, ’04** (John, Guardian, “GM crops linked,” l/n, 1/8)

Eight years of planting genetically modified maize, cotton and soy beans in the US has significantly increased the amount of herbicides and pesticides used, according to a US report which could influence the British government over whether to let GM crops be grown. The most comprehensive study yet made of chemical use on genetically modified crops draws on US government data collected since commercialisation of the crops began. It appears to undermine one of the central selling points of GM farming - that the crops benefit the environment because they need fewer manmade agrochemicals. Charles Benbrook, the author of the report, who is also head of the Northwest Science and Environment Policy Centre, at Sandpoint, Idaho, found that when first introduced most of the crops needed up to 25% fewer chemicals for the first three years, but afterwards significantly more. In 2001, the report states, 5% more herbicides and insecticides were sprayed compared with crops only of non-GM varieties; in 2002 7.9% more was sprayed; and in 2003 the estimated rise was 11.5%. In total, £73m more agrochemicals were sprayed in the US during 200 1-2003 because of GM crops, says the report, which was commissioned by Iowa State University, the Consumers’ Union and others.

#### Pesticides cause endocrine disruption causing human extinction

**Togawa ’99**  (Tatsuo, Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Technology in Society, August)  
  
Advanced technology provides a comfortable life for many people, but it also produces strong destructive forces that can cause extinction of the human race if used accidentally or intentionally. As stated in the Russell-Einstein Manifesto of 1955, hydrogen bombs might possibly put an end to the human race.1 Nuclear weapons are not the only risks that arise from modem technologies. In 1962, Rachel Carson wrote in her book, Silent Spring [2], that the amount of the pesticide parathion used on California farms alone at that time could provide a lethal dose for five to ten times the whole world's population. Destruction of the ozone layer, the greenhouse effect, and chemical pollution by endocrine-destructive chemicals began to appear as the result of advanced technology, and they are now considered to be potential causes of extinction of the human race unless they are effectively controlled.