# Keynes Core and DeDevlopment

# De-Development

### DeDev 1NC-Generic

Economic collapse inevitable – diminishing returns from innovations mean complex societies inevitably crash and infinite innovation is impossible – partitioned collapse is key to solve extinction─

Deborah Mackenzie 08 – BBC Correspondant. Quotes Joe Tainter - an archaeologist at the University of Utah, Salt Lake City, and author of the 1988 book The Collapse of Complex Societies, and Yaneer Bar-Yam, head of the New England Complex Systems Institute in Cambridge, Massachusetts 4/5/2008 (“Are WE doomed?” Ebsco)

The very nature of civilisation may make its demise inevitable, says Debora MacKenzie 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. 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. History is not on our side. Think of Sumeria, of ancient Egypt and of the Maya. In his 2005 best-seller, 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 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](http://web.ebscohost.com.ezproxy.cul.columbia.edu/ehost/detail?vid=17&hid=12&sid=053d6c1f-93b9-4e78-af50-0ce75a2d2b94%40sessionmgr4&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#toc) 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. 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 is mounting and although global is still increasing, constant innovation is needed to cope with environmental degradation and evolving - 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. 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 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](http://web.ebscohost.com.ezproxy.cul.columbia.edu/ehost/detail?vid=17&hid=12&sid=053d6c1f-93b9-4e78-af50-0ce75a2d2b94%40sessionmgr4&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#toc) 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 wehave 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. 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." 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. 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 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. The stakes are high. Historically, collapse always led to a fall in population. "Today's population levels depend on fossil fuels and industrial agriculture," says Tainter. "Take those away and there would be a reduction in the Earth's population that is too gruesome to think about." If industrialised civilisation does fall, the urban masses - half the world's population - will be most vulnerable. Much of our hard-won knowledge could be lost, too. "The people with the least to lose are subsistence farmers," Bar-Yam observes, and for some who survive, conditions might actually improve. Perhaps the meek really will inherit the Earth.

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## \*\*\*Transition Debate\*\*\*

### 1nc-Mindset Shift Shell

Complexity makes collapse inevitable – economic collapse causes a mindset shift to sustainability.

Speth 8 – Rhodes Scholar @ Oxford University, Chairman of Council on Environmental Quality for Executive Office, Founder of World Recourses Institute (Think-Tank), Led the Western Hemisphere Dialogue on Environment and Development, Administrator of United Nations Development Program, Dean of Yale School of Forestry and Environmental Studies, Leader of the President’s Task Force on Global Recourses and the Environment, Holds multiple awards—National Wildlife Federation’s Recourse Defense Award and Lifetime Achievement Award of Environmental Law Institute, and Blue Planet Prize, James, “The Bridge at the Edge of the World”, p 211-5

Forces for Change The very practical and very difficult question is what might spur human sensibilities in these directions? When one considers our world today, with its widespread ethnic hatreds, intrastate warfare, and immense violence, militarism, and terrorism, not to mention the dysfunctional values already addressed, the task can seem hopelessly idealistic. In truth, it is precisely because of these calamities, which are linked in many ways, that one must search for answers and hope desperately to ﬁnd them. There is a vast literature on cultural change and evolution. In what spirit, then, should we take up the question of spurring change? The goal must be forging cultural change, not waiting on it. Here, the in- sight of Daniel Patrick Moynihan is helpful: “The central conservative truth is that culture, not politics, determines the success of a society. The central liberal truth is that politics can change a culture and save it from itself .”2' Historian Harvey Nelsen has asked the right question: “How . . . can politics save a culture from itself?” “There is only one way,” he answers, “through the development of new consciousness?” People have conversion experiences and epiphanies. Can an entire society have a conversion experience? Unfortunately, the surest path to widespread cultural change is a cataclysmic event that profoundly affects shared values and delegitimizes the status quo and existing leadership. The Great Depression is a classic example. I believe that both 9/11 and Hurricane Katrina could have led to real cultural change in the United States, both for the better, but America lacked the inspired leadership needed. The most thorough look at this issue from the perspective here is Thomas Homer-Dixon’s The Upside of Down. He argues “that our circumstances today are surprisingly like Rome’s in key ways. Our societies are also becoming steadily more complex and often more rigid. This is happening partly because we ’re trying to manage—often with limited success—stresses building inside our societies, including stresses arising from our gargantuan appetite for energy. . . . Eventually, as occurred in Rome, the stresses may become too extreme, and our societies too inﬂexible to respond, and some kind of economic or political breakdown will occur. . . . “People often use the words ‘breakdown’ and ‘collapse ’ synony- mously. But in my view, although both breakdown and collapse pro- duce a radical simplification of a system, they differ in their long-term consequences. Breakdown may be serious, but it’s not catastrophic. Something can be salvaged after breakdown occurs and perhaps rebuilt better than before. Collapse, on the other hand, is far more harmful. . . . “In coming years, I believe, foreshocks are likely to become larger and more frequent. Some could take the form of threshold events—like climate ﬂips, large jumps in energy prices, boundary-crossing out- breaks of new infectious disease, or international ﬁnancial crises. ”” I-Iomer-Dixon argues that foreshocks and breakdowns can lead to positive change if the ground is prepared. “We need to prepare to turn breakdown to our advantage when it happens—because it will,” he says.“ Homer-Dixon’s point is critically important. Breakdowns, of course, do not necessarily lead to positive outcomes; authoritarian ones and Fortress World are also possibilities. Turning a breakdown to advantage will require both inspired leadership and a new story that articulates a positive vision grounded in what is best in the society's values and history. A congressman is said to have told a citizens’ group, “If you will lead, your leaders will follow.” But it doesn’t have to be that way. Harvard ’s Howard Gardner stresses this potential of true leadership in his book Changing Minds: “Whether they are heads of a nation or senior ofﬁcials of the United Nations, leaders of large, disparate populations have enormous potential to change minds . . . and in the process they can change the course of history. “I have suggested one way to capture the attention of a disparate population: by creating a compelling story, embodying that story in one ’s own life, and presenting the story in many different formats so that it can eventually topple the counterstories in one ’s culture. . . . [T] he story must be simple, easy to identify with, emotionally resonant, and evocative of positive experiences?” There is evidence that Americans are ready for another story. As noted, large majorities of Americans, when polled, express disenchantment with today ’s lifestyles and offer support for values similar to those discussed here.“ But these values are held along with other strongly felt and often conﬂicting values, and we are all pinned down by old habits, fears, insecurities, social pressures, and in other ways. A new story that helps people find their way out of this confusion and dissonance could help lead to real change. Gardner’s stress on story and narrative is thus important. Bill Moy- ers, a powerful force for good in our country, has written that “America needs a different story. . . . Everywhere you turn you’ll ﬁnd people who believe they have been written out of the story. Everywhere you turn there ’s a sense of insecurity grounded in a gnawing fear that freedom in America has come to mean the freedom of the rich to get richer even as millions of Americans are dumped from the Dream. So let me say what I think up front: The leaders and thinkers and activists who honestly tell that story and speak passionately of the moral and religious values it puts in play will be the first political generation since the New Deal to win power back for the people. . . . Here, in the ﬁrst decade of the 21 st century, the story that becomes America’s dominant narrative will shape our collective imagination and hence our politics.”” If Moyers addresses the social aspects of our need for a new nar- rative, many other authors have begun to develop new stories of our relationship with nature—'I‘homas Berry in T/ze Dream of the Eart/z, Carolyn Merchant in Reinventing Eden, Evan Eisenberg in T/ze Ecology ofEden, Bill McKibben in Deep Ecology, and others.” One story that needs to be told is about a people who set out on a journey—a journey through time—to build a better world for themselves and their chil- dren. High-minded and full of hope as they began, they accomplished much in their quest. But they became so enamored of their successes, indeed captured by them, that they failed to see the signs that pointed in new directions, and they became lost. Now they must find their way back to the right path.” Another source of value change is social movements. Social move- ments are all about raising consciousness and, if successful, can usher in a new consciousness. We speak casually about the environmen- tal movement. We need a real one. One can hear echoes of Reich in Curtis White ’s book The Spirit of Disobidience. “Although the sixties counterculture has been much maligned and discredited, it attempted to provide what we still desperately need: a spirited culture of refusal, a counterlife to the reigning corporate culture of death. We don’t need to return to that counterculture, but we do need to take up its challenge again. If the work we do produces mostly bad, ugly, and destructive things, those things in turn will tend to recreate us in their image. “If we’re concerned about the kind of human future we are creat- ing, we must also be concerned with how we are living in the present. Unhappily, how we live is presently the near exclusive concern of cor- porations and media conglomerates which have, together, turned every Main Street into the same street and made the inside of every American head echo with the same vacuous music and movie/ TV scenarios. This is the arena in which a spiritualized disobedience means most.”’° Another way forward to a new consciousness should lie in the world’s religions. Mary Evelyn Tucker has noted that “no other group of institutions can wield the particular moral authority of the religions” and that “the environmental crisis calls the religions of the world to respond by ﬁnding their voice within the larger Earth community. In so doing, the religions are now entering their ecological phase and ﬁnd- ing their planetary expression.”3' The potential of faith communities is enormous. About 85 percent of the world’s people belong to one of the ten thousand or so religions, and about two-thirds of the global population is Christian, muslim or hindu. Religions played key roles in ending slavery, the in the civil rights movement, and in overcoming apartheid in South Africa, and they are now turning attention with increasing strength to the environment.

### Mindset Shift Possible-Degrowth Movements

Mindset shift is possible.

Victor 10 - Peter Victor is an economist at York University in Toronto, Ontario and author of Managing Without Growth: Slower by Design, Not Disaster, Questioning economic growth, Nature 468, 370–371 (18 November 2010)

The idea that governments of developed countries should no longer pursue economic growth as a primary policy objective is widely regarded as heresy. Yet a growing number of scholars, policy-makers and citizens are coming round to the idea that the planet cannot sustain continued global economic growth. Even economist Robert Solow, who won the 1987 Nobel Prize in Economics for his work on economic growth, said in 2008 that the United States and Europe might soon find that “either continued growth will be too destructive to the environment and they are too dependent on scarce natural resources, or that they would rather use increasing productivity in the form of leisure”1. The idea of steady-state economies, or even economic 'degrowth', in developed countries is gaining traction. The reasons for disenchantment with economic growth as a paramount policy objective are not hard to find. Humanity has gone beyond the 'safe operating space' of the planet with respect to climate change, nitrogen loadings and biodiversity loss, and threatens to do so with six other major global environmental issues2. This excessive burden on Earth can be traced to the massive increase in the materials, fossil fuels and biomass used by the world's economies. Mankind's 'throughput' — the sheer weight of materials, including fuel, that feed the world's economies — has increased 800% in the twentieth century3, with a correspondingly large increase in wastes returned to the environment. In the same time, the human population has risen from 1.6 billion to more than 6 billion, and our presence has been felt over an increasingly large part of Earth's surface. All of this drove and was driven by unprecedented economic growth, the benefits and costs of which have been spread remarkably unevenly around the planet. A key question now is whether and how economies can develop in a way that respects Earth's biophysical boundaries and feeds the 9 billion people expected by mid-century. One option is for developed countries to continue striving for economic growth, while attempting to reduce impacts on the planet. This means betting that economic growth can be successfully and rapidly decoupled from material and energy inputs. Such 'green growth' is currently favoured by the Organisation for Economic Co-operation and Development (OECD). But it can be confounded by the rebound effect: efficiency improvements often induce changes that reduce, nullify or outweigh environmental and resource benefits. This was first recognized in 1865 by economist W. S. Jevons, who noted that improvements in steam engines were accompanied by an increase in total coal consumption. By 1910, the best steam engines in the United Kingdom were about 36 times more efficient than those of 1760 (ref.4), but a 2,000-fold rise in steam-power use5 had increased coal consumption dramatically. A rebound of 50% is not unusual for many technologies. What price happiness? An alternative is to encourage growth in sectors of the economy that use fewer resources, such as the service sector. Such a strategy could buy some time, but not if it simply shifts the production of resource-intensive products and their related environmental burdens to other countries, as has been the pattern in recent years. A third option is to limit growth itself. The battle against climate change illustrates the attractiveness of this strategy. To reduce greenhouse-gas emissions (GHG) by 80% over 50 years, an economy that increases its real gross domestic product (GDP) by 3%a year must reduce its emissions intensity — tonnes of GHG per unit of GDP — by an astonishing 6% a year. For an economy that does not grow, the annual cut would be a still very challenging 3.2%. The view that we should curb planetary impacts by reducing growth in richer countries is reinforced by several considerations. First, there is mounting evidence that this growth is largely unrelated to measures of happiness. Second, in recent decades, increasing inequality has accompanied much of this growth, leading to problems ranging from poor public health to social unrest. Third, the prospects for real improvement in the developing world are likely to be diminished if developed countries continue to encroach on more ecological space. Removing economic growth as a major policy priority runs counter to the views of governments and many international agencies. Many nations responded to the recent financial crisis with desperate measures to resume economic growth. Yet when we recognize how briefly economic growth has held such prominence in policy circles, dethroning it seems less improbable. Regular estimates of GDP by governments date back only to the 1940s, and the measure was initially used in support of specific objectives, such as stimulating employment. Only in the 1950s did economic growth become a policy priority in its own right6

### Collapse Solves Mindset Shift-Crisis

Growth mindset is fragile – collapse solves.

Speth 8 – Rhodes Scholar @ Oxford University, Chairman of Council on Environmental Quality for Executive Office, Founder of World Recourses Institute (Think-Tank), Led the Western Hemisphere Dialogue on Environment and Development, Administrator of United Nations Development Program, Dean of Yale School of Forestry and Environmental Studies, Leader of the President’s Task Force on Global Recourses and the Environment, Holds multiple awards—National Wildlife Federation’s Recourse Defense Award and Lifetime Achievement Award of Environmental Law Institute, and Blue Planet Prize, James, “The Bridge at the Edge of the World”, p 121-3

A ray of hope comes from Robert Collins in his book More: The Politics of Economic Growth in Postwar America. Collins points out how “the pursuit of economic growth came to become a central and defining feature of U.S. public policy in the half-century after the end of World War II. Commentators in the 1950s coined the term ‘growthmanship’ to describe the seemingly single-minded pursuit of exuberant economic growth that was then appearing to dominate the political agenda and the public dialogue throughout the Western industrialized world, no- where more dramatically than in that bastion of materialistic excess, the United States. . . . “What made the postwar pursuit of growth distinctively modern was the availability of new state powers and means of macroeconomic management dedicated to achieving growth that was more exuberant, more continuous and constant, more aggregately quantiﬁable, and also more precisely measured than ever before. Perhaps we can best ap- preciate what made postwar growthmanship distinctive by looking at the context from which it emerged, for it was the ambivalence of New Deal economic policy that made the subsequent emergence of growthmanship seem like a striking departure.”” If our current growthmania is indeed an artifact of the postwar world, then there is hope that it is not a permanent or inevitable feature of the economic landscape. But Collins is realistic about the scale of the challenge. He observes that “the acceptance of limits in the pursuit of growth brings its own painful consequences. Growth has often been America’s ‘out’—the way, many believed, that the nation could somehow square the circle and reconcile its love of liberty with its egalitarian pretensions. Without the promise of particularly rapid growth to resolve this tension at the core of the American enterprise, we are at century’s end left with a task fully challenging enough to test, and perhaps again to tap, whatever reserves of national genius and greatness we carry with us into the new millennium.”““ The good news is that there are ways other than rapid growth to “resolve this tension," as the chapter that follows shows. If challenging growth seems difficult, one should remember Milton Friedman’s observation: “Only a crisis—actual or perceived—produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes politically inevitable. That is one philosophy—be ready for the coming crisis. Another, taken from Mahatma Ghandi, is more active: “First they laugh at you” he said, “then they ignore you, then they fight you, then you win”.

### Collapse Solves Mindset Shift-Decoupling

Economic collapse causes developing countries to abandon industrialization – spills over to a mindset shift.

Lewis 2k – Instructor in the Sewall American Studies Program at the University of Colorado. Chris, The coming age of scarcity: preventing mass death and genocide in the twenty-first century, p. 54-7

The First World’s failure to modemize and civilize the world should not be seen as a tragedy, but as an opportunity. With the increasing recognition of the inability of development to resolve the economic and political contradictions it creates, whether you call it sustainable or not, peoples and communities will be once again forced to draw on their own cultures, histories, religions, and intimate knowledge of their local environments to improve their lives and ensure a "reasonable life" for their children. For most of history, successfully adapting to changing local and regional environments was the fundamental chal- lenge facing human societies. But how will First World political and economic elites react to these efforts by Third World peoples and others to withdraw from the global economy and to create a society and future not based on mod- emiza tion and development? Third World peoples’ refusal to pay their debts, to sell their resources to the developed world, and their refusal to allow the First World and TNCS to dominate their economies, so- cieties, and politics will not come without global conflict and struggle. There will be neocolonial wars, political and economic subversion, widespread suffering and turmoil, and social and political chaos. We witnessed some of this during the cold war, when the United States and Europe found more often than not that they had to force Third World people to accept development and the neocolonialism and tre- mendous poverty, suffering, and political unrest it created. The Soma- [is and Balkan nations’ ability to use force to prevent continued First World domination are models for this future conflict. The process will not be easy. It will be like the wars and conflicts that brought the fall of the Mayan and Roman empires (Ponting 1991). The successful collapse of global industrial civilization is, in part, dependent on the 80 percent not fully integrated with the global economy breaking free from their ties to modern industrial civiliza- tion. Faced with growing threats of economic and ecological collapse, many underdeveloped nations and regions should declare their independence from the global economy, recognizing that this economy is the larger cause of their poverty. After breaking free from the First World's economic and political hegemony, underdeveloped countries can then use their resources and people to feed themselves and im- prove their quality of life. Of course, we have been witnessing such attempts for the past fifty years after World War II as colonial and neocolonial struggles for independence. The wars in Vietnam, Cambo- dia, Afghanistan, Nicaragua, El Salvador, Angola, Mozambique, So- malia, and in the nations of the former Soviet Union were all struggles to win independence from foreign domination. The cold war was, in large part, a struggle between the United States and the Soviet Union over who would dominate the modern world and the so-called non- aligned nations of the Third World. With the global instability created by the end of the cold war, the collapse of the Soviet Union, and the decline of American hegemony, underdeveloped countries may find that they have the strategic opportunity to demand their indepen- dence from First World domination. They can refuse to pay their debts, withdraw from the global industrial economy, nationalize foreign cor- porations that are exploiting their wealth, and create local and re- gional economies to support their own people. But Third World independence from the First World-dominated global economy will not come without a heavy economic, political, and military price. With the withdrawal of underdeveloped countries from the global economy within the next thirty to fifty years, the developed countries will face continual material, ecological, and energy shortages that will force them to downscale their economies. The First World will, ironically, be forced to follow the lead of the Third World and create local and regional economies that are sustainable and self-sufficient. In many instances, nations will break up, forming smaller polities tied together by ethnic, religious, or social bonds. If these polities and nations take responsibility for helping their peoples survive the hardship and suf- fering imposed by the devolution of the global industrial civilization and economy, they will be better able to reduce the real threat of mass death and genocide that will arise from the collapse of modern industrial civilization. Most critics would argue, probably correctly, that instead of allow- ing underdeveloped countries to withdraw from the global economy and undermine the economies of the developed world, the United States, Europe, and Japan and others will fight neocolonial wars to force these countries to remain within this collapsing global economy. These neocolonial wars will result in mass death, suffering, and even regional nuclear wars. If First World countries choose military con- frontation and political repression to maintain the global economy, then we may see mass death and genocide on a global scale that will make the deaths of World War II pale in comparison. However, these neocolonial wars, fought to maintain the developed nations’ economic and political hegemony, will cause the final collapse of our global industrial civilization. These wars will so damage the complex eco- nomic and trading networks and squander material, biological, and energy resources that they will undermine the global economy and its ability to support the earth's 6 to 8 billion people. This would be the worst-case scenario for the collapse of global civilization. It is also entirely possible that the global economy is already so fragile that developed countries cannot afford to engage in these neo- colonial wars, especially if they do not do it as a global block of de- veloped nations through the United Nations. The desperate struggle among competing modern empires to maintain their resource pipe- lines into the underdeveloped world will only further undermine glo- bal civilization. Warring nations’ attempts to cripple their enemies by denying access to their economies and resources will only hasten the collapse of the global economy. No matter how it collapses, through economic collapse and the development of local and regional economies or through a global military struggle by the First World to maintain its access to Third World resources, or both modern industrial civilization will collapse because its demands for energy, natural resources, and ecosystem ser- vices are not sustainable. The current collapse of economies and states in Africa, Latin America, and the former Soviet Union demonstrate that this global collapse is already occurring. The inability of the United States and the United Nations in the 1990s to solve the economic and political problems that exacerbate conflicts in Africa, Latin America, Eastern Europe, and the former Soviet Union demonstrate that the developed countries might be under such economic and political stress that they cannot afford to use the political or military capital necessary to force recalcitrant nations and peoples to remain within the global industrial economy. Although many would argue that the massive death and suffering caused by these conflicts must be stopped, it could be that this death will be less than if the First World intervened and tried to force Third World countries to remain within global civilization. At- tempts to intervene in these growing regional conflicts, on the basis of liberal intemationalism and global civilization, will backfire and cause only more suffering. In fact, these interventions will further accelerate the collapse of global civilization.

### Collapse Solves Mindset Shift-Localization

Collapse forces a shift to localization.

Lewis 2k – Instructor in the Sewall American Studies Program at the University of Colorado. Chris, The coming age of scarcity: preventing mass death and genocide in the twenty-first century, p. 44-45

I will argue that we are witnessing the collapse of global industrial civilization. Driven by individualism, materialism, and the endless pursuit of wealth and power, the modern industrialized world's ef- forts to modernize and integrate the world politically, economically, and culturally since World War II are only accelerating this global collapse. In the late-twentieth century, global development leaves 80 percent of the world's population outside the industrialized nations’ progress and affluence (Wallimann 1994). When the modern industri- alized world collapses, people in the underdeveloped world will con- tinue their daily struggle for dignity and survival at the margins of a moribund global industrial civilization. With the collapse of the modern world, smaller, autonomous, local and regional civilizations, cultures, and politics will emerge. We can reduce the threat of mass death and genocide that will surely accom- pany this collapse by encouraging the creation and growth of sustain- able, 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 civilization, modern peoples will not have the material resources, biological capital, and energy to reestablish global 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. For the societies that destroy their local environments and economies, as modem people so often do, will themselves face collapse and ruin.

### Collapse K2 Sustainable Society

Collapse is key to solve poverty and atrocities – IFIs prove that post-mindset shift economies are net better

Klassen 4 - former senior editor with Adbusters magazine, and now a senior partner at Biro Creative (Nicholas “Islamic Economics” July <http://www.somaliaonline.com/cgi-bin/ubb/ultimatebb.cgi?ubb=get_topic;f=8;t=000555;p=0>

Picture it. In the not-too-distant future, the US economy is teetering after decades of debt accumulation. Paper transactions and excess consumption carry on relentlessly despite the growing depletion of real capital. Speculation spirals out of control just as banks start calling back their credit. Policymakers disregard financial prudence in their pursuit of Pax Americana. And then a worldwide plague or a terrorist attack provides the tipping point for total economic collapse. What then? Will economists have learned any lessons? To answer this, we might begin by examining the ethics of capitalism. Or rather the lack thereof. Capitalism is famous for being free of moral considerations. To neo-liberal economic guru Milton Friedman, the expectation that business bears any â€œsocial responsibilities is a fundamentally subversive doctrine. “Capital’s only expectation is to increase profits. As a result, we operate in an economy where business administration students are taught that “greed is good,” competition is stressed over solidarity, and the poor are left largely to fend for themselves. In light of this moral vacuity, it doesn’t come as a surprise that the world’s rich have rigged the global economic game in their favor. People in the north sit back and enjoy their treasures while their southern neighbors struggle to survive. Even ostensibly well-intentioned efforts to alleviate global poverty like the World Bank and the International Monetary Fund (imf) manage to make things worse. Since the establishment of these financial institutions 60 years ago, the income gap between the first and third world has widened, and today 1.5 billion people live on an income of less than $1 a day. The people of Argentina know all about the dark side of World Bank/imf prescriptions. They don’t need to imagine what an economic collapse might look like. In 2002, after years of following directives to deregulate markets, reduce public spending, and liberalize trade, Argentina found itself in a financial mess. A country that had been trumpeted as a great success found itself reeling as austerity measures caught up, investors got scared, profits fled the country, and the national debt-load mushroomed. Argentinians watched helplessly as their banks were closed and their savings evaporated. World Bank prescriptions elsewhere have been equally devastating. Under Structural Adjustment Programs (saps), developing countries have been required to devalue their currencies, slash their civil services, privatize state assets, and remove price controls and import tariffs designed to protect local industries. In a country like Zambia, the effects have been so overwhelmingly negative that many people are convinced sap stands for â€œSatani ali panoâ€ (Satan in our midst). Thanks to the World Bank, young children often canâ€™t attend public school because fees are required, purchasing power has taken a nosedive thanks to the devaluation of the currency, and curable diseases are left untreated because of depleted health services. The policies have literally killed people. Even the bank is conscious of the dark cloud hovering over its saps and has changed their name to Poverty Reduction Strategy Papers. The irony of course is that rich countries force poor ones to open up their markets and liberalize their trade policies but donâ€™t adhere to their own exhortations. Perhaps the most egregious example of this is the $300 billion doled out in farm subsidies every year by the EU and the US. With so many third world inhabitants engaged in subsistence farming, the elimination of agricultural protectionism would do wonders for southern economies. Can such a corrupted economic system be redeemed? The World Trade Organization has chided the US for its cotton subsidies, and Americans may eventually be forced to abide by their free trade rhetoric, but such minor corrections will do little to improve the long-term prospects for global economic justice. Any real effort to address third world poverty will require a sweeping economic paradigm shift. And a cataclysmic collapse might be the only way to bring that about. But what if, up from the ashes, a new economy infused with a moral compass emerged? The growing discipline of Islamic economics hints at the potential to hardwire an economy with ethical considerations. For centuries, Muslims have blended economic principles with religious law, known as sharia. In the past few decades, this synthesis has evolved into a formal system of Islamic economics. Under this arrangement, the basic framework of the economy is left up to the market, but it is also organized around ethical investment rules that prohibit putting money into companies that profit from alcohol, gambling, tobacco, weapons or pork-related products. Islamic economics also mandate participatory arrangements between capital and labor and a ban on interest. This rule stems from the understanding that since Allah determines the failure of a financial venture, the borrower should not be the sole bearer of the cost. As formalized Islamic economics has gained adherents, Islamic financial institutions (ifis) have enjoyed enormous growth rates. IFIS engage in real economic activity â€“ as opposed to passive speculation â€“ and make money work as capital, not debt. Even though Islamic banks are beholden to principles of social responsibility that make them less profit-driven than western interest-based banks, they have proven to be quite lucrative. There is even an International Islamic Financial Market charged with c\*\*\*\*\*ng the course for about 200 Islamic banks and financial institutions around the world. And the principles of Islamic economics donâ€™t just apply to banks. Sharia insurance firms are also gaining popularity. Concepts like â€˜no interestâ€™ might seem fanciful to western skeptics, but an economy with a moral code could provide a refreshing relief for the worldâ€™s poor. Unfortunately, it might take an economic collapse to make it happen. But once weâ€™ve dusted ourselves off and begun to rebuild, there will be no place for neo-classical financial thinking. Thankfully our Muslim brethren will be ready to provide us with the tools for an alternative system.

### Collapse K2 Sustainable Society

Consumptive ideology and the drive for increasing wealth and resources make atrocities and extinction inevitable – economic catastrophe is key to generate a mindset shift, creating a sustainable society

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

### Collapse Solves Extinction

Growth-based economic systems make ecological collapse and extinction inevitable – collapse now is key to ensure the requisite resources remain for humanity to form small societies

Barry, 08 president and founder of Ecological Internet, Economic Collapse and Global Ecology (Dr. Glen, ,1/14, Counter Currents, http://www.countercurrents.org/barry140108.htm)

Given widespread failure to pursue policies sufficient to reverse deterioration of the biosphere and avoid ecological collapse, the best we can hope for may be that the growth-based economic system crashes sooner rather than later Humanity and the Earth are faced with an enormous conundrum -- sufficient climate policies enjoy political support only in times of rapid economic growth. Yet this growth is the primary factor driving greenhouse gas emissions and other environmental ills. The growth machine has pushed the planet well beyond its ecological carrying capacity, and unless constrained, can only lead to human extinction and an end to complex life. With every economic downturn, like the one now looming in the United States, it becomes more difficult and less likely that policy sufficient to ensure global ecological sustainability will be embraced. This essay explores the possibility that from a biocentric viewpoint of needs for long-term global ecological, economic and social sustainability; it would be better for the economic collapse to come now rather than later. Economic growth is a deadly disease upon the Earth, with capitalism as its most virulent strain. Throw-away consumption and explosive population growth are made possible by using up fossil fuels and destroying ecosystems. Holiday shopping numbers are covered by media in the same breath as Arctic ice melt, ignoring their deep connection. Exponential economic growth destroys ecosystems and pushes the biosphere closer to failure. Humanity has proven itself unwilling and unable to address climate change and other environmental threats with necessary haste and ambition. Action on coal, forests, population, renewable energy and emission reductions could be taken now at net benefit to the economy. Yet, the losers -- primarily fossil fuel industries and their bought oligarchy -- successfully resist futures not dependent upon their deadly products. Perpetual economic growth, and necessary climate and other ecological policies, are fundamentally incompatible. Global ecological sustainability depends critically upon establishing a steady state economy, whereby production is right-sized to not diminish natural capital. Whole industries like coal and natural forest logging will be eliminated even as new opportunities emerge in solar energy and environmental restoration. This critical transition to both economic and ecological sustainability is simply not happening on any scale. The challenge is how to carry out necessary environmental policies even as economic growth ends and consumption plunges. The natural response is going to be liquidation of even more life-giving ecosystems, and jettisoning of climate policies, to vainly try to maintain high growth and personal consumption. We know that humanity must reduce greenhouse gas emissions by at least 80% over coming decades. How will this and other necessary climate mitigation strategies be maintained during years of economic downturns, resource wars, reasonable demands for equitable consumption, and frankly, the weather being more pleasant in some places? If efforts to reduce emissions and move to a steady state economy fail; the collapse of ecological, economic and social systems is assured. Bright greens take the continued existence of a habitable Earth with viable, sustainable populations of all species including humans as the ultimate truth and the meaning of life. Whether this is possible in a time of economic collapse is crucially dependent upon whether enough ecosystems and resources remain post collapse to allow humanity to recover and reconstitute sustainable, relocalized societies. It may be better for the Earth and humanity's future that economic collapse comes sooner rather than later, while more ecosystems and opportunities to return to nature's fold exist. Economic collapse will be deeply wrenching -- part Great Depression, part African famine. There will be starvation and civil strife, and a long period of suffering and turmoil. Many will be killed as balance returns to the Earth. Most people have forgotten how to grow food and that their identity is more than what they own. Yet there is some justice, in that those who have lived most lightly upon the land will have an easier time of it, even as those super-consumers living in massive cities finally learn where their food comes from and that ecology is the meaning of life. Economic collapse now means humanity and the Earth ultimately survive to prosper again. Human suffering -- already the norm for many, but hitting the currently materially affluent -- is inevitable given the degree to which the planet's carrying capacity has been exceeded. We are a couple decades at most away from societal strife of a much greater magnitude as the Earth's biosphere fails. Humanity can take the bitter medicine now, and recover while emerging better for it; or our total collapse can be a final, fatal death swoon. A successful revolutionary response to imminent global ecosystem collapse would focus upon bringing down the Earth's industrial economy now. As society continues to fail miserably to implement necessary changes to allow creation to continue, maybe the best strategy to achieve global ecological sustainability is economic sabotage to hasten the day. It is more fragile than it looks. Humanity is a marvelous creation. Yet her current dilemma is unprecedented. It is not yet known whether she is able to adapt, at some expense to her comfort and short-term well-being, to ensure survival. If she can, all futures of economic, social and ecological collapse can be avoided. If not it is better from a long-term biocentric viewpoint that the economic growth machine collapse now, bringing forth the necessary change, and offering hope for a planetary and human revival. I wish no harm to anyone, and want desperately to avoid these prophesies foretold by ecological science. I speak for the Earth, for despite being the giver of life, her natural voice remains largely unheard over the tumult of the end of being.

### AT-Transition Won’t Work

Mindset shift is possible and won’t cause extinction

Taylor, 08 - Adjunct Reader with the School of Integrative Systems, University of Queensland
(Graeme, Evolutions Edge, Introduction: The Evolutionary Challenge, http://www.bestfutures.org/images/documents/ee\_intro.pdf)

At the cutting edge Albert Einstein said that problems cannot be solved at the same level of awareness that created them.1 Because the global system creates problems like war, poverty and environmental destruction, it cannot solve them. But they could be solved at a different level — by a new type of planetary civilization with different views, values and social institutions. Evolution’s Edge uses societal evolution — the process by which societies reorganize themselves in more complex forms with new capabilities — to explain why the next level of civilization has already begun to emerge. It explains how we can support this evolutionary process — the transformation of our unsustainable Industrial Age into a sustainable Information Age.2 At the cutting edge of evolution, changing conditions and competition leave few options: species and societies either evolve or die off. Human societies have been evolving for hundreds of thousands of years. Evolutionary change results when either random mutation (in plants and animals) or conscious invention (in human societies) produce new structures with new capabilities. The need for environmental relevance means that useful changes are preserved, while useless changes disappear. At each new biological and social stage new and more complex forms and functions emerge. We are the products of many successful evolutionary transformations: inorganic evolution from subatomic particles to complex molecules; biological evolution from single-cell organisms to humans; social evolution from hunter-gatherer societies to industrial civilizations. Now we are in the middle of another evolutionary leap. However, our long history does not guarantee future success: most of the species and most of the civilizations that have ever existed on earth are extinct. Because industrial civilization is rapidly degrading the global environment, we have reached a critical point where the survival of humanity is threatened. The problem is that limitless expansion is not possible on a finite planet. The danger is that our growth-based global system will collapse as critical resources become scarce and major ecosystems fail. The hope is that new ideas, values and technologies will enable us to avoid disaster and create a better world. Humanity has no choice: if global civilization is to survive, it must evolve into a completely new type of societal system. A consumer society cannot be transformed into a conserver society without structural change. From tipping points to transformation In front of us are both an immense challenge and a wonderful opportunity. The challenge is to avoid the catastrophic collapse of our natural and social worlds. The opportunity is to finally end humanity’s ancient addiction to war and greed and to create a peaceful and healthy civilization. This is possible because the same forces that are driving us to self-destruction are creating the conditions for constructive change. Human societies have been evolving for more than 200,000 years. Nomadic families of hunter-gatherers armed with stone spears have developed into industrialized nations armed with nuclear missiles. In the process, occasional contacts between isolated bands have developed into constant exchanges among international networks. Globalization marks the beginning of a tremendous shift past tribal and national boundaries towards a planetary civilization. But it also marks the end of unexplored frontiers and the end of major resource discoveries. With the shrinking of time and space, our species has begun to realize that it lives on a finite planet with limited resources.4 Globalization is triggering a profound shift in human consciousness. On one hand we are being forced to realize that we cannot do anything we want — the price of continuing to exploit nature and each other will be our own destruction. On the other hand, we are learning that our differences are less important than our commonalities — because we are all humans, if our species succeeds, our children and grandchildren will lead happy lives; if it fails, they will inhabit a dying world. Although our future is threatened, this is a hopeful book. This is a time when we can — and must — make a great turning.5We believe that the coming global crisis is a critical but inevitable part of the social evolution of our species. Our species has not failed — rather we risk being the victims of our own success. The Industrial Age has not been an evolutionary error, but a necessary stage in human development. It has encouraged the growth of science and technology; it has given most people better and longer lives. However, these benefits have come with enormous environmental and social costs, and the industrial system has now outlived its usefulness. The continuing development of both destructive and constructive capabilities creates two trends: • the dominant trend towards collapse — unsustainable consumption and environmental destruction. • the emerging trend towards transformation — sustainable ideas, values and technologies. These two trends are the major forces shaping the world today.6 There is no guarantee that all the necessary elements of a sustainable system will develop quickly enough to prevent irreversible environmental and social damage. Major evolutionary transformations only occur after a critical number of useful paradigm changing developments (functional mutations) have taken place within a biological or social system. If these new system components are compatible, their interactions can begin to change the form and function of the entire system. All of the key social and technological components of a sustainable system will have to be present before it will be possible for our consumer society to transform itself into a conserver society. For this reason we need to actively support their development. In order to do this we need to understand not only the evolutionary process but also the requirements of a sustainable system. The purpose of Evolution’s Edge is to help us determine how we can best support the constructive transformation of our world. Changing the world The challenge is not just to change our values and social institutions, but to change them quickly enough to avoid environmental and social disaster. But how can a world system based on power, violence and inequality become peaceful and just? Global problems often appear to be too large and complex to understand, let alone manage. This is because human societies, like weather systems, are open systems with chaotic and complex dynamics. However, since all open systems operate within definable parameters and follow predictable patterns, appropriate theories can be used to explain and predict the dynamics of both weather systems and societal systems. The key to analyzing and managing global change is to recognize that our industrial civilization is not only a dynamic system (with all the characteristics of dynamic systems) but also a living and evolving societal system. Evolutionary systems theory provides us with powerful tools from both the natural and social sciences for analyzing complex global problems.8 My father Alastair M. Taylor, a historian and political geographer, was the first to use evolutionary systems theory to explain the historical evolution of societal systems and worldviews. While previous societal systems (historical ages) took thousands of years to develop, we have only a few years left in which to transform our civilization. Fortunately, we do not have to start from square one. Because the shift to a holistic society began over a hundred years ago, many of the key components of a sustainable societal system are already present.9Moreover, our species is constantly learning new skills and becoming increasingly adaptable. At the same time as our civilization has become unsustainable, our species has acquired the ability to redesign living systems. We now understand biological and social processes well enough to make scientific interventions such as genetic modification and cultural interventions such as marketing. Scientists have now identified the basic components and codes of biological systems and are racing to create artificial life.10 Understanding how living systems work is both powerful and dangerous knowledge. While it can be used in irresponsible and destructive ways, it can also be used constructively to help us design a sustainable societal system. Because evolution is about innovation (the emergence of new forms and functions), it is possible for humans to accelerate evolutionary processes. We can support the emergence of a sustainable civilization through consciously inventing and constructing critical technical and cultural components. Of course there are profound differences between physical and living systems. Physical systems are externally created while living systems are self-organizing. Societal systems maintain themselves, reproduce themselves and change themselves. This means that in order to be successful, societal interventions must build on and support existing processes. If the interventions result in useful innovations (functional mutations), they are likely to be adopted and spread throughout the system.12 The purpose of Evolution’s Edge is to contribute to the design and self-organization of a logical, workable solution to our planet’s major problems. • First we will need a clear statement of the general problem and the general solution — a declaration of the mission and vision. •Next we will need to examine what works and what doesn’t work in our current system in order to distinguish bad practices (what causes problems) from best practices (what supports solutions). •Then we will need to link the best practices together in synergistic ways that support social networking (social self-organizing) and the emergence of functional new structures. Sound easy? Well, it won’t be. The devil is in the details — how the network connects together. The vision has to be right and the components have to have a design that enables them to self-organize into a sustainable system. In fact, in order to design a better social network we need not only better theories but an entirely new paradigm. But we are already more than half way there — better theories and the new paradigm have already been developed. When President John Kennedy announced on May 25, 1961 that the US would put humans on the moon within a decade, many doubted whether his ambitious goals could be achieved. Although the technology did not yet exist for a trip to the moon, the project was launched because it was theoretically possible (and in the view of the US administration, a strategic necessity).13 The project achieved its goals ahead of schedule: the first astronaut landed on the moon on July 20, 1969. The challenge that humanity faces now is to rapidly transform our unsustainable global system into a sustainable system. The survival of our species is a more urgent and important task than the space race, although it is in many ways a similar project. Like going to the moon, we only have a general idea of how we will do it. And although many difficult problems remain to be solved, we already have the basic theoretical skills that we will need to solve them. We can expect to encounter enormous resistance. Technological innovations — like railways and cars — have always had to overcome initial derision and opposition, and social innovations — like democracy and public education — have been strongly opposed. Vested interests have always argued that progressive changes will cause economic ruin and social chaos. The same arguments are now being raised against efforts to protect the environment and to introduce renewable technologies. As always, these arguments are self-serving and irrational. Because the global economy is no longer sustainable, the complete transformation of the existing system is not an option, but a requirement. Creating a more efficient and equitable economy will not cause a global depression — it is the only possible way to avoid economic collapse and sustain economic growth.

### AT-Transition Wars

Transition wars are unlikely and the chance of reaching sustainable society outweighs any risk

Trainer 2 - Lecturer, School of Social Work, University of New South Wales (Ted, “Debating the Significance of the Global Eco-village Movement: A Reply to Takis Fotopoulos” Democracy & Nature, Vol. 8, No. 1, 2002)

However I am not convinced the transition must inevitably involve overt conflict, let alone violence.  It probably will, but it is conceivable that as conditions deteriorate and as the existence of a more sensible way becomes more evident, and as access to it increases as a result of Eco-village building, there will be a more or less peaceful shift to The Simpler Way. Again I do not think this is very likely, but it is possibility to be worked for. Nothing is foregone in heading down that path, on the understanding that in time it might become clear that overt confrontation might have to be accepted.  The longer we can grow while avoiding confrontation the less likely that we will be crushed if it does occur. However the issue is of no practical importance at this point in time. Whatever conclusion one comes to on it our best strategy here and now is to plunge into establishing and spreading the new ways. It will be a long time before it will be evident whether or not we must contest those who have power now, or whether they will lose their power in a collapse of the present resource-expensive infrastructures and of legitimacy.

## \*\*\*Top Level Impact Debate\*\*\*

### Growth 🡪 War-Extinction

Growth causes conflict and extinction

Chase-Dunn and Podobnik, assistant professor of sociology, 99( Christoper, D irector of the Institute for Research on World-Systems, , Assistant Professor in the Department of Sociology at U of California, and Bruce, Anthropology at Lewis and Clark College, The Future of Global Conflict, ed. Bornschier and Chase-Dunn, pg 43)

While the onset of a period of hegemonic rivalry is in itself disturbing, the picture becomes even grimmer when the influence of long-term economic cycles is taken into account. As an extensive body of research documents (see especially Van Duijn, 1983), the 50 to 60 year business cycle known as the Kondratieff wave (K-wave) has been in synchronous operation on an international scale for at least the last two centuries. Utilizing data gathering by Levy (1983) on war severity, Goldstein (1988) demonstrates that there is a corresponding 50 to 60 year cycle in the number of battle deaths per year for the period 1495-1975. Beyond merely showing that the K-wave and the war cycle are linked in a systematic fashion, Goldstein’s research suggests that severe core wars are much more likely to occur late in the upswing phase of the K-wave. This finding is interpreted as showing that, while states always desire to go to war, they can afford to do so only when economic growth is providing them with sufficient resources. Modelski and Thompson (1996) present a more complex interpretation of the systemic relationship between economic and war cycles, but it closely resembles Goldstein’s hypothesis. In their analysis, a first economic upswing generates the economic resources required by an ascending core state to make a bid for hegemony; a second period of economic growth follows a period of global war and the establishment of a new period of hegemony. Here, again, specific economic upswings are associated with an increased likelihood of the outbreak of core war. It is widely accepted that the current K-wave, which entered a downturn around 1967-73, is probably now in the process of beginning a new upturn which will reach its apex around 2025. It is also widely accepted that by this period US hegemony, already unraveling, will have been definitively eroded. This convergence of a plateauing economic cycle with a period of political multicentricity within the core should, if history truly does repeat itself, result in the outbreak of full-scale warfare between the declining hegemon and the ascending core powers. Although both Goldstein (1991) and Modelski and Thompson (1996) assert that such a global war can (somehow) be avoided, other theorists consider that the possibility of such a core war is sufficiently high that serious steps should be taken to ensure that such collective suicide does not occur .

### 1nc-War/Upswing Shell

Economic collapse solves war—growth causes it.

Boehmer 7 – Charles Boehmer University of Texas, The Effects of Economic Crisis, Domestic Discord, and State Efficacy on the Decision to Initiate Interstate Conflict, Politics & Policy, Volume 35, No. 4 (2007): 774-809

\*MID = Militarized Inter-state Dispute

Economic Growth and Fatal MIDs The theory presented earlier predicts that lower rates of growth suppress participation in foreign conflicts, particularly concerning conﬂict initiation and escalation to combat. To sustain combat, states need to be militarily prepared and not open up a second front when they are already ﬁghting, or may fear, domestic opposition. A good example would be when the various Afghani resistance ﬁghters expelled the Soviet Union from their territory, but the Taliban crumbled when it had to face the combined forces of the United States and Northern Alliance insurrection. Yet the coefﬁcient for GDP growth and MID initiations was negative but insigniﬁcant. However, considering that there are many reasons why states ﬁght, the logic presented earlier should hold especially in regard to the risk of participating in more severe conﬂicts. Threats to use military force may be safe to make and may be made with both external and internal actors in mind, but in the end may remain mere cheap talk that does not risk escalation if there is a chance to back down. Chiozza and Goemans (2004b) found that secure leaders were more likely to become involved in war than insecure leaders, supporting the theory and evidence presented here. We should ﬁnd that leaders who face domestic opposition and a poorly performing economy shy away from situations that could escalate to combat if doing so would compromise their ability to retain power. Table 5 presents the results where the external conﬂict measure is Fatal MID onset. A few points are in order before discussing the results. First, I measure growth in this model with a three-year moving average considering that the decision to engage in foreign clashes, which involve combat, may likely be based on several years of growth or domestic stability, although the results are similar for a one-year lag or moving averages of other durations between two and four years. Second, although my theory speciﬁes a directional relationship claiming that economic growth should increase the likelihood of conﬂict, the results are presented based on a two-tailed test to be consistent with the rest of the models. Thus, the results are biased against my theory and the statistical signiﬁcance is stronger than presented. Economic growth is positively related to the onset of foreign conflicts that lead to fatalities and this is signiﬁcant below the .05 level with a one-tailed test. This part of my theory is thus supported. The baseline probability of a Fatal MID in this model is .048, as depicted in Table 6. A one standard deviation in GDP growth, protest, and rebellion all have the same approximate substantive increase in probability of .006 to .007, whereas democracy and development have a similar pacifying effect of -.01. Figures 4 through 6 map the range of probabilities of GDP growth, protest, and rebellion respectively. Economic Growth increases the risk of a Fatal MID whereas regime change becomes less likely (Figure 4). 14 Again though, a graph can give us a more complete picture compared to the information in Table 6. Figure 5 shows that the effect on political protest is more severe over the full range of the scale. Whereas the risk of a Fatal MID levels off and drops, the relationship between protest and regime change is linear and continues upward. We see a similar pattern in Figure 6 with regard to rebellion. Therefore, when we look at the middle range of probabilities for the three variables, they appear to have similar effects, but at the highest levels of domestic conflict (beyond one standard deviation), the risk of a Fatal MID actually decreases. In this manner, there is support for the theory that economic growth indeed raises the probability of interstate conﬂicts that result in fatalities, whereas domestic conflict likewise increases this risk, but only to a point. The highest levels of domestic conﬂict actually reduce MID initiation, MID targets, and Fatal MIDs. Hence, if state leaders attempt to divert because of domestic conﬂict, they clearly avoid escalating external conﬂicts to the point of fatalities and risking war. I have theorized in this study that economic growth should be positively related to militarized interstate conﬂicts while at the same time it should reduce the risk of domestic regime changes. I also expected that domestic conﬂict would reduce the risk of interstate conﬂict. The research design used here speciﬁcally allows for a comparison of the relative probabilities of both interstate conﬂict and regime changes. I ﬁnd only partial support for both my theory and the conclusions often made in studies of diversionary conﬂict that lower rates of economic growth should lead to interstate conﬂict, although in cases where this occurs, this is in fact followed by some form of regime change, suggesting that diversion was not successful or the only tactic politically necessary. In fact, the alternative theory presented here was supported in regard to the most severe interstate conﬂicts. Higher levels of economic growth are positively related to the onset of deadly interstate conﬂicts. However, the results concerning domestic conﬂict are interesting and both support and contradict my theory. Indeed, domestic conﬂict increases the threat of both regime changes and interstate conﬂict, but only to a point. The effects of protest and rebellion are generally nonlinear where only the middle levels contribute to interstate conﬂict. The highest levels of protest and rebellion actually reduce the risk of interstate conﬂict. This suggests that state leaders may attempt diversion as long as protest and rebellion are not so severe, although beyond some middle-range threshold leaders shy away from especially the most severe interstate conﬂicts. One post hoc rationale could be that leaders are insulated from domestic opponents to some degree and are not constrained until domestic conﬂict reaches a certain threshold.

### 2nc-War Impact Calculus

Intensity—wars in upswing are 21 times as deadly.

Goldstein 88 - Joshua S. Goldstein, Professor of International Relations, American University, 1988, Long Cycles, pp. 244-248

The connection between economic phase periods and wars is investigated in several ways. Levy’s “great power wars” (class 2, above) are categorized (table 11.4) according to the economic phase period in which the war “mainly” fell (see definitions above, p. 239). Thirty-one wars occurred during upswings, twenty-seven during downswings, and six seriously overlapped phase periods (see also table 11.5, column 7). Thus hardly any more wars occurred on the upswing phases than the downswings. But in total battle fatalities (severity), except for the 1575—94 upswing, there is a clear alternation between upswing and downswing phases. More severe wars occurred during upswing phases. I have tabulated six war indicators by phase period (table 11 .5).26 The first indicator (col. 3) derives from the list of fatalities (table 11.4), here expressed as an average annual fatality rate in each phase.27 This indicator is also displayed as a bar chart in figure 11.3. With the exception of the (low-fatality) upswing of 1575—94, fatalities follow the pattern of upswings and downswings throughout the 481-year span of the data. Up through 1892, the average annual fatality rate was six times higher on upswings than on downswings; if the twentieth century is included, it is twenty-one times higher on upswings than downswings. Categorizing the same fatality data “strictly” by phase period (col. 4),28 in conjunction with the method just discussed, points to sensitivities to the exact dating of turning points. Not surprisingly, the main effect is on the twentieth century’s two world wars, each overlapping one to two years into an adjacent phase. The results also show the weakest correlation to be in the period 1495—1620. Nonetheless, the fatality rate on upswings is still more than four times higher than on downswings for both 1495—1892 and 1495—1975. The greater severity of war on long wave upswings, then, is a very strong and consistent correlation.29

Probability – growth makes miscalculation much more likely

Boehmer, 2010 (Charles R., Associate Professor of Political Science at the University of Texas El Paso, “Economic Growth and violent international conflict: 1875-1999,” Defence and Peace Economics, Volume 21, Issue 3, June)

The point here is to make it clear that war need not be a result of economic growth but that when growth does contribute to interstate violence it does so by serving as a catalyst of willingness against a backdrop of opportunities. Chinese leaders may be less likely to back away from violent interstate conflict if a crisis occurs during a period of economic growth than they would before economic growth, and this risk is higher for China because its major power status and region provide more opportunities relative to most other states. Based on the rationale above, I do not predict that economic growth makes it more likely that states will initiate militarized conflicts with other states, or that it increases their overall conflict propensity. Economic growth appears dangerous in those situations where states are already involved in a conflict by making it more likely that a state will reciprocate or escalate conflicts. Considering that war is a suboptimal outcome (Gartzke, 1999), states would not risk escalating conflicts to violence or war if they have reason to believe that they may lose. Hubris may lead states into conflicts that turn deadly by providing an increased willingness to fight or even distorting and inflating leaders’ perception of state strength. States often march off to war thinking that the war will be short and that their side will prevail (Blainey, 1988); I suspect economic growth increases this resolve to stand against challenges from other states and to escalate crises.

### Economic Collapse 🡪 Cooperation

Economic collapse causes cooperation not conflict – diversionary theory is false.

Fravel, Prof PoliSci @ MIT, 2010

Taylor, "The Limits of Diversion: Rethinking Internal and External Conflict" Security Studies 19.2

The diversionary hypothesis offers one of the most powerful alternatives to rationalist explanations of war based on the state as a unitary actor. Strong empirical support for diversion would identify a more complete set of causal mechanisms underlying international conflict. The cases investigated in this article, however, raise doubts about the strength of the diversionary hypothesis as well as the empirical validity of arguments based on diversionary mechanisms, such as Mansfield and Snyder’s theory about democratization and war.126 In Argentina and Turkey, the hypothesis fails to pass two most likely tests. In neither case was domestic unrest a necessary condition for the use of force as proponents of diversionary theory must demonstrate. Instead, external security challenges and bargaining over disputed territory better explain Argentine and Turkish decision making. The historical record, including leadership statements and reasoning, offers stronger evidence for a standard realist model and the dynamics of coercive diplomacy. Drawing definitive conclusions about diversion from just two cases is impossible. Nevertheless, the modified most likely research design used in this article weakens confidence in the strength of diversionary arguments. Diversion as a principal or primary source of some conflicts may be much less frequent than scholars assert. These two episodes should be among the easiest cases for diversion to explain. Not only did embattled leaders escalate disputes intocrises and then use force, but scholars have also viewed these cases as being best explained by diversionary mechanisms. If diversion cannot account for these decisions, it is unclear what the hypothesis can in fact explain. My findings have several implications for the literature on diversionary war theory. At the most general level of analysis, the lack of support for the diversion hypothesis in Argentina and Turkey complements those quantitative studies of diversion that do not identify a systematic and significant relationship between domestic politics and aggressive foreign policies, including the use of force.127 In addition, the modified most likely research design used in this article raises questions about those quantitative studies that do provide empirical support for diversion because it demonstrates that despite the presence of domestic unrest, the underlying causal mechanisms of diversion may not account for the decisions to use force. The lack of support for diversion raises a simple but important question: why is diversion less frequent than commonly believed, despite its plausible intuition? Although further research is required, several factors should be considered. First, the rally effect that leaders enjoy from an international crisis is generally brief in duration and unlikely to change permanently a public’s overall satisfaction with its leaders.128 George H. W. Bush, for example, lost his reelection bid after successful prosecution of the 1991 Gulf War. Winston Churchill fared no better after the Allied victory in World War II.129 Leaders have little reason to conclude that a short-term rally will address what are usually structural sources of domestic dissatisfaction. Second, a selection effect may prevent embattled leaders from choosing diversion. Diversionary action should produce the largest rally effect against the most powerful target because such action would reflect a leader’s skills through coercing a superior opponent. At the same time, leaders should often be deterred from challenging stronger targets, as the imbalance of military forces increases the risk of defeat and thus the probability of losing office at home. Although the odds of victory increase when targeting weaker states, success should have a much more muted effect on domestic support, if any, because victory would have been expected.130 Third, weak or embattled leaders can choose from a wide range of policy options to strengthen their standing at home. Although scholars such as Oakes and Gelpi have noted that embattled leaders can choose repression or economic development in addition to diversionary action, the range of options is even greater and carries less risk than the failure of diversion. Weak leaders can also seek to deepen cooperation with other states if they believe it will strengthen their position at home. Other studies, for example, have demonstrated that political unrest facilitated détente among the superpowers in the early 1970s, China’s concessions in its many territorial disputes, support for international financial liberalization, and the formation of regional organizations such as the Association of Southeast Asian States and the Gulf Cooperation Council.131

### AT-Power Transitions

Power transitions from decline don’t cause war.

MacDonald, Asst Prof. of PoliSci @ Williams College and Parent, Asst Prof. PoliSci @ U of Miami, 2011

Paul and Joseph, “Graceful Decline?”, International Security, 35.4, Project MUSE

In this article, we question the logic and evidence of the retrenchment pessimists. To date there has been neither a comprehensive study of great power retrenchment nor a study that lays out the case for retrenchment as a practical or probable policy. This article fills these gaps by systematically examining the relationship between acute relative decline and the responses of great powers. We examine eighteen cases of acute relative decline since 1870 and advance three main arguments. First, we challenge the retrenchment pessimists' claim that domestic or international constraints inhibit the ability of declining great powers to retrench. In fact, when states fall in the hierarchy of great powers, peaceful retrenchment is the most common response, even over short time spans. Based on the empirical record, we find that great powers retrenched in no less than eleven and no more than fifteen of the eighteen cases, a range of 61-83 percent. When international conditions demand it, states renounce risky ties, increase reliance on allies or adversaries, draw down their military obligations, and impose adjustments on domestic populations. Second, we find that the magnitude of relative decline helps explain the extent of great power retrenchment. Following the dictates of neorealist theory, great powers retrench for the same reason they expand: the rigors of great power politics compel them to do so.12 Retrenchment is by no means easy, but [End Page 9] necessity is the mother of invention, and declining great powers face powerful incentives to contract their interests in a prompt and proportionate manner. Knowing only a state's rate of relative economic decline explains its corresponding degree of retrenchment in as much as 61 percent of the cases we examined. Third, we argue that the rate of decline helps explain what forms great power retrenchment will take. How fast great powers fall contributes to whether these retrenching states will internally reform, seek new allies or rely more heavily on old ones, and make diplomatic overtures to enemies. Further, our analysis suggests that great powers facing acute decline are less likely to initiate or escalate militarized interstate disputes. Faced with diminishing resources, great powers moderate their foreign policy ambitions and offer concessions in areas of lesser strategic value. Contrary to the pessimistic conclusions of critics, retrenchment neither requires aggression nor invites predation. Great powers are able to rebalance their commitments through compromise, rather than conflict. In these ways, states respond to penury the same way they do to plenty: they seek to adopt policies that maximize security given available means. Far from being a hazardous policy, retrenchment can be successful. States that retrench often regain their position in the hierarchy of great powers. Of the fifteen great powers that adopted retrenchment in response to acute relative decline, 40 percent managed to recover their ordinal rank. In contrast, none of the declining powers that failed to retrench recovered their relative position

### AT-Diversionary Conflict

Diversionary wars stay limited.

Bennett and Nordstrom. Professors of PoliSci @ Penn State, 2000

Scott and Timothy, “Foreign Policy Substitutability and Internal Economic Problems in Enduring Rivalries,” Journal of Conflict Resolution, Feb

When engaging in diversionary actions in response to economic problems, leaders will be most interested in a cheap, quick victory that gives them the beneﬁt of a rally effect without suffering the long-term costs (in both economic and popularity terms) of an extended confrontation or war. This makes weak states particularly inviting targets for diversion- ary action since they may be less likely to respond than strong states and because any response they make will be less costly to the initiator.

Diversionary studies are bogus—it’s only true in very limited circumstances.

Arena, University @ Buffalo, SUNY, 2010

Phillip, Why Not Guns and Butter: Responses to Economic Turmoil, Foreign Policy Analysis, 4.6

If we are to understand the relationship between economic conditions and the use of force, we need to better identify the degree to which the probability of retaining office depends upon economic conditions absent a dispute, after foreign policy success, and after foreign policy failure. If readily observable factors can help to separately determine the relative importance of economic conditions in each of these cases, scholars can better isolate empirically those cases where diversionary relationships are most likely to obtain compared to those where they are not. Many empirical studies of diversion focus exclusively on the United States, which is far more powerful than most any potential diversionary state. If the distribution of material capabilities influences the probability of prevailing in an international conflict, as is typically assumed, then the relationship between economic conditions and the use of force that typically obtains in dyads involving the United States may systematically differ from the relationship between economic conditions and the use of force in other dyads. Unfortunately, it is not clear which direction the relationship between economic conditions and the use of force is being pushed by the advantageous distribution of capabilities enjoyed by the United States. If we believe that the impact of economic conditions on the probability of retaining office is sufficiently low following disputes that end favorably relative to the impact of economic conditions following disputes that end unfavorably, then a greater probability of prevailing in an international dispute makes diversionary relationships more likely. However, there have been few, if any, studies of the degree to which economic voting becomes more or less important following an international dispute conditional upon the outcome of that dispute. It is therefore difficult to know whether the impressive material capabilities of the United States make diversionary arguments more likely to obtain for the United States. All we can say with any confidence is that the difference in material capabilities between the United States and most other advanced democracies makes it unlikely that the relationship between economic conditions and the use of force is the same for the United States as it is for other democracies. Another factor that may explain the differences commonly found between studies focusing on the United States versus those with a cross-national sample, such as Leeds and Davis (1997), could be differences in electoral systems. I have only considered two strategies available to governments. As others have observed (Smith 2004; Kayser 2005), governments might also respond to economic conditions by calling early elections. Introducing an option to call early elections into the model might prove fruitful. So too might other extensions of the model. Introducing uncertainty over the Leader’s willingness to initiate a dispute would allow for the possibility that a government’s macroeconomic policies can reveal valuable information about their intentions in the international arena. Scholars who examine the link between economic conditions and international conflict might therefore benefit from not only considering the objective state of the economy, but also whether the government attempts to manipulate the economy. One might also consider the impact of uncertainty over the impact of economic reforms, or the relative sensitivity of the Leader’s probability of remaining in office to the state of the economy. As I hope to have demonstrated, arguments relating the state of the economy to the use of force depend critically upon the assumptions we make not only about the availability of economic policies, but also the impact of such policies. The relationship between the state of the economy and the use of force also depends upon the assumptions we make about how sensitive a leader’s hold on power is to the state of the economy, and whether and how much this sensitivity changes if the leader enters into an international dispute. Current empirical studies of diversion largely fail to provide any reason to believe their implicit assumptions in this regard.

### AT-World War II

World war 2 doesn’t disprove our theories – it was during an upswing and resulted from awkward resolution of WWI

Goldstein 88 - Joshua S. Goldstein, Professor of International Relations, American University, 1988, Long Cycles, pp. 242-243.

World War II is anomalous, coming at the beginning rather than the end of a long wave upswing.16 World War I marks the end of one upswing, and World War II the beginning of the next, with a downswing of economic stagnation and reduced war in between. The timing of World War II at the start of an upswing might be explained in part by the unusual irresolution that resulted from World War I. The costs of that war were far above any previous experience, constituting a severe shock to the world economic and political system.17 World War I ended in mutual exhaustion without resolving the issue of hegemony (particularly since the rising powers, Russia and America, withdrew into revolution and isolationism after that war). Only at the outset of the next long wave upswing (production having turned upward sometime around 1933), could hegemonic war resume. The upswing thus began at a high level of war severity instead of war building up to a peak late in the upswing as in previous long waves. But once World War II occurred, how could the world economy sustain a continued upswing phase instead of being driven into a long downswing as in previous war peaks? Here the answer may be the expansion of the core of the world economy. By the time of World War II, the United States had become the world’s largest industrial power; Soviet industrialization had proceeded at a rapid pace, and Japan had also industrialized rapidly and benefited from sitting out World War I. This expanded core could support another hegemonic war before Europe alone could have. The increased severity of World War I, coupled with the extension of the European system to a global one (Barraclough 1964:268), thus created the conditions for World War II to occur early rather than late in the upswing phase.18 The rest of the 1940-80 upswing phase saw continuing war, but not directly between great powers. Three “Pacific” wars—World War II, Korea, and Vietnam—go together on this upswing (see chapter 14). The upswing ended with an unusually small war, Vietnam (although it did take its toll on the world economy), as it had begun with an unusually large one.

### Decline Won’t Cause War-Retrenchment

Economic decline does not cause war---retrenchment solves.

MacDonald and Parent 12 (Paul K.\*, Paul K. MacDonald is Assistant Professor of Political Science at Wellesley College., Joseph M.\*\*, Joseph M. Parent is Assistant Professor of Political Science at the University of Miami., “Decline and Retrenchment—Peril or Promise?”, International Security, Volume 36, Number 4, Spring 2012, MUSE)

Haynes offers insightful criticism of the spare neorealist framework we used to predict the timing and form of retrenchment. First, he contends that policymakers may not be as responsive to external events as we suggest. Although neorealist theory suggests that states should possess a strong incentive to anticipate decline and retrench before their power has ebbed, policymakers often dither in the face of power shifts and act only in response to "exogenous shocks." In this way, retrenchment is more often a "delayed reaction to the gradual and protracted decline that preceded" an ordinal transition than to the transition itself. Our differences with Haynes on this matter are more apparent than real. We agree that great powers can adopt a policy of retrenchment when they are not in the midst of an ordinal transition, and that states can reduce their defense spending and overseas commitments for multifarious reasons (p. 27). That states view retrenchment as a useful policy even when they are not being surpassed by potential rivals provides further support for our claim that its risks have been overstated. Moreover, we agree that astute leaders anticipate fluctuations in relative power and retrench preventively whereas obtuse leaders grope for solutions only after their fortunes have foundered. Neorealism has never claimed that leaders are hyperopic rationalists, invariably navigating power shifts with Bismarckian dexterity (pp. 20-21). Indeed, Haynes's contention that policymakers tend to react to crises is perfectly consistent with neorealism's emphasis on negative feedback and adaptation to external constraints. It is also consistent with our emphasis on moments of ordinal transition, when the incentives for states to change course should be greatest. Yet, where Haynes separates exogenous shocks from power trends, we contend that such shocks are endogenous and correlate with relative decline. It is precisely when a great power's economic base is eroding relative to those of rivals that it is more likely to experience "economic crises, unexpected foreign policy setbacks, or newly emerging security threats." We use economic data to identify periods of acute relative decline not because we believe that policymakers are primarily driven by economic stimuli, but because these moments should correspond to events that prompt retrenchment (p. 24). In normal times, great powers can dismiss external shocks as isolated accidents or irrelevant aberrations. Moments of acute relative decline are special, however, because they increase the frequency and magnitude of policy failures. It is no coincidence that Russia [End Page 198] suffered a series of shocking losses following its fall in the great power rankings around 1903, and it is no coincidence that those shocks continued until Russia retrenched. Second, Haynes questions the conceptual and operational distinctions we draw between internal and external retrenchment. Here he claims that a "narrower focus on 'external' retrenchment would provide greater conceptual clarity." We acknowledge that we could have developed this distinction in greater detail. Nevertheless, from a theoretical standpoint, internal balancing is a critical component of neorealism, one that derives logically from self-help incentives in an anarchic international system. It makes sense that great powers seeking to moderate their foreign policy ambitions would confront similar pressures to do so in a way that minimizes their reliance on others whenever possible. If we were to ignore internal retrenchment, therefore, we would be overlooking the chief policy tool that great powers should use to ease their foreign policy burdens. A focus on external retrenchment also would obscure the painful dilemmas that great powers encounter when deciding how to integrate retrenchment strategies. In theory, there are three possible ways a great power can combine internal and external types of retrenchment. It can embrace both internal and external mechanisms, decreasing the extent of its overseas commitments and the size of its military. We find these paradigmatic cases among our "large decliners," such as the United Kingdom in 1946 and the Soviet Union in 1987. Yet, at the same time, states often mix and match internal and external forms of retrenchment in interesting and inventive ways. Some states abandon overseas commitments to concentrate resources for a military buildup at home. The United Kingdom in 1908 and 1935 pursued versions of this policy. Other states seek to maintain their foreign policy commitments, but court slightly more risk by using fewer resources. France in 1873 and the United Kingdom in 1872 adopted this strategy.2 Haynes's recommendation to focus on external retrenchment alone would conflate the first and second kinds of retrenchment while ignoring the third altogether. Thus, we see no need to make our model more parsimonious. Haynes is right to point out the coding difficulties when indicators for internal and external retrenchment point in opposite directions. For this reason, we made our accounting as clear as possible and provided a range of coding choices for controversial cases. Even so, Haynes's concern should be kept in perspective; the equivocal cases he refers to are rare. Of our eighteen cases of acute relative decline, only four great powers—the United Kingdom in 1908 and 1935, Germany in 1931, and Russia in 1903—had an annual average increase in military personnel in the five years following their ordinal transition that was higher than the baseline for other great powers. With or without these exceptions, our findings still hold. Whereas Haynes mainly engaged our theoretical assumptions, Thompson focuses on our data. First, he questions the reliability of our measure of acute relative decline, in particular, our use of gross domestic product (GDP) to identify moments of ordinal [End Page 199] transition. Thompson correctly states that GDP measures "the size of an economy but not its quality" and that "systemic leadership is not predicated on the sheer size of the economy." We concur and go even further by detailing other limits to GDP as a proxy measure for relative power (pp. 22-24). At the same time, we do not see how these points undercut our claim that acute relative economic decline induces great powers to reevaluate their foreign policy. Great powers undoubtedly consider a whole host of economic factors when assessing their relative power, including the quality of their economy, their technology base, and their capacity for innovation. Yet most of these factors are strongly correlated with GDP. In unusual cases, great powers with extremely developed economies or uniquely advanced technological bases may be able to cushion the impact of a sharp decline in GDP, but they are unlikely to be able to do so for long. Nor is it clear that alternative measures, such as GDP per capita, offer a more attractive proxy for relative power.3 To be sure, great powers with high GDP per capita may be able to extract more surplus wealth to invest in geopolitical competition, but as far as we know, this has yet to be established. The reverse may also be true; states with a high GDP per capita may be more burdened by domestic obligations to their prosperous (and demanding) citizens. Furthermore, an assessment of relative power based on ordinal shifts in GDP per capita would suffer from a number of limitations. It would miss the eclipse of the United Kingdom by Imperial Germany prior to World War I.4 It would also fail to capture the burgeoning might of the Soviet Union early in the Cold War, as well as the Soviets' rapid and sustained collapse toward the end of it.5 Similar problems bedevil qualitative assessments of "systemic leadership." We have no doubt that a great power would be under extreme pressure to adjust its grand strategy if its systemic leadership were under fire. But how do we define and operationalize leadership? By our measure, the United States surpassed the United Kingdom in 1872 to become the world's most dominant economy. It is plausible to argue that the United States, despite having the world's largest economy, was not yet the "systemic leader." But when did it become so—1898, 1918, 1945, 1989? The cost of using our strict definition of acute relative decline is that some marginal but well-known cases are omitted—Italy and Austria-Hungary, for example, fail to break our threshold of a 10 percent share of total great power GDP. The timings we derive for specific transitions may also diverge from the conventional wisdom—Britain feared Germany's geopolitical rise well before the German economy overtook it in 1908. Nonetheless, our approach has the benefit of generating an intuitively plausible set of cases through a standard metric that is theory driven and verifiable across more than a century. Second, Thompson takes issue with our grouping all eighteen cases of acute relative [End Page 200] decline together in the same analysis. The "ultimate problem," he asserts, "is that great power relative decline leads to transitions of different kinds." Transitions can vary depending on states' economic systems, the historical period, and the involvement of a hegemon. No one disputes that these factors affect a great power's reaction to acute relative decline, but theory building is about causal priority. Neorealist theory and the data do not support the assertion that any of these factors is nearly as important as relative power, and any theory that assumed otherwise would explain less with more factors. Consider the three categories of power transitions that Thompson describes in his letter. Of our eighteen cases of acute relative decline, eight are type I transitions involving a trading state and a land power; one is a type II transition involving two maritime powers; and nine are type III transitions involving two land powers. According to our more conservative coding of retrenchment, six of the eight type I transitions and seven of the nine type III transitions feature a strategy of retrenchment by the declining power. The only example of a type II transition among our cases, the United Kingdom in 1872, is coded as low to no retrenchment.6 As a whole, retrenchment does not appear to be any more or less common in one category of dyad than another. Nor do certain types of dyad appear more conflict prone. Two of the eight great powers involved in type I transitions, and two of the nine great powers involved in type III transitions, became embroiled in interstate wars. The United Kingdom in 1935, an example of a type I transition, was the only great power in our sample that fought its ordinal challenger. Thompson's hypothesis that type III transitions between rival land powers are especially conflict prone may be correct, yet we do not observe an example of this in our eighteen cases. Surely there are many examples of rival land powers coming to blows, but the data suggest that such wars are not strongly associated with periods of acute relative decline or a policy of retrenchment. Thompson likewise advances the reasonable hypothesis that new historical developments, such as the advent of nuclear weapons or European integration, may change the context in which great powers adjust their grand strategies. But then Thompson is putting a sharper point on our argument than we do. If nuclear weapons bestow a defensive advantage and Europe is pacified, then great powers would be in a safer position to retrench. Finally, where Thompson believes that hegemonic transitions are different in kind from other transitions, we believe the difference is in degree. As we note in our article, there are sound reasons to assume that hegemonic powers should manage acute relative decline much like—if not better than—their less powerful counterparts (pp. 41-42). Great powers that fall in the ranks from number one to number two will continue to possess sizable bases of military and economic capabilities that afford them considerable security from external threats. Moreover, their relative power should provide them opportunities to attract new allies and deter ambitious enemies, all while shedding inessential external commitments. In contrast, a great power that falls in the ranks from number three to number four is more likely to lack capabilities, be closer to bankruptcy, [End Page 201] have run out of options, and be in danger of decisive defeat. The data, admittedly exiguous but the best available, bear this supposition out. The only hegemonic transition since 1870, the United States passing the United Kingdom in 1872, was not calamitous or dissimilar to other great powers facing declines of similar depth. The most war-prone ordinal transition among our cases, Germany overtaking the United Kingdom in 1935, consisted of two great powers competing for third place. The obvious impetus for examining decline and retrenchment is to offer provisional guidance for contemporary policymakers. Both Haynes and Thompson, though, are skeptical of our findings' relevance for current events. Haynes worries that in our effort to discredit retrenchment pessimists, we "understate the potential costs of such a strategy." Even if retrenchment does not court geopolitical catastrophe, Haynes warns that retrenching great powers may still be forced to concede on vital issues and run considerable risks. Let us be absolutely clear: retrenchment is risky, but not retrenching is riskier. Living beyond one's means is possible temporarily, but prolonged insolvency invites a terrible reckoning. Grasping great powers present a brittle, overextended defensive perimeter with strategic inflexibility and shallow reserves—a blatantly ripe target for opportunistic states. This is likely why so few declining states in our study chose not to retrench, and those that failed to fared poorly. It is understandable that declining powers retrench reluctantly; it is all the more telling that they tend to do so quickly. Pushed a bit further, though, Haynes's critique opens promising avenues of inquiry on the risks of retrenchment. By confining our analysis to the potential dangers a great power might face to its own security, we neglect how retrenchment might endanger regional partners or newfound allies, which now confront increased self-help incentives. Retrenchment may not be devastating to declining great powers, but it could have pernicious knock-on effects for regional stability or global trade.7 Our work did not illuminate this issue well, and the matter merits greater attention. Thompson, for his part, objects that the impending U.S.-China transition will not necessarily conform to the patterns of the past, that to derive lessons from a sample of all great powers is to suffer from an "ecological fallacy," and that "[w]e are simply in no theoretical or empirical position to make" definitive predictions, "but we can say that U.S. success in future world politics will require more than tactical retrenchment." We agree—with some caveats. By no means did we intend for our conclusions to be taken as definitive, and the future does not always resemble the past. Yet Thompson's modesty goes too far. History and the tools of social science are not irrelevant to political prediction—they are the best available guides for policymakers to prepare for the future. Our critics propose a number of refinements to our model, but they do not replace it or impair our methods and evidence. As decisionmakers revamp the U.S. force posture, propose personnel cuts, and draw down foreign entanglements, they need to know which causal factors are primary and which are secondary to predict the likely effects of potential actions. Our arguments [End Page 202] and data have laid a foundation to do this, and we welcome subsequent improvements. Regardless, we agree with Thompson that Chinese dominance is not foreordained; retrenchment alone is no panacea; and domestic reforms are an indispensable part of great power recovery. These points are so consequential that we discuss them at length elsewhere.8 In sum, Haynes and Thompson have constructive concerns about our work on retrenchment, but there appears to be a striking amount of consensus. Retrenchment is typical and sensible in response to acute relative decline, and relative power plays a primary role in how states respond to it. Nevertheless, our contribution is merely a first cut, and there remains much work to be done. The world would be a safer place if we knew much more about retrenchment, but it will take many more than the authors in this exchange to complete the task.

### Decline Won’t Cause War-Diversification

Economic decline does not cause war---diversification and resiliency check.

Aiginger 09 (Karl, ÖSTERREICHISCHES INSTITUTE FÜR WIRTSCHAFTSFORSCHUNG, “Strengthening the Resilience of an Economy Strategies to Prevent another Crisis”, WIFO Working Papers, No. 338 June 2009, http://www.wifo.ac.at/wwa/downloadController/displayDbDoc.htm?item=WP\_2009\_338$.PDF)

Sectors with reduced exposure to price and business cycle volatility, e.g. highly processed products as opposed to raw materials and intermediate products, are less influenced by economic cycles even in the current crisis. However, this time the fluctuations in the machinery and construction sectors have been particularly high. The car sector was always strongly cyclical, this time even more so due to flawed model policies (failing to adapt to increasing fuel costs or to look for alternative drive systems). Non-durable consumer goods are less cyclical compared to durable consumer goods. A larger proportion of non durable consumer goods would reduce cyclical fluctuations but could be at the expense of growth since demand e.g. for food and clothes grows more slowly than for other products and Austria is at a competitive disadvantage in this sector. What does make an economy more resilient to a crisis is a larger service sector, although it must be said that fast growing business services are more prone to stronger fluctuations (as compared to personal and public services). High value industrial products with a fast growth rate but also with a service component or product differentiation by quality definitely go some way to insuring against large fluctuations. This is also true of an industry structure which continually and prospectively incorporates the European Energy and Climate packages into any investment plans. This would also reduce fluctuations which occur as a result of the increasing priority of environmental goals. It is however counterproductive to reduce the share of industry in output as it is the basis of many business-related services. There is also a lack of arguments which would justify the government intervening in a market economy in this way. Furthermore Austrian industry is a model for success on both a national and international level (Aiginger − Sieber, 2009). A broad spread of exports across all regions is usually an effective insurance against a crisis. The simultaneity of the economic downturn in the current crisis surprised everyone but even now there markets which are still growing faster than the average or which are already growing fast again after the immediate impact from the crisis. Since one can assume that the next crisis will not be as synchronised it is advantageous to diversify exports across all regions whilst paying special attention to growth markets such as the Middle East, China, the emerging EU countries and neighbouring markets (Turkey, Ukraine and Russia; Wolfmayr, 2009). Building up inventories instead of just-in-time delivery could be increase resilience. However, larger stocks may have the effect of reducing efficiency and increasing costs. Diversifying suppliers (having more than one), a broader range of potential buyers (more than one dominant buyer) and diversifying the application range of products (chip production for cars, mobile telephones and conveying machinery) can have a stabilising effect. Diversification may also reduce the amount of research provided by a supplier for a fixed buyer. Technical knowhow in the supply industry, which is valuable to multiple purchasers and for diverse purposes, generally increases flexibility in a crisis. Public or private storage of goods which tend to be cyclical and whose supply is relatively fixed in the short term (difficult to expand) could be considered, e.g. food and energy. This would curb extreme fluctuations in price and lucrative speculation. Buffer stocks should ideally be on a supra-regional (e.g. European) level. High marginal taxation and high replacement ratios (e.g. for unemployment benefits) can slow down an economic boom or quickly smoothen a recession (without any additional discretionary economic policy intervention). However both instruments have a downside with regards to efficiency (they may reduce workplace motivation and efforts by the unemployed to find a job). We should think about financing social security to a higher degree from tax revenues. The new budgetary framework (“Haushaltsgesetz”) sets spending limits, which, strictly applied, provide a buffer against the state spending too much money during a boom through expenditure ceilings. This prevents the dramatically increasing tax revenues, as seen in 2008, immediately being spent on additional spending programmes which were set up on short notice. Additional mechanisms would be desirable in regional administrative bodies and for the special financing (funds). Also in these institutions any excess funds will immediately be spent in boom time and if there is a deficit an additional grant will be demanded from the “higher” level.

### Decline Won’t Cause War-DeDev Solves

Economic decline does not cause war---shift to localized economies solves.

CLES 10 (The Centre for Local Economic Strategies (CLES) has been working over the past two years on the development of a place resilience framework. CLES has defined place resilience as ‘the capacity of a place to be ready to deal with change and opportunity.’ This will require adaptability so a place can respond, take advantage and learn, so that the place and its citizens are better equipped to deal with opportunities and negative change in the future., “Productive Local Economies: Creating Resilient Places”, http://t3sc.org/documents/Boing!Briefing.pdf)

Our villages, towns, cities and counties are entering a new era, not only because of cuts to public sector funds but also in terms of wider economic turbulence. We are likely to see more places failing to deal with change. Opportunities will continue to be lost and communities will suffer. Recent economic events have highlighted how dependent some places are upon a single economic activity. Environmental change- there is a need for places to adapt, so they can mitigate the effects of environmental change and create new ways of sustainable living; Demographic shifts, in particular ageing, have and will create new pressures on public resources and the nature of how we live; A range of political and cultural forces, including lack of trust in politicians are resulting in an increasing demand for people and civil society to do more in shaping and making place. CLES argue that economic development cannot be achieved on a narrow understanding of ‘economy’. Their research shows that there tends to be a fairly narrow definition of what is meant by ‘economy’ which is constrained to a discussion around jobs, levels of gross value added (GVA), skills and productivity. The recent recession has uncovered a number of areas where solid levels of economic growth achieved through the boom years have not been sustained as investment and jobs have drained away at the first sign of trouble. CLES suggests that local economic policy needs to absorb and be reflected in the broader, more qualitative aspects of place development, accommodating the breadth of social, cultural, economic and environmental facets that are part of a whole networked system within a locality. For them, it must not simply be fixated on economic performance. Many of the strategies CLES examined focused on ‘hard’ economics – small business start-ups, inward investment, availability of land and premises for business – rather than ‘softer’ aspects of place, such as neighbourhood renewal, environmental sustainability, and levels of community empowerment and participation. Local economies aren’t simply an isolated silo of private sector activity that can be encouraged and shaped. They are made up of a network of social, public and commercial economic activity and if these are too opaque, too unknown, or too dependent on long and complex connections, are very vulnerable to small disturbances. Although CLES’ research is still active with a number of pilot research projects still in progress, it is possible to draw a number of early conclusions about the nature of place resilience in the areas they are working: The public sector needs to be able to work with the private and social sector to manage and mitigate the impacts of public sector cuts to communities and the economy. In all seven pilots, the CLES research has demonstrated the interconnectivity of the public sector with the social and commercial economies. Public sector cuts of between 25% and 40% will impact on the social and commercial economies. This means that strong relationships between the public, commercial and social sector are vital in order to ensure each locality is ready and prepared for cuts. Resilient places don’t necessarily have to be predicated on economic success. They could be places where success is about effective and high quality services such as schools and hospitals, or places where people feel part of a strong and involved community, or where there is a high quality natural environment. Furthermore, CLES found very poor connections between the commercial and the social economy. It would appear that beyond corporate social responsibility, there is not a local culture of philanthrocapitalism, including giving, within commercial interests in the UK. The research has shown that resilient economies can be stimulated through projects that wouldn’t normally be in an Economic Development Strategy. These are important at helping to develop the capacity, the networks and the relationships that exist within a place, providing the foundations for greater resilience, including: a thriving VCF sector – which is able to respond to challenges in order tosupport vulnerable communities; strong public sector – a public sector which understands its economic footprint and uses this impact effectively to support local economies, employment and as a landowner; a diverse finance sector – encouraging local circulation of money (e.g. credit unions); effective public services – including transport, education, housing and adult social care, which ensure that the most vulnerable in society are cared for and addresses income inequality; closer integration of land use planning with economic development- a high quality environment which attracts people to the area either to work or live, including public green space; strong provision for young people – to encourage the development of a future labour force that can take advantage of the best opportunities for the local economy. CLES will be completing the research in each of the pilot areas over the next few months and publishing a summary of the key findings from the pilot areas. They have established a professional network which meets regularly and provides an opportunity to take the discussion on resilience and economic development forward. They would be interested in getting your thoughts on the resilience work, and how it may help you to think about rebalancing your local economy.

### Decline Won’t Cause War

Economic decline doesn’t cause war

Deudney 91 – Hewlett Fellow in Science, Technology, and Society at the Center for Energy and

Environmental Studies, Princeton (Daniel, Bulletin of the Atomic Scientists, Ebsco)

Poverty Wars. In a second scenario, declining living standards first cause internal turmoil. then war. If groups at all levels of affluence protect their standard of living by pushing deprivation on other groups class war and revolutionary upheavals could result. Faced with these pressures, liberal democracy and free market systems could increasingly be replaced by authoritarian systems capable of maintaining minimum order.9 If authoritarian regimes are more war-prone because they lack democratic control, and if revolutionary regimes are warprone because of their ideological fervor and isolation, then the world is likely to become more violent. The record of previous depressions supports the proposition that widespread economic stagnation and unmet economic expectations contribute to international conflict. Although initially compelling, this scenario has major flaws. One is that it is arguably based on unsound economic theory. Wealth is formed not so much by the availability of cheap natural resources as by capital formation through savings and more efficient production. Many resource-poor countries, like Japan, are very wealthy, while many countries with more extensive resources are poor. Environmental constraints require an end to economic growth based on growing use of raw materials, but not necessarily an end to growth in the production of goods and services. In addition, economic decline does not necessarily produce conflict.How societies respond to economic decline may largely depend upon the rate at which such declines occur. And as people get poorer, they may become less willing to spend scarce resources for military forces. As Bernard Brodie observed about the modein era, “The predisposing factors to military aggression are full bellies, not empty ones.”’” The experience of economic depressions over the last two centuries may be irrelevant, because such depressions were characterized by under-utilized production capacity and falling resource prices. In the 1930 increased military spending stimulated economies, but if economic growth is retarded by environmental constraints, military spending will exacerbate the problem. Power Wars. A third scenario is that environmental degradation might cause war by altering the relative power of states; that is, newly stronger states may be tempted to prey upon the newly weaker ones, or weakened states may attack and lock in their positions before their power ebbs firther. But such alterations might not lead to war as readily as the lessons of history suggest, because economic power and military power are not as tightly coupled as in the past. The economic power positions of Germany and Japan have changed greatly since World War 11, but these changes have not been accompanied by war or threat of war. In the contemporary world, whole industries rise, fall, and relocate, causing substantialfluctuations in the economic well-being of regions and peoples without producing wars.There is no reason to believe that changes in relative wealth and power caused by the uneven impact of environmental degradation would inevitably lead to war. Even if environmental degradation were to destroy the basic social and economic fabric of a country or region, the impact on international order may not be very great. Among the first casualties in such country would be the capacity to wage war.The poor and wretched of the earth may be able to deny an outside aggressor an easy conquest, but they are themselves a minimal threat to other states.Contemporary offensive military operations require complex organizational skills, specialized industrial products and surplus wealth.

### Decline Won’t Cause Extinction

Economic decline doesn’t cause extinction

Heinberg 4 – 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 (Richard, “Power Down”, Published by New Society Publishers, pg. 149-150)

These are the lessons of the past. However, we should also keep in mind the ways in which present circumstances differ from previous ones. Today’s industrial society is the first global civilization in history. It is characterized by interlocking systems of trade such that hardly a single country today is entirely self-sufficient in food, energy, or other basic necessities. Its environmental impacts are global in extent, so that the survivors will not be able simply to move elsewhere in order to escape. Moreover, today’s industrial civilization has developed weapons capable of extinguishing all higher life on the planet.  In the worst imaginable case, the collapse of our current civilization will be absolute and permanent: no one will survive. However, it is more likely that collapse will be survivable, at least for some. More significantly, because industrial civilization is drawing down important resources far more quickly than they can be replenished, its fall will almost certainly have the characteristics of a depletion-led collapse. According to Greer, if depletion is limited by decreased drawdown of resources as a consequence of diminished production, the crisis may play out much like a maintenance crisis. However, “a society in which depletion is advanced…may not be able to escape catabolic collapse even if such steps are taken. Cultural and political factors may also make efforts to avoid catabolic collapse difficult to accomplish, or indeed to contemplate. A possible scenario for the collapse of our own civilization might go something like this: Energy shortages commence in the second decade of the century, leading to economic turmoil, frequent and lengthening power blackouts, and general chaos. Over the course of several years, food production plummets, resulting in widespread famine, even if formerly wealthy countries. Wars – including civil wars – rage intermittently. Meanwhile ecological crisis also tears at the social fabric, with water shortages, rising sea levels, and severe storms wreaking further havoc. While previous episodic disasters could have been dealt with by disaster management and rescue efforts, by now societies are too disorganized to mount such efforts. One after another, central governments collapse. Societies attempt to shed complexity in stages, thus buying time. Empires devolve into nations; nations into smaller regional or tribal states. But each lower stage – while initially appearing to offer a new beginning and a platform of stability – reaches its own moment of unsustainability and further collapse ensues. Between 2020 and 2100, the global population declines steeply, perhaps to fewer than one billion. By the start of the next century, the survivors’ grandchildren are entertained by stories of a great civilization of the recent past in which people flew in metal birds and got everything they wanted by pressing buttons.

### DeDev Turns Case-Automobilities

De-growth solves the internal link to your automobilities bad arguments better and allows for more sustainable forms of transport to emerge.

Alexander 12 (Dr. Samuel Alexander is Co-­‐Director of the Simplicity Institute and a lecturer at the Office for Environmental Programs, Ground Floor, Walter Boas Building (163), University of Melbourne, Victoria, 3010, Australia., “Degrowth implies Voluntary Simplicity: Overcoming Barriers to Sustainable Consumption”, Simplicity Institute Report 12b, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/OvercomingBarrierstoSustainableConsumptionReport-12b.pdf)

The question of transport provides one of the clearest examples of how structure can ‘lock’ people into high impact, energy-­‐intensive consumption. Riding bicycles and taking public transport [is] widely regarded as important characteristics of more sustainable consumption in transport. It is probable that simply reducing the distances and regularity of travel will also be a requirement (Moriarty and Honnery, 2008). This is primarily because driving and flying are extremely carbon-­‐intensive modes of transportation, and climate change and peak oil both indicate that transport practices dominated by driving and flying are unsustainable in anything like their current forms. It is very likely, of course, that there will always be cars on the roads and planes in the air, but these forms of transport are likely to get much less common, and much more expensive, if the world transitions to a post-­‐carbon future over coming decades. In short, lifestyles of sustainable consumption require people to make different decisions when ‘consuming’ transport, especially with respect to driving cars. The fact is, however, escaping car culture is very difficult or impossible for many people in consumer societies today, as the survey results imply. There are undoubtedly cases where people have the option to ride their bikes to work or to take public transport, but for one reason or another choose to drive. However, there are also people who would like to cycle to work or take public transport, but for structural reasons beyond their immediate control they are unable to do so. For example, someone may be convinced of the ecological problems caused by petroleum-­‐based driving, but in the absence of safe bike lanes or accessible public transport, this person may find themselves driving to work for lack of any other option. This exemplifies perfectly the background thesis being explored in this paper, for it shows how ‘structure’ influences consumption behaviour by making some transport choices easy or necessary and other options difficult or impossible. If those structures were different, however – say, if governments decided to invest heavily in bike lanes and public transport – this would ‘unlock’ many people from their dependence on driving and allow them to engage in more sustainable modes of transport. Driving, therefore, is not just a matter of ‘private preference.’ By not investing sufficiently in sustainable transport infrastructure, governments are implicated in the structures that promote unsustainable consumption of transport. Note how this analysis exposes how differently the issue of sustainable transport looks when viewed from the ‘production angle’ compared to when it is viewed from the ‘consumption angle.’ From the production angle, if the overconsumption of petroleum (e.g. from driving too much) is causing negative externalities (e.g. climate change, pollution, etc.), then to maximise social utility governments should attempt to internalise the costs of those externalities. This would make the production of petrol more expensive and those increased costs would be passed onto consumers. Through market forces that price increase would presumably lead to reductions in driving, until an ‘optimal’ amount of driving is achieved. From the consumption angle, however, the aim is not simply to internalise externalities (although that may be part of the solution). Rather, the consumption angle shows that the way people consume transport is partly a function of the structures within which their consumption decisions are made, so by changing those structures, different consumption patterns would or could emerge. Instead of merely aiming to price petrol correctly, therefore, the consumption angle suggests that governments should also try to promote alternatives to damaging consumption, such as investing heavily in sustainable infrastructure in order to dismantle existing barriers to sustainable transport consumption. Of course, even if there were safe bike lanes and accessible public transport, some people would still choose to drive. But that is a different ‘value-­‐focused’ or behavioural issue which cannot be addressed here. There is also the unexplored question of broader structural issues beyond those considered above which may also affect consumption of transport. For example, sprawling urban landscapes as well as globalised trade encourage more travel rather than less, so another way governments can promote structures of sustainable transport is to promote higher density living and more localised economies. But for present purposes the point has been made sufficiently that external ‘structures’ affect consumption patterns in transport. If people are expected to consume transport sustainably, therefore, governments must help create social and economic infrastructures that unchain people from carbon-­‐intensive travel. It is not clear, however, that many governments have made this commitment in any serious way; nor is it clear that governments are receiving much pressure to do so from the cultural mainstream.

### DeDev Turns Case-Car Culture

And allowing industrial society to collapse shifts us away from car culture and solves all their offense on why automobilities are bad.

Alexander 11 (Dr. Samuel Alexander is a lecturer in ‘Consumerism and Sustainability’ at the Office for Environmental Programs, University of Melbourne. He is also Co-­‐Director of the Simplicity Institute (www.simplicityinstitute.org), a research institute that addresses issues related to sustainable consumption, “Peak Oil, Energy Descent, and the Fate of Consumerism”, Simplicity Institute Report 11b, 2011, http://simplicityinstitute.org/wp-content/uploads/2011/04/Peak-Oil-Energy-Descent-and-the-Fate-of-Consumerism-Report-11b.pdf)

A second way high oil prices are likely to impact on consumer lifestyles is on car culture. Currently oil prices make it economically feasible for many individuals to drive long distances to work (usually with only one person in the car) or to take many short trips around one’s locality for shopping or other errands. As oil prices increase, these practices are likely to disappear or be greatly reduced. Public transport, so far it is available, will become much more widely used, and there will be huge upsurge in people walking and cycling places, primarily for economic reasons. The environmental and health benefits of walking and cycling will be a welcome and much--‐needed bonus. People will also travel much less – locally, nationally, and internationally.66

### DeDev Turns Case-Oil Shocks

Increased growth increases oil prices which causes cycles of economic decline.

Alexander 11 (Dr. Samuel Alexander is a lecturer in ‘Consumerism and Sustainability’ at the Office for Environmental Programs, University of Melbourne. He is also Co-­‐Director of the Simplicity Institute (www.simplicityinstitute.org), a research institute that addresses issues related to sustainable consumption, “Peak Oil, Energy Descent, and the Fate of Consumerism”, Simplicity Institute Report 11b, 2011, http://simplicityinstitute.org/wp-content/uploads/2011/04/Peak-Oil-Energy-Descent-and-the-Fate-of-Consumerism-Report-11b.pdf)

Over the last few years we have seen how fragile and delicate the global economic system is – owing in a large part to its oil dependency. More specifically, we saw the price of oil increase steadily as the peak of conventional oil was approached, and as the supply of conventional oil stagnated while demand continued to increase, we saw the price of oil spike at $147 in July 2008. Although mainstream media attributed the global economic crash in 2008 to the sub-­‐prime fiasco that originated on Wall Street and materialised in Cleveland – and while there is at least some truth to that account – the untold story is the role that oil prices played, and continues to play, in the global financial crisis. Economist, James Hamilton, has shown in a recent paper that 10 out of the 11 economic recessions experienced by the US post-­‐WII were preceded by high oil prices,52 and many others have drawn the connection between economic growth and energy supply.53 Given how dependent the global economy is on cheap oil, it is rather surprising that so few people have made the link between the economic crash and the spike in oil prices. Unfortunately however, this is probably a lesson that is going to be taught and retaught in coming years and decades.54 The global economy simply cannot withstand the economic impacts of high oil prices – primarily because so much trade is now international and therefore dependent on oil for the transportation of goods. But when oil prices get so high that the economy cannot function – which is what happened in 2008 – the economy struggles to grow, and this reduction in economic activity means a reduction in oil demand, and this reduced demand makes the price of oil crash also. This is what happened after the crash in 2008, and it is what happens whenever the demand for oil is reduced because of economic recession. Low oil prices, however, then aid economic recovery, but as economies recover from recession and begin to grow again, this puts more demand pressure on stagnating oil supplies, and the cycle repeats itself. In short, oil prices increase till economic breaking point, economies crash, which leads to a crash in oil prices; the low oil prices then facilitate economic recovery, which puts more demand pressure on oil, leading prices to rise till economic breaking point, and so and so forth. This increasingly severe cycle of bust-­‐recovery-­‐bust is what we should expect in coming years and decades, and as oil supplies decline, economic contraction is what we should expect and prepare for. The world is unlikely to escape this unhappy cycle until it transitions beyond a growth-­‐based economy and breaks its addiction to oil. This final point about breaking our addiction to oil deserves some brief elaboration, because it raises the spectre of what Tom Murphy has called the ‘energy trap.’55 In order to break the addiction to oil, economies dependent on oil will need to invest huge amounts of money and energy in building new social and economic infrastructures that are not so heavily dependent on oil (e.g. efficient public transport systems to incentivise people to drive less).

### DeDev Turns Case-Peak Oil

We should let peak oil happen---it will catalyze the action necessary to shift away from an overstretched consumer society.

Alexander and Ussher 12 (\* Dr. Samuel Alexander (primary and corresponding author), Co-­‐Director of the Simplicity Institute and lecturer at the Office for Environmental Programs, University of Melbourne., \*\* Dr. Simon Ussher, Co-­‐Director of the Simplicity Institute., “The Voluntary Simplicity Movement: A Multi-­ National Survey Analysis in Theoretical Context”, AN ABRIDGED AND REVISED VERSION OF THIS REPORT IS APPEARING IN THE JOURNAL OF CONSUMER CULTURE 12(1) (2012)., http://simplicityinstitute.org/wp-content/uploads/2011/04/The-Voluntary-Simplicity-Movement-Report-11a.pdf)

Even if the developed nations never choose to question the growth imperative – which admittedly seems to be a real likelihood – the issue of ‘peak oil’ suggests that the era of growth is coming to an end nevertheless (Campbell, 2004; Deffeyes, 2010; Heinberg, 2011). The Executive Director of the Post-­‐Carbon Institute, Asher Miller, claims that peak oil ‘almost certainly’ occurred in 2008 (Miller, 2010, p. xiv). While there is still some debate about the exact date (Hopkins, 2008), it is now widely accepted that oil production, if it has not already peaked, will peak sometime in the foreseeable future, and then, after a short plateau, enter terminal decline. Since oil demand is expected to keep on rising, however, the reduction of oil supply will inevitably lead to sharply increasing oil prices (Hirsch et al, 2010). The issue is not that human beings will ever run out of oil, therefore; the issue is that we will soon run out of cheap oil (Heinberg, 2003). This is hugely significant because oil is not just another commodity – it is the lifeblood of modern industrial civilization. If the price of oil surges, as many predict it will (Heinberg and Lerch, 2010), no one is quite sure what will happen to the global economy that is so dependent on it. Many of the most prominent experts in the field argue that if immediate steps are not taken to mitigate the effects of peak oil, the consequences are likely to be extremely grim (Heinberg and Lerch, 2010). The world seems to be recovering (at least superficially) from the ‘credit crunch,’ but the ‘oil crunch’ may well come to tell a different story (Holmgren, 2009). Again, the intricacies of this highly complex issue cannot be explored here (and we are not qualified to advise on the geophysics). Our purpose in raising the issue of peak oil is simply to highlight the fact that breaking free from industrial society’s addiction to oil will entail breaking free from high consumption lifestyles that in so many ways depend upon oil. The ‘Transition Initiatives,’ founded by Rob Hopkins (2008), provide the most prominent example of people responding to peak oil at the grassroots level, and in their attempts to re-­‐localize economies and become less oil-­‐dependent those involved are in many ways exemplifying ‘simpler lives’ of reduced consumption. This is a strong indication that, if there is to be a voluntary transition to a world beyond cheap oil, it is very likely to be informed by the post-­‐ consumerist ethos of voluntary simplicity. Moreover, as Ted Trainer (2007) has argued, renewable energy, even if it is embraced whole-­‐heartedly and on a global scale, will never be able to sustain the expansion of high consumption consumer lifestyles, especially with the global population growing. If Trainer is correct, and he presents a powerful case that ought to be taken seriously, this provides further grounds for thinking that the global consumer class will need to adopt simpler lifestyles of reduced consumption in the foreseeable future. Whether this transition occurs voluntarily or is imposed by force of biophysical limits remains to be seen. It scarcely needs remarking that a voluntary transition would be the desired path.

Allowing peak oil to happen would incentivize people to shift to more sustainable lifestyles.

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The fourth impact of high oil prices will be the flow on price effects more generally. As noted above, when oil gets expensive, all commodities dependent on oil for production, packaging, marketing or transportation get more expensive too. This includes almost all commodities, to varying degrees, meaning that a given income will be able to purchase fewer things. This will enforce frugality and moderation in consumption on most people, as well as provide a great incentive to reduce waste, and recycle and reuse wherever possible. Most importantly, perhaps, it will provide a great incentive to simply reduce the amount of household consumption. At every opportunity, people will find that it is in their immediate and long-­‐term interest to provide for themselves in ways that do not rely on the formal economy. For example, more people will mend or make their clothes rather than buy them new; people will find ways to entertain themselves that do not involve monetary exchange or high energy consumption; and people will lend when asked and borrow when necessary. In short, the potential for sustained and even considerably higher oil prices will increasingly price consumer lifestyles out of the market.

## \*\*\*Sustainability Debate\*\*\*

### Collapse Inevitable-DeDev Solves

Failure to revert to sustainable societies soon means ecological catastrophes will cause extinction – this outweighs any financial crash

Andrew Gaines, December 11th, 2008 (alliance for sustainable wellbeing, member of the Society for Sustainable Business, thirty years of experience improving human performance as a Feldenkrais practitioner, creativity trainer and psychotherapist, author of "Evolving a World That Works," “The Unsustainable Complexity Dillemma,” http://www.openforum.com.au/content/environment-and-economics-unsustainable-complexity-dilemma >:)

There is an unrecognised sustainability dilemma at work in NSW. Our local issue, which is very real, is iconic of the global dilemma as expressed in the recent New Scientist cover story Growth Is Folly. It is well known that historically, societies destroy themselves by undermining their own resource bases. When farms and forests turn into deserts, then that's that. Jared Diamond's Collapse gives many examples. Anthropologist Joseph Tainter takes a slightly different angle. Tainter points out that societies collapse when they can no longer produce the energy (grain, fuel, and in today's world money) required to maintain the complex layers of education, arms manufacture, roads, ports, and administrative bureaucracy that were developed to solve the society's challenging problems (The Collapse of Complex Societies, 1988). When energy needs can't be met, societies devolve to a more decentralised less complexly integrated organisation. The transition, if sudden and not willingly undertaken, is horrendous. Completely aside and apart from whatever forces of corruption or opportunity for self-aggrandisement may be at play, those who govern a society sometimes feel forced to make decisions that are ecologically damaging because they feel that they cannot afford to make the ecologically sound decision. This is the unsustainable complexity dilemma. It's a question of immediate financial need versus long-term ecological viability. Beyond a certain point, activities undertaken to increase or even just maintain a certain level of social complexity set us up for social and/or environmental collapse. Let's look at how this is playing out in New South Wales. In New South Wales the government is currently authorising full exploitation of our coal resources (from which the government gets royalties) rather than protecting the long-term viability of rivers and aquifers. NSW has an extensive coal mining industry, far bigger than most people realise, and it is set to expand. In addition to the larger issue of global warming there are three key areas that are of immediate ecological concern: mining in the wetlands at the sources of rivers, doing underground mining so close to rivers that the stream beds crack (longwall mining), and mining over a major aquifer, which will either crack the aquifer or pollute it with heavy metals released by the mining. Mining in wetlands at the source of rivers destroys the life of the entire river. This is because wetlands provide a steady flow of stored water even in the severest droughts. If that flow stops, all the life of the river dies. New South Wales is in the process of issuing permits for more underground mining near rivers, as well as permitting coal mining at the swampy sources of some rivers, and in the Liverpool Plains, the most productive grain-growing region of New South Wales. The Liverpool Plains agricultural region (which is in north-west NSW, not near Liverpool City) is supported by an aquifer. And of course coalmining uses huge amounts of water in its own right in a time where cities and agriculturists are concerned about water supplies. Enough damage has been done already that a coalition of groups, Rivers SOS, has been formed to raise awareness and stop mining in these crucial affected areas. The government currently gets about $1 billion per annum in royalties from mining, including coal. It has been suggested that the NSW government authorises the mining because the government is addicted to the money. But we should look at it from the government's point of view. Continuing to expand coal mining in NSW is a case in point of the unsustainable complexity dilemma. The NSW government has not taken up an offer by the Rudd government to provide a computer for every desk in schools, because they cannot afford to. According to the front page of the Sydney Morning Herald, the NSW government is $900 million in debt already this year, and the housing market is dropping, severely affecting its revenue base. It is not obvious that banning mining in areas which would affect rivers and aquifers would immediately reduce the government's income from coal. So it is a bit of a puzzle as to why they continue to authorise such environmentally damaging activities. But for the sake of discussion, let's assume that the government genuinely believes that by imposing environmentally protective restrictions they would lose $1 billion in royalties. You can see the dilemma. The government feels pressured to make an environmentally damaging decision (not just damaging, but disastrous), in order to maintain itself. Understandably, they want to protect the income they need to properly maintain education, health services, roads and railroads, their own bureaucracy and many other services. I submit that this is not just a government dilemma; it is our dilemma, as a society and as members of that society. As Tainter points out, we have step by step made our society more complex and hungry for resources. We've kept adding roads, port facilities, distribution terminals, free trade agreements, education and research facilities - all of which solve real problems. When a society can no longer maintain its level of complexity, it inevitably (and painfully) reverts to a less complex mode of organisation. No government wants to do this; as you know governments around the world are assiduously trying to keep the growth economy going. Given the link between economic growth and global warming, this is our unsustainable complexity dilemma writ large. If we succeed in keeping growth going, as New Scientists points out, it will surely end in tears. A financial crash is nothing compared to an ecological crash. Currently we deal with such dilemmas by bumbling along with competing interests but no common cause. One faction may win, but our common need is neglected. A far better approach would be to understand our global situation as a system, and ask how must the system change if we are to achieve long-term viability? The spirit of such an enquiry is captured in two comments Barrack Obama made in his acceptance speech: Even as we celebrate tonight, we know the challenges that tomorrow will bring are the greatest of our lifetime, two wars, a planet in peril, the worst financial crisis in a century. So let us summon a new spirit ... of service and responsibility where each of us resolves to pitch in and work harder and look after not only ourselves, but each other. Obama is right to remind us that we have a planet in peril and that we need to look after each other as well as take care of ourselves. So I suggest that we develop cross-sectoral forums to think through our situation and identify what is needed to create a viable society. For lack of a better term I call them immersive think tanks. We should gather people with divergent knowledge, opposing points of view and different value sets. Experience shows that if such groups spend sufficient time - say three full days - they reach fruitful levels of common perception, and come up with creative solutions that transcend their initial biases. Such forums should not be attended just by academics, but also by policy makers and senior leaders of influential organisations. The point of such forums is not just to communicate conclusions, or articulate positions. Rather it is to immerse everybody so deeply in the consideration that we all come out with a new understanding of what is needed and possible, and most importantly with a commitment to getting there. If we want governments to change their way of thinking, we need to change the way we all think. We need to immerse ourselves the unsustainable complexity dilemma until we come up with a line of solution that we are willing to work to achieve.

Complexity makes collapse inevitable – economic collapse causes a mindset shift to sustainability.

Speth 8 – Rhodes Scholar @ Oxford University, Chairman of Council on Environmental Quality for Executive Office, Founder of World Recourses Institute (Think-Tank), Led the Western Hemisphere Dialogue on Environment and Development, Administrator of United Nations Development Program, Dean of Yale School of Forestry and Environmental Studies, Leader of the President’s Task Force on Global Recourses and the Environment, Holds multiple awards—National Wildlife Federation’s Recourse Defense Award and Lifetime Achievement Award of Environmental Law Institute, and Blue Planet Prize, James, “The Bridge at the Edge of the World”, p 211-5

Forces for Change The very practical and very difficult question is what might spur human sensibilities in these directions? When one considers our world today, with its widespread ethnic hatreds, intrastate warfare, and immense violence, militarism, and terrorism, not to mention the dysfunctional values already addressed, the task can seem hopelessly idealistic. In truth, it is precisely because of these calamities, which are linked in many ways, that one must search for answers and hope desperately to ﬁnd them. There is a vast literature on cultural change and evolution. In what spirit, then, should we take up the question of spurring change? The goal must be forging cultural change, not waiting on it. Here, the in- sight of Daniel Patrick Moynihan is helpful: “The central conservative truth is that culture, not politics, determines the success of a society. The central liberal truth is that politics can change a culture and save it from itself .”2' Historian Harvey Nelsen has asked the right question: “How . . . can politics save a culture from itself?” “There is only one way,” he answers, “through the development of new consciousness?” People have conversion experiences and epiphanies. Can an entire society have a conversion experience? Unfortunately, the surest path to widespread cultural change is a cataclysmic event that profoundly affects shared values and delegitimizes the status quo and existing leadership. The Great Depression is a classic example. I believe that both 9/11 and Hurricane Katrina could have led to real cultural change in the United States, both for the better, but America lacked the inspired leadership needed. The most thorough look at this issue from the perspective here is Thomas Homer-Dixon’s The Upside of Down. He argues “that our circumstances today are surprisingly like Rome’s in key ways. Our societies are also becoming steadily more complex and often more rigid. This is happening partly because we ’re trying to manage—often with limited success—stresses building inside our societies, including stresses arising from our gargantuan appetite for energy. . . . Eventually, as occurred in Rome, the stresses may become too extreme, and our societies too inﬂexible to respond, and some kind of economic or political breakdown will occur. . . . “People often use the words ‘breakdown’ and ‘collapse ’ synony- mously. But in my view, although both breakdown and collapse pro- duce a radical simplification of a system, they differ in their long-term consequences. Breakdown may be serious, but it’s not catastrophic. Something can be salvaged after breakdown occurs and perhaps rebuilt better than before. Collapse, on the other hand, is far more harmful. . . . “In coming years, I believe, foreshocks are likely to become larger and more frequent. Some could take the form of threshold events—like climate ﬂips, large jumps in energy prices, boundary-crossing out- breaks of new infectious disease, or international ﬁnancial crises. ”” I-Iomer-Dixon argues that foreshocks and breakdowns can lead to positive change if the ground is prepared. “We need to prepare to turn breakdown to our advantage when it happens—because it will,” he says.“ Homer-Dixon’s point is critically important. Breakdowns, of course, do not necessarily lead to positive outcomes; authoritarian ones and Fortress World are also possibilities. Turning a breakdown to advantage will require both inspired leadership and a new story that articulates a positive vision grounded in what is best in the society's values and history. A congressman is said to have told a citizens’ group, “If you will lead, your leaders will follow.” But it doesn’t have to be that way. Harvard ’s Howard Gardner stresses this potential of true leadership in his book Changing Minds: “Whether they are heads of a nation or senior ofﬁcials of the United Nations, leaders of large, disparate populations have enormous potential to change minds . . . and in the process they can change the course of history. “I have suggested one way to capture the attention of a disparate population: by creating a compelling story, embodying that story in one ’s own life, and presenting the story in many different formats so that it can eventually topple the counterstories in one ’s culture. . . . [T] he story must be simple, easy to identify with, emotionally resonant, and evocative of positive experiences?” There is evidence that Americans are ready for another story. As noted, large majorities of Americans, when polled, express disenchantment with today ’s lifestyles and offer support for values similar to those discussed here.“ But these values are held along with other strongly felt and often conﬂicting values, and we are all pinned down by old habits, fears, insecurities, social pressures, and in other ways. A new story that helps people find their way out of this confusion and dissonance could help lead to real change. Gardner’s stress on story and narrative is thus important. Bill Moy- ers, a powerful force for good in our country, has written that “America needs a different story. . . . Everywhere you turn you’ll ﬁnd people who believe they have been written out of the story. Everywhere you turn there ’s a sense of insecurity grounded in a gnawing fear that freedom in America has come to mean the freedom of the rich to get richer even as millions of Americans are dumped from the Dream. So let me say what I think up front: The leaders and thinkers and activists who honestly tell that story and speak passionately of the moral and religious values it puts in play will be the first political generation since the New Deal to win power back for the people. . . . Here, in the ﬁrst decade of the 21 st century, the story that becomes America’s dominant narrative will shape our collective imagination and hence our politics.”” If Moyers addresses the social aspects of our need for a new nar- rative, many other authors have begun to develop new stories of our relationship with nature—'I‘homas Berry in T/ze Dream of the Eart/z, Carolyn Merchant in Reinventing Eden, Evan Eisenberg in T/ze Ecology ofEden, Bill McKibben in Deep Ecology, and others.” One story that needs to be told is about a people who set out on a journey—a journey through time—to build a better world for themselves and their chil- dren. High-minded and full of hope as they began, they accomplished much in their quest. But they became so enamored of their successes, indeed captured by them, that they failed to see the signs that pointed in new directions, and they became lost. Now they must find their way back to the right path.” Another source of value change is social movements. Social move- ments are all about raising consciousness and, if successful, can usher in a new consciousness. We speak casually about the environmen- tal movement. We need a real one. One can hear echoes of Reich in Curtis White ’s book The Spirit of Disobidience. “Although the sixties counterculture has been much maligned and discredited, it attempted to provide what we still desperately need: a spirited culture of refusal, a counterlife to the reigning corporate culture of death. We don’t need to return to that counterculture, but we do need to take up its challenge again. If the work we do produces mostly bad, ugly, and destructive things, those things in turn will tend to recreate us in their image. “If we’re concerned about the kind of human future we are creat- ing, we must also be concerned with how we are living in the present. Unhappily, how we live is presently the near exclusive concern of cor- porations and media conglomerates which have, together, turned every Main Street into the same street and made the inside of every American head echo with the same vacuous music and movie/ TV scenarios. This is the arena in which a spiritualized disobedience means most.”’° Another way forward to a new consciousness should lie in the world’s religions. Mary Evelyn Tucker has noted that “no other group of institutions can wield the particular moral authority of the religions” and that “the environmental crisis calls the religions of the world to respond by ﬁnding their voice within the larger Earth community. In so doing, the religions are now entering their ecological phase and ﬁnd- ing their planetary expression.”3' The potential of faith communities is enormous. About 85 percent of the world’s people belong to one of the ten thousand or so religions, and about two-thirds of the global population is Christian, muslim or hindu. Religions played key roles in ending slavery, the in the civil rights movement, and in overcoming apartheid in South Africa, and they are now turning attention with increasing strength to the environment.

### Collapse Inevitable-Complexity Theory

Societal breakdown will happen – diminishing returns from increasing complexity create societal instabilities, making collapse inevitable – economic collapse now creates a shift to sustainable civilizations, but continued growth will cause resource wars

Coley Hudgins, March 22nd, 2012, (author/website owner, ‘Resilient Family,’ “Complexity Theory and System Collapse,” <http://www.theresilientfamily.com/2012/03/complexity-theory-and-system-collapse/> >:)

Jim Rickards is probably the world’s baddest of the bad-asses in understanding and explaining modern monetary theory. I’m about three-quarters of the way through his outstanding book Currency Wars: The Making of the Next Global Crisis and can’t recommend it highly enough. If you really want a comprehensive understanding of how our global economic system works (or doesn’t [work]), Rickards’ insights will give you a graduate level understanding. I’m going to be writing more about Currency Wars in the future, but wanted to start off today by writing about his insights on Complexity Theory. The concept of Complexity Theory is really pretty simple: It’s the idea that as systems become more complex, they become inherently unstable. One of the deepest thinkers on Complexity Theory is Joseph A. Tainter, the author of The Collapse of Complex Societies . Rickards devotes a considerable amount of space in Currency Wars explaining Tainter’s work, which is crucial to understanding why it seems modern society continues to face ever-more frequent financial crises, wars, currency collapses and societal breakdowns. Tainter, who studied societal collapses throughout history — from the collapse of the Roman Empire to the disappearance of Mayan and Chacoan civilizations — argues persuasively that in all cases, societal breakdown follows a fairly consistent trajectory: The exponential increase in complexity, which eventually reaches a point of diminishing marginal returns followed by collapse. In other words, a society’s inputs increase with the scale of civilization, but its outputs – when measured in terms of public good – eventually decline per unit of input until the whole shebang implodes and the societal growth process starts over. Take the case of government bureaucracy. In America’s early beginnings, our government was highly efficient and generated substantial “public goods”. We had a straightforward and simple blueprint that enumerated citizens’ rights and responsibilities (the Constitution and Bill of Rights), and the rules of the road for how society would be governed. Over the course of the next couple of hundred years, complexity inexorably worked its way into the bureaucratic system. To understand the perils of complexity, one need only look at the nation’s tax code. In 1913, when the 16th amendment was ratified allowing the Feds to tax individual income, the tax code was 400 pages. One hundred years later, our tax code is over 72,000 pages. Today, the marginal returns of taxpayer (ahem) “investments” in government bureaucratic functions – education, financial regulation, agriculture, labor, and others — are diminishing at a faster and faster clip, the downslope of the marginal utility curve. There are more and more inputs (rules, regulations, laws, etc.), but the outputs — or the public goods from those inputs — are fewer and fewer. The Dodd-Frank financial overhaul legislation is another great example of diminishing marginal returns in action. The 849-page Dodd-Frank bill (compare that to the 37-page Glass-Steagall Act that regulated Wall Street until 1999) provides absolutely no clarity whatsoever in how the financial sector should be regulated. It’s a mish-mash of confusing gobbledygook, ill-defined, and vague government overreach that only a Wall Street banker could love. Why? Because only they have the size and scope to pay astronomically high-priced lawyers to comb through the legislation and find the myriad loopholes and exemptions that will render future enforcement of Wall Street scumbaggery toothless. The consequence of Dodd-Frank then is more, not less, complexity, which creates more instability in the financial system as the next financial weapon of mass destruction lurks right around the corner. Rickards uses Tainter’s example of the collapse of the Roman Empire to explain just what happens when complex societal systems go kaboom: “When the barbarians finally overran the Roman Empire, they did not encounter resistance from the farmers; instead they were met with open arms. The farmers had suffered for centuries from Roman policies of debased currency and heavy taxation [to fund an increasingly complex bureaucracy] with little in return. In fact, because the barbarians were operating at a considerably less complex level than the Roman Empire, they were able to offer farmers basic protections at a very low cost.” In Tainter’s and Rickards’ view, increasing complexity also creates hugely inefficient obstacles to improvements that would benefit all of society, and instead benefits only those parasitical government and financial elites who use complexity to perpetuate their own privileged class through rent-seeking — the accumulation of wealth through non-productive means. Think about it this way; the financialization of the global economy, and the explosion of government on a global scale are really all about harnessing complexity for the benefit of privileged classes. It’s why supranational, quasi-government organizations like the IMF, World Bank, G-20, and European Union have become so influential and self-perpetuating. It’s why increasing complexity in finance leads to the extraction of financial resources from society at large and directs them towards financial and government elites in the form of taxes, bailouts, usurious consumer fees, deceptive derivatives and bonuses. And it’s why, for instance, the IMF can get away with proposing even more complex global monetary instruments like SDR’s (Special Drawing Rights) through what they argue is a process that “may be relatively fast and need not involve significant public support.” (Us hoi polloi needn’t worry our heads about such things I guess… It’s too complex after all, and in any case the IMF will decide for us.) In the end, it’s this complexity that crushes citizens under the weight of rent extraction from a parasitical class. The end-result is an exponential increase in instability and an increasing possibility of collapse. Summarizing Tainter, Rickards says we now have three choices: simplification – descaling society and returning the input-output ratio to a more sustainable level by, for instance, devolving political and economic power away from the self-perpetuating, parasitical elites in government and finance to more local and decentralized systems; continued conquest – the effort to take resources from neighbors by force in order to provide new inputs (U.S. foreign policy); or collapse – a sudden, involuntary and chaotic form of simplification. It’s wishful thinking to believe that the highly complex global systems we have today will descale and simplify to more sustainable levels on their own. But you can take individual action by simplifying your own life and decoupling to the extent possible from the complex and unstable systems on which most of us now depend. At its core, resiliency is really about the stability that simplicity makes possible. It’s indeed possible for individuals to weather instability and collapse, but it starts with individual action. Self-reliance, stability and simplicity are the best hedges in an increasingly complex and unstable world.

Collapse inevitable – diminishing returns from complex innovations

Akshay Ahuja, archived March 29th, 2012, (published March 19th, 2012, book reviewer, writer, ‘The Occasional Review,’ “The Collapse of Complex Societies,” <http://www.energybulletin.net/stories/2012-03-29/collapse-complex-societies-review> >:)

Talk to anyone with power in the modern world and this will strike them as an intelligent remark. Masquerading as sober analysis, though, Summers’s analogy is at heart a pure statement of faith. It is the modern faith, suitable for carving on all of our tombstones: a more complex system is always better than a simple one. Summers could, as a trained economist, attempt to gauge what is lost and gained in the move to a more resource-intensive system. In the case of jet travel, the benefit consists of many hours of travel saved; on the debit side, one has pollution and environmental damage, the depletion of huge quantities of fuel, and the immense resources invested not just in the planes but the government-funded infrastructure. What benefit to society is left after all of this work of extraction, construction, and mitigation is done? I have no idea — obviously it is not a simple analysis. What is important is that no such analysis is ever done. It is simply assumed, as Summers does, that benefits will indeed accrue, and that governments should begin spending to accommodate the new reality. This brings us to The Collapse of Complex Societies, Joseph Tainter’s attempt to synthesise all of the theories of decline and fall into a single model. Tainter’s argument is that investing in complexity inevitably generates decreasing marginal returns for the society that utilises it. In his analysis, persisting in the same methods even when they have ceased to work — as Summers suggests we do — sets a civilisation on track for collapse. Here is Tainter’s basic narrative. A civilisation forms when some benefit accrues from greater complexity. These occasions are actually quite rare in human history. For example, in the case of the Chaco Canyon civilisation of the American Southwest, two different bioregions within a modest distance of each other might have realised that different stresses affected their food supplies — a drought in one area, for example, often didn’t affect another — and decided to pool their resources. When such pooling occurs, a new class of person springs into existence: the coordinator. Behind the leadership of these figures, a newly complex society emerges, one which is geared to pursue complexity as a strategy. And benefits do accrue — in certain human terms, and for a time — such as improved nutrition (in calorific terms) and the greater availability of certain goods. The marginal benefits of complexity, however, eventually decline. Beyond a certain point, intensification of cultivation will produce less additional food, and the peasantry and land base will be subjected to more and more stress. In Tainter’s model, however, the society now only knows how to utilise a single strategy, and a superstructure is in place — along with a much larger population — that cannot be gracefully abandoned. Near the end, vast resources are invested in entirely unproductive ways, such as desperate attempts at regime legitimisation: the competitive monument-building of the Lowland Maya, for example, or the lavish parades held for each new, short-lived Roman emperor. Eventually, the burden of civilisation becomes greater than any benefit it provides and the society collapses. Then, over the next decades or centuries, the remaining population begins to form new arrangements at a much lower level of resource use. There is endless raw material for reflection in some of Tainter’s examples. Here, for example, is Tainter’s one paragraph summary of the origins of the Industrial Revolution in England. Wilkinson (1973) has shown that major jumps in population, at around A.D. 1300, 1600, and in the late eighteen century, each led to intensification in agriculture and industry. As the land in the late Middle Ages was increasingly deforested to provide fuel and agricultural space for a growing population, basic heating, cooking, and manufacturing needs could no longer be met by burning wood. A shift to reliance on coal began, gradually and with apparent reluctance. Coal was definitely a fuel source of secondary desirability, being more costly to obtain and distribute than wood, as well as being dirty and polluting. Coal was more restricted in its spatial distribution than wood, so that a whole new, costly distribution system had to be developed. Mining of coal from the ground was more costly than obtaining a quantity of wood equivalent in heating value, and became even more costly as the most accessible reserves of this fuel were depleted. Mines had to be sunk ever deeper, until groundwater flooding became a serious problem. Watt’s steam engine was developed to pump water out of these flooded mines, and it soon put humanity on the path to our modern industrial society. Why England, I wondered, at that particular moment in the world’s history? Why did the population stresses there result in a form of resource exploitation that hadn’t developed elsewhere, even in cultures, like ancient China, that had similar population pressures, a comparable level of technology, and easily accessible coal? Along with practical issues of historical and technological development, I think there is a spiritual dimension to these questions, involving what kind of responses a society is willing to consider when it is faced with a challenge. Maybe a story will help explain what I mean. In Chuang Tzu, a traveler sees a farmer laboriously carrying water with a pitcher to water his crops. The traveler walks up to the man and suggests that the irrigation could be done for a hundred plots much more simply with a draw-well and channels (a piece of appropriate technology if ever there was one). This is the farmer’s response: I have heard my teacher say: ‘When a man uses a machine he carries on all his business in a machine-like manner. Whoever does his business in the manner of a machine develops a machine heart. Whoever has a machine heart in his breast loses his simplicity. Whoever loses his simplicity becomes uncertain in the impulses of his spirit. Uncertainty in the impulses of the spirit is something that is incompatible with truth.’ Not that I am unfamiliar with such devises; I am ashamed to use them. The Zhou dynasty out of which this story emerged lasted for over 700 years, and disintegrated without exhausting its land base. Modern industrial civilisation, on the other hand, could both collapse and render the Earth virtually uninhabitable in half that time. Why? Tainter’s answer to this question, ‘different rates of declining marginal returns,’ is not really illuminating. These are questions of culture and spirit. Why do some complex societies look with such suspicion on novelties, even ones that might make their lives simpler, while ours has come to embrace absolutely any new technology, no matter how trivial its benefits, even at the cost of our health and sanity?

Collapse coming now – diminishing returns are already happening

Walter Haugen, July 8th, 2012 (writer, ‘Transition Whatcom,’ “Parsing Alexander’s Article About Resilience,” <http://transitionwhatcom.ning.com/profiles/blogs/parsing-alexander-s-article-about-resilience> >:)

A "little" knowledge is a dangerous thing. Samuel Alexander's article "Resilience Through Simplification" is a case in point. For example, the figure that heads the blurb and is reproduced in the article comes from a Joseph Tainter article from 2011 and was first introduced in his 1988 book The Collapse of Complex Societies (available from the Whatcom County System). Here is an article from 1996 which explains it well: http://www.goldonomic.com/tainter.htm I also added the figure below. As Tainter says, B1, C1 is the point at which a society has entered the phase at which it becomes vulnerable to collapse. What Alexander seems to have missed, and that is not apparent from Tainter's figure, is that a society achieves diminishing returns well before it becomes vulnerable to collapse. This is at the inflection point, which I commented on in a June 17th post about the Jared Diamond TED video, where he briefly touched on 1st and 2nd derivatives. I have reproduced my post below (just in case "someone" decides to delete my original response). This may seem a little obtuse but consider an exponential curve attached onto the left side of the figure, at the point where the two axes start. At this point the sign changes from a plus to a minus and this is the point where marginal returns change from a plus to a minus. At this point society is receiving less than 1 unit of return for 1 unit of energy input. We passed this point in 1968 by my calculation, based on the historical high point of the minimum wage in inflation-adjusted dollars. It should also be pointed out that in the area under the curve defined by B1, C1 all the way to B1, C3 the society is in collapse, not only from B2, C2 and downwards. Most people cannot see it until we get to B2, C2. In short, we are in collapse already. Get used to it. You don't have the luxury of inventing programs to be resilient. You have to be resilient already. Figure 1: The marginal productivity of increasing complexity. At a point such as B1, C3, the costs of complexity exceed the benefits, and complexity is a disadvantageous approach to problem solving (Tainter, 2011a: 27). Original Response to Diamond's TED Video June 17, 2012 http://transitionwhatcom.ning.com/video/jared-diamond-why-societies... Jared Diamond's throwaway comment about looking at the 1st and 2nd derivative in predicting collapse bears some investigation and explanation. To make things as simple as possible, the 1st derivative is about change in sign and the 2nd derivative is about concavity upwards and downwards. What this means for the curve of a society as it increases energy consumption is that at a certain point - called the inflection point - the acceleration changes sign and the concavity changes from concave upwards to concave downwards. This is the point that Joseph Tainter (Collapse of Complex Societies 1988) mentions as the point where marginal returns start to diminish. [He didn't call it an inflection point but that's what it is.] Up to this point, an increase of 1 unit (energy, money, grain, etc.) yields more than 1 unit of return. After this inflection point, 1 unit of increase yields less than 1 unit of return. This happens well before the society tops out on the bell curve of its florescence. If you go to this website you can see a very nice graphic of what an inflection point looks like: http://en.wikipedia.org/wiki/Inflection\_point The upshot for predicting collapse is that most people cannot see the change in the second derivative while it is happening. What we do see is when we have crossed the top of the bell curve and are heading downwards. This is what we are seeing now, which some peak oil theorists call the "bumpy plateau." The real inflection point, where the marginal returns of American society started creating less than 1 unit of return for each 1 unit of input, was back in the late 1960's - about 1968. Back then I and people like me made massive changes in our lives because we could see the collapse. It has taken over 40 years but now it is upon us. As I have stated so succintly in previous posts, "Them dirty hippies was right."

Economic collapse will happen – energy’s not infinite – fossil fuels aren’t as abundant as they used to be, making further complex solutions with diminishing returns inevitable

Cam Riley, No Date Given Last Updated July 1st, 2012,. (software developer, telecommunications, energy, ITS @ Shutterfly, “Energy as the Constraining Factor on Increased Complexity,” <http://www.southsearepublic.org/article/731/read/energy_as_the_constraining_factor_on_increased_complexity> >:)

Joseph Tainter has an interesting essay titled Complexity, Problem Solving and Sustainable Societies. His thesis is that humankind, in order to solve practical problems, increases the complexity of the systems that go toward a solution. Over time this complexity needs to be subsidized by increasing energy - lest they collapse. Tainter includes a discussion of Rome in his thesis. As Theophile Escargot argues, Rome hung around for so long that you can fit any model into its collapse: [T]he Decline of Rome is a useful ground for arguing absolutely anything. Want to build up defence spending? Argue the Roman empire fell because it didn't secure its borders against the barbarians. Don't like immigration? Argue that their mistake was letting Visigoth asylum-seekers settle inside the Danube border after fleeing the Huns. Like free trade? Argue like Pirenne that the Arab restriction of trade routes did for it. Don't like religion? Follow Gibbon and say it was weak-minded Christianity that softened it up. Tainter's argument is that complexity, and ability to problem solve with increasing complexity is a restraint on a society and economic system. The only way it can be overcome is with external energy inputs. Humans generally choose a simpler and easier method where they can, but often, there is no choice but to become more complex and usually through greater "differentiation, specialisation and integration". Tainter describes complexity as an economic process as it "levies costs and yields benefits" and as such is an investment that has a quantifiable return. Humankind has generally chosen the cheapest, easiest and least complex solution first. But once that is exhausted increasingly complex solutions are found with diminishing returns. A good example is oil extraction. Most of the easy oil deposits have been found, so now we drill offshore and are even contemplating using the oil shale in Canada for energy. In terms of Rome we have looked at Peter Turchin's model of Asabiya which describes the cycles of collective action. More recently Chalmers Johnson's thesis that empire leads to undemocratic forms which are inefficient and lead an empire into long decline. Not to forget Jared Diamond's ideas of social collapse. Tainter describes Rome's increasing complexity and diminishing returns in terms of how the ruling class responded to military crisis. It taxed heavily, established greater bureaucracy, built more and more fortifications, doubled the army and devastated the economy: The empire came to sustain[ed] itself by consuming its capital resources; producing lands and peasant population. The Roman Empire provides history's best-documented example of how increasing complexity to resolve problems leads to higher costs, diminishing returns, alienation of a support population, economic weakness, and collapse. In the end it could no longer afford to solve the problems of its own existence. Interestingly he discusses industrialization, which was the rise of the British Empire, though Tainter does not mention it that way. The overpopulation and denuding of forests for energy led to the use of coal. The easy deposits were mined, so deeper and deeper shafts were driven but that led to ground water issues. Which was solved with steam powered pumps. He writes: What set industrialism apart from all of the previous history of our species was its reliance on abundant, concentrated, high-quality energy. With subsidies of inexpensive fossil fuels, for a long time many consequences of industrialism effectively did not matter. Industrial societies could afford them. When energy costs are met easily and painlessly, benefit/cost ratio to social investments can be substantially ignored (as it has been in contemporary industrial agriculture). Fossil fuels made industrialism, and all that flowed from it (such as science, transportation, medicine, employment, consumerism, high-technology war, and contemporary political organization), a system of problem solving that was sustainable for several generations. So energy subsidises complexity, to the point that complexity's true cost and diminishing return on investment can be hidden. Such that Tainter writes that for our ability to solve problems with greater complexity, "the availability of energy per capita will be a constraining factor".

Collapse gon’ happen any day now

João Neto, March 5th, 2012 (writer, Ruminaçœs Digitais, “Tainter - The collapse of complex societies III,” <http://sonhoslx.blogspot.com/2012/03/tainter-collapse-of-complex-societies.html> >:)

Any complex hierarchy must allocate a portion of its resource base to solving the problems of the population it administers, but must also set aside resources to solve problems created by its own existence, and created by virtue of overall societal complexity. Prior to the development of modern welfare states it is likely that these increased administrative costs did little for the population as a whole other than to maintain some semblance of basic needs. And often even that was not accomplished. To maintain growth in complexity, hierarchies levy heavier taxes on their populations. At some point even this yields declining marginal returns. This happens when rates are so high that avoidance increases, and taxation-induced inflation erodes the value of the money collected. Rulers [...] must constantly legitimize their reigns. Legitimizing activities include such things as external defense and internal order, alleviating the effects of local productivity fluctuations, undertaking local development projects, and providing food and entertainment (as in Imperial Rome) for urban masses. In many cases the productivity of these legitimizing investments will decline. Whatever activities a hierarchy undertakes initially to bond a population to itself (providing defense, agricultural development, public works, bread and circuses, and the like) often thereafter become de rigueur, so that further bonding activities are at higher cost, with little or no additional benefit to the hierarchy. [...] The alternative course is to reduce legitimizing activities and increase other means of behavioral control. Yet in such situations, as resources committed to benefits decline, resources committed to control must increase. Although quantitative cost/beneft data for such control systems are rare, it seems reasonable to infer that as the costs of coercion increase, the benefits (in the form of population compliance) probably do not grow proportionately [...] These remarks are not meant to suggest that social evolution carries no benefits, nor that the marginal product of social complexity always declines. The marginal product of any investment declines only after a certain point; prior to that point benefits increase faster than costs. Very often, though, societies do reach a level where continued investment in complexity yields a declining marginal return. At that point the society is investing heavily in an evolutionary course that is becoming less and less productive, where at increased cost it is able to do little more than maintain the status quo.

### Growth Unsustainable-DeDev Solves-Laundry List

Societal breakdown will happen – diminishing returns from increasing complexity create societal instabilities, making collapse inevitable – economic collapse now creates a shift to sustainable civilizations, but continued growth will cause resource wars

Coley Hudgins, March 22nd, 2012, (author/website owner, ‘Resilient Family,’ “Complexity Theory and System Collapse,” <http://www.theresilientfamily.com/2012/03/complexity-theory-and-system-collapse/> >:)

Jim Rickards is probably the world’s baddest of the bad-asses in understanding and explaining modern monetary theory. I’m about three-quarters of the way through his outstanding book Currency Wars: The Making of the Next Global Crisis and can’t recommend it highly enough. If you really want a comprehensive understanding of how our global economic system works (or doesn’t [work]), Rickards’ insights will give you a graduate level understanding. I’m going to be writing more about Currency Wars in the future, but wanted to start off today by writing about his insights on Complexity Theory. The concept of Complexity Theory is really pretty simple: It’s the idea that as systems become more complex, they become inherently unstable. One of the deepest thinkers on Complexity Theory is Joseph A. Tainter, the author of The Collapse of Complex Societies . Rickards devotes a considerable amount of space in Currency Wars explaining Tainter’s work, which is crucial to understanding why it seems modern society continues to face ever-more frequent financial crises, wars, currency collapses and societal breakdowns. Tainter, who studied societal collapses throughout history — from the collapse of the Roman Empire to the disappearance of Mayan and Chacoan civilizations — argues persuasively that in all cases, societal breakdown follows a fairly consistent trajectory: The exponential increase in complexity, which eventually reaches a point of diminishing marginal returns followed by collapse. In other words, a society’s inputs increase with the scale of civilization, but its outputs – when measured in terms of public good – eventually decline per unit of input until the whole shebang implodes and the societal growth process starts over. Take the case of government bureaucracy. In America’s early beginnings, our government was highly efficient and generated substantial “public goods”. We had a straightforward and simple blueprint that enumerated citizens’ rights and responsibilities (the Constitution and Bill of Rights), and the rules of the road for how society would be governed. Over the course of the next couple of hundred years, complexity inexorably worked its way into the bureaucratic system. To understand the perils of complexity, one need only look at the nation’s tax code. In 1913, when the 16th amendment was ratified allowing the Feds to tax individual income, the tax code was 400 pages. One hundred years later, our tax code is over 72,000 pages. Today, the marginal returns of taxpayer (ahem) “investments” in government bureaucratic functions – education, financial regulation, agriculture, labor, and others — are diminishing at a faster and faster clip, the downslope of the marginal utility curve. There are more and more inputs (rules, regulations, laws, etc.), but the outputs — or the public goods from those inputs — are fewer and fewer. The Dodd-Frank financial overhaul legislation is another great example of diminishing marginal returns in action. The 849-page Dodd-Frank bill (compare that to the 37-page Glass-Steagall Act that regulated Wall Street until 1999) provides absolutely no clarity whatsoever in how the financial sector should be regulated. It’s a mish-mash of confusing gobbledygook, ill-defined, and vague government overreach that only a Wall Street banker could love. Why? Because only they have the size and scope to pay astronomically high-priced lawyers to comb through the legislation and find the myriad loopholes and exemptions that will render future enforcement of Wall Street scumbaggery toothless. The consequence of Dodd-Frank then is more, not less, complexity, which creates more instability in the financial system as the next financial weapon of mass destruction lurks right around the corner. Rickards uses Tainter’s example of the collapse of the Roman Empire to explain just what happens when complex societal systems go kaboom: “When the barbarians finally overran the Roman Empire, they did not encounter resistance from the farmers; instead they were met with open arms. The farmers had suffered for centuries from Roman policies of debased currency and heavy taxation [to fund an increasingly complex bureaucracy] with little in return. In fact, because the barbarians were operating at a considerably less complex level than the Roman Empire, they were able to offer farmers basic protections at a very low cost.” In Tainter’s and Rickards’ view, increasing complexity also creates hugely inefficient obstacles to improvements that would benefit all of society, and instead benefits only those parasitical government and financial elites who use complexity to perpetuate their own privileged class through rent-seeking — the accumulation of wealth through non-productive means. Think about it this way; the financialization of the global economy, and the explosion of government on a global scale are really all about harnessing complexity for the benefit of privileged classes. It’s why supranational, quasi-government organizations like the IMF, World Bank, G-20, and European Union have become so influential and self-perpetuating. It’s why increasing complexity in finance leads to the extraction of financial resources from society at large and directs them towards financial and government elites in the form of taxes, bailouts, usurious consumer fees, deceptive derivatives and bonuses. And it’s why, for instance, the IMF can get away with proposing even more complex global monetary instruments like SDR’s (Special Drawing Rights) through what they argue is a process that “may be relatively fast and need not involve significant public support.” (Us hoi polloi needn’t worry our heads about such things I guess… It’s too complex after all, and in any case the IMF will decide for us.) In the end, it’s this complexity that crushes citizens under the weight of rent extraction from a parasitical class. The end-result is an exponential increase in instability and an increasing possibility of collapse. Summarizing Tainter, Rickards says we now have three choices: simplification – descaling society and returning the input-output ratio to a more sustainable level by, for instance, devolving political and economic power away from the self-perpetuating, parasitical elites in government and finance to more local and decentralized systems; continued conquest – the effort to take resources from neighbors by force in order to provide new inputs (U.S. foreign policy); or collapse – a sudden, involuntary and chaotic form of simplification. It’s wishful thinking to believe that the highly complex global systems we have today will descale and simplify to more sustainable levels on their own. But you can take individual action by simplifying your own life and decoupling to the extent possible from the complex and unstable systems on which most of us now depend. At its core, resiliency is really about the stability that simplicity makes possible. It’s indeed possible for individuals to weather instability and collapse, but it starts with individual action. Self-reliance, stability and simplicity are the best hedges in an increasingly complex and unstable world.

### Growth Unsustainable-DeDev Solves-Laundry List

Status quo growth-based economies will cause extinction by making ecological problems, resource deficiencies and collapse inevitable – it also makes poverty inevitable which is morally disgusting – technological fixes will inevitably fail – shift to a simpler, sustainable lifestyle is key to avoid catastrophes – economic collapse and redistribution of wealth are key to trigger a consciousness shift, which is a pre-requisite to embracing ‘zero-growth’ economies

Samuel Alexander, April 20th, 2012, 4/20, founder, Simplicity Collective, Australian-born British philosopher, “Ted Trainer and the Simpler Way,” simplicity institute report,

1. INTRODUCTION For several decades Ted Trainer has been<http://simplicitycollective.com/wp-content/uploads/2012/04/TedTrainerandTheSimplerWay3.pdf> developing and refining an important theory of societal change, which he calls The Simpler Way (Trainer, 1985; Trainer, 1995; Trainer, 2010a). His essential premise is that overconsumption in the most developed regions of the world is the root cause of our global predicament, and upon this premise he argues that a necessary part of any transition to a sustainable and just world involves those who are overconsuming accepting far more materially ‘simple’ lifestyles. That is the radical implication of our global predicament which most people, including most environmentalists, seem unwilling to acknowledge or accept, but which Trainer does not shy away from and, indeed, which he follows through to its logical conclusion. The Simpler Way is not about deprivation or sacrifice, however; it is about embracing what is sufficient to live well and creating social and economic systems on that basis. This essay presents an overview of Trainer’s position, drawing mainly on the most complete expression of it in his latest book, The Transition to a Sustainable and Just World (Trainer, 2010), an analysis which is supplemented by some of his more recent essays (Trainer, 2010b; Trainer, 2011). My review is designed in part to bring more attention to a theorist whose work has been greatly underappreciated, so the review is more expository than critical. But in places my analysis seeks to raise questions about Trainer’s position, and develop it where possible, in the hope of advancing the debate and deepening our understanding of the important issues under consideration. I begin by outlining the various elements of The Simpler Way and proceed to unpack them in more detail. 2. OUTLINE OF THE SIMPLER WAY The premise of Trainer’s position, as noted, is that a necessary part of any transition to a sustainable and just world involves those who are overconsuming accepting far more materially ‘simple’ lifestyles. Given the extent of ecological overshoot (Global Footprint Network, 2012), Trainer argues that there is no way to sufficiently decouple current economic activity from ecological impact in the time available, which necessitates moving away from high impact, Western--‐style consumer lifestyles without delay. While Trainer is unreservedly in favour of renewable energy, he presents an evidential case that renewable energy and other ‘tech--‐fixes’ will never be able to sustain energy and resource intensive consumer societies. This goes against the grain of mainstream environmental thinking which seems to assume that ecological sustainability can be achieved without giving up high consumption, energy--‐intensive lifestyles. Trainer also insists that mere ‘lifestyle’ changes are insufficient to achieve sustainability; fundamental structural change is also required. On that basis Trainer proposes that growth--‐based, consumer capitalism must be replaced with a zero--‐growth or ‘steady state’ economy. In recent decades many other theorists have also been arguing for a steady state economy (Daly, 1991; Victor, 2008; Jackson, 2009), but Trainer maintains that even most advocates of a steady state economy do not appreciate the radical implications of such an economic framework; most importantly, they do not seem to appreciate that a zero--‐growth economy implies giving up interest bearing loans, since that mode of financing economic activity requires capital growth in order to pay back the debt plus the interest. Even the Transition and Permaculture Movements (Hopkins, 2008; Holmgren, 2002), which Trainer believes are the most promising eco--‐ social movements at present, are subjected to his sympathetic criticism for seemingly 2 trying to build more resilient and sustainable communities within consumer capitalism, rather than focusing on the more radical project of replacing consumer capitalism. After presenting his critical analysis of the global situation, Trainer describes his vision of The Simpler Way, which is a vision of communities creating highly localised, zero--‐growth economies, based on far lower resource and energy consumption than what is common in developed nations today, and in which the profit motive has been largely or entirely removed. Since Trainer believes that governments are inextricably intertwined with the economic imperative to grow, his theory of change is fundamentally ‘anarchistic,’ in the sense that he believes that ‘top down’ parliamentary processes cannot be relied on to play any significant role in restructuring society for The Simpler Way. The change that is needed, he argues, if it is ever to arrive, must be driven by grassroots, community--‐based action. It is a peaceful revolution that Trainer envisions, but a revolution all the same, and it is one that he believes can be completed in a matter of months (Trainer, 2010a: 14), provided a critical mass of people are prepared to act for its realisation. The problem is not what needs to be done. ‘That’s easy,’ he asserts (Trainer, 2010a: 15). ‘The problem is developing the understandings and values whereby ordinary people will want to design and build the new systems, and will delight in doing so’ (Trainer, 2010a: 15). 3. THE GLOBAL PREDICAMENT Trainer’s vision of The Simpler Way can only be understood in relation to his diagnosis of the global situation, which arises out of the ‘limits to growth’ analysis (Meadows et al, 2004). He argues that the most serious fault in the existing economy is the commitment to industrialised production, global trade, consumer lifestyles, and limitless economic growth. While the figures and statistics on resource depletion and environmental degradation are well known (MEA, 2005), their significance are not generally acknowledged or fully understood. Trainer contends that very few people recognise the real extent of ecological overshoot. The global economy, he argues, is far beyond the levels of resource and energy use that can be maintained for much longer, let alone spread to all people. Add to this situation the fact that global population will increase to 9 billion in the next few decades and the magnitude of our problems becomes clear. ‘Our way of life,’ he concludes, ‘is grossly unsustainable’ (Trainer, 2010a: 19).1 Trainer employs recent data on humanity’s ‘ecological footprint’ to reinforce his diagnosis (see Trainer, 2010a: 20). Recent estimates hold that it takes 8 ha of productive land to provide water, energy, and settlement area for one person living in a rich nation. So if 9 billion people were to live as the average Australian does, for example, we would need about 72 billion ha of productive land, which is about 9 times the productive land that is available on the planet. An even more coercive argument, Trainer insists, can be based on the greenhouse problem. It is increasingly accepted that we must totally eliminate all carbon emissions by 2050 (see Hansen et al, 2008), but Trainer argues that it will not be possible to do this while maintaining consumer--‐capitalist society. This is primarily because it will not be possible to run an energy--‐intensive, industrial economy on renewable energy, nuclear energy, and geosequestration (Trainer, 2007; Trainer, 1 Trainer dedicates very little attention to the issue of overpopulation, which many will consider a significant weakness to his position. He is very aware of the problem, of course, which he builds into his diagnosis of the global situation; and he recognises the importance of stabilising and reducing population. But he could strengthen his position by discussing population issues in more detail. It is worth noting, however, that even if the world’s population stopped growing today (at 7 billion), the planet would remain dangerously overburdened by high consumption lifestyles, so focusing primarily on consumption has some justification. There is certainly a risk that the population problem gets used to deflect attention away from what Trainer argues is the more fundamental problem of overconsumption, and perhaps this explains why Trainer has largely avoided the population debate so far. 3 2010b), a point to which we will return in the next section. Of course, even if consumer societies could be maintained on renewable energy or other post--‐carbon technologies, that would not change the fact that resource consumption is already far too high, even at current levels. In other words, the energy problem is but one of many aspects to the ecological crisis. To make matters worse, there is a mounting body of evidence indicating that the richest nations are experiencing a breakdown of social cohesion and a stagnation or even falling quality of life (e.g. Lane, 2000), due primarily to their materialistic value orientations (Hamilton and Denniss, 2005; Kasser, 2002). This implies that even if we could sustain consumer societies over the long term, we would not want to (Alexander, 2009; Alexander, 2011a). The problems do not, however, end there. In addition to the ecological and social issues just described, Trainer highlights the absurdity of current attitudes toward economic growth. Despite the evidence showing that the global economy is already exceeding the sustainable carrying capacity of the planet, even the richest nations on the planet seem determined to increase present living standards as much as possible and without apparent limit (Hamilton, 2003). What is not well understood, however, is just how unrealistic this growth project has become. Trainer makes the essential point in painfully clear terms: ‘If we [in Australia] have 3% p.a. increase in output, by 2070 we will be producing eight times as much every year. If by then all the expected 9 billion had risen to the living standards we would have then, the total world economic would be more than 60 times as great as it is today’ (Trainer, 2010a: 21). These types of calculations can never be precise, which Trainer accepts; but given that the present level of economic activity is already unsustainable, it should be clear that the limitless growth project on a finite planet is impossible. This growth paradigm, however, continues to define the global development agenda (Purdey, 2010), although the peaking of oil and the bursting of credit bubbles seem to be in the process of the shattering that fantasy (Heinberg, 2011; Alexander, 2011b; Martenson, 2010). It may be, therefore, that the world is entering the twilight of growth whether it wants to or not. If by some genuine miracle, growth--‐based, consumer societies could be made ecologically and economically sustainable, as well as socially desirable, Trainer insists they would still be morally unacceptable, especially when considered in a global context. The enormous amount of poverty and suffering in the world is not due to lack of resources, for instance, but because of a market system that distributes resources only to those who can pay for them, rather than to those who would benefit most from them. ‘That’s why we in the rich counties get most of the oil produced. It is also why more than 600 million tonnes of grain are fed to animals in rich countries every year, over one--‐ third of total grain production, while more than 850 million people are hungry (Trainer, 2010a: 24). According to Trainer, the perversity of this system of distribution is an inevitable consequence of an economic system that privileges whatever industries are most profitable, as distinct from those that are most necessary or appropriate. That is why plantations and factories in the Third World generally produce things to export to rich countries, rather than producing things needed by the world’s poorest people. ‘This is most disturbingly evident,’ Trainer maintains, ‘where most of the best land is devoted to export crops while millions are malnourished’ (Trainer, 2010a: 24). Even leaving ecological issues to one side, the confronting moral that Trainer draws from this analysis is that the affluence enjoyed in rich counties is built on a global economic system that is, at its core, patently unjust. It is a system that enables the rich countries to take far more than their fair share of the world resources, while depriving the poorest countries of the resources needed to live even a minimally decent existence. Not only that, rich nations work hard to entrench and maintain their empires using coercive aid contributions, trade power, ‘structural adjustment packages,’ and, whenever necessary, military force. This is not a message the rich world is prepared to receive. For all these reasons (among others discussed below), Trainer concludes that consumer capitalism cannot be fixed or reformed; it has to be replaced. 4 4. THE LIMITS OF TECHNOLOGY AND RENEWABLE ENERGY At this point it is worth looking more closely at Trainer’s critical perspectives on technology and renewable energy, because his claims on these subjects contradict widely held assumptions. Most people, including most environmentalists, seem to believe that Western--‐style lifestyles can indeed be sustained and even globalised, provided the world transitions to systems of renewable energy and produces commodities more cleanly and efficiently. This assumption is reflected especially clearly in international political discourse on environmental issues (e.g. UNDP, 2007/8), which consistently pushes the message that we can decouple economic growth from ecological impact, or even that we need more economic growth in order to fund environmental protection initiatives and thus save the planet (Beckerman, 2002). Trainer casts considerable doubt on the possibility of any technological ‘fix’ to ecological problems. 4.1. Technology Cannot Sustain the Growth Paradigm Trainer’s general point on technology is that the extent of ecological overshoot is already so great that technology will never be able to solve the ecological crises of our age, certainly not in a world based on economic growth and with a growing global population. Amory Lovins (1998) is probably the best--‐known advocate of technological solutions to ecological problems, most famous for his ‘factor four’ thesis. He argues that if we exploit technology we could have four times the economic output without increasing environmental impact (or maintain current economic output and reduce environmental impact by a factor of four). But as we have already seen, if the rich world continues to grow at 3% per year until 2070 and by that stage the poorest nations have attained similarly high living standards – which is the aim of the global development agenda – total world economic output (and impact) could well be as much as 60 times larger than it is today. If we assume that sustainability requires that fossil fuel use and other resource consumption must be half of what they are today (and the greenhouse problem would require a larger reduction than this), then what is needed is something like a factor 120 reduction in the per unit impact of GDP, not merely a factor 4 reduction (Trainer, 2007: 117). Again, even allowing for some uncertainty in these calculations, the claim that technological solutions can solve the ecological crises and sustain the growth paradigm is simply not credible. Trainer has shown that the absolute decoupling necessary is just beyond what is remotely possible. The final nail in the coffin of techno--‐ optimists is the fact that despite decades of extraordinary technological advance, the overall ecological impact of the global economy is still increasing (Jackson, 2009: Ch. 4), making even a factor four reduction through technological advance seem wildly optimistic. 4.2. Renewable Energy Cannot Sustain Consumer Societies Trainer has also levelled a narrower critique of technological solutions, which focuses on renewable energy (Trainer, 2007). Environmentalists commonly argue that life as we know it can indeed be sustained, provided the world transitions to systems of renewable energy. From that perspective, there is no need to question affluent lifestyles or the global commitment to economic growth. Driven by doubts over the validity of that perspective, Trainer set himself the task of examining the crucially important and almost completely neglected question of what the limits of renewable energy sources might be. This is not the place to review in detail Trainer’s arguments and research, which would be a laborious task given the meticulous and necessarily dry nature of his analysis of the evidence. For the facts and figures, readers are referred to Trainer’s books and essays (esp. Trainer, 2007; Trainer, 2010b; Trainer, 2012a). But the critical 5 findings of his research can be easily summarised. After examining the evidence on varieties of solar, wind, biomass, hydrogen, etc., as well as energy storage systems, Trainer discovered that the figures just do not support what almost everyone assumes; that is to say, they do not support the argument that renewable energy can sustain consumer societies. This is because the enormous quantities of electricity and liquid fuels required by consumer societies today simply cannot be converted to any mixture of renewable energy sources, each of which suffer from various limitations arising out of such things as intermittency of supply, storage problems, resource limitations (e.g. land for biomass competing with food production), and inefficiency issues. Ultimately, however, the cost is the fundamental issue at play here. Trainer provides evidence showing that existing attempts to price the transition to systems of renewable energy are wildly understated (see Trainer, 2012a). This challenging conclusion, however, only defines the magnitude of the present problem. If we were to commit ourselves to providing 9 or 10 billion people with the energy resources currently demanded by those in the richest parts of the world, then the problems and costs become greater by orders of magnitude. The challenges are exacerbated further by the existence of the ‘rebound effect,’ a phenomenon that often negates the expected energy use reductions of efficiency improvements (see Holm and Englund, 2009; Jackson, 2009: Ch. 4). At times efficiency improvements can even be the catalyst for increased energy consumption, a phenomenon known as the ‘Jevons’ paradox (see e.g. Polimeni et al, 2009). Going directly against the grain of mainstream thinking on these issues, Trainer is led to conclude that renewable energy and efficiency improvements will never be able to sustain growth--‐based, consumer societies, primarily because it would be quite unaffordable to do so. It is of the utmost importance to emphasise that this is not an argument against renewable energy, as such; nor is it an argument more broadly against the use of appropriate technologies to achieve efficiency improvements. Trainer argues without reservation that the world must transition to full dependence on systems of renewable energy without delay and exploit appropriate technology wherever possible (Trainer, 2007: 117). But given the limitations and expense of renewable energy systems, any transition to a just and sustainable world requires a vastly reduced demand for energy compared to what is common in the developed regions of the world today, and this necessitates giving up growth--‐based, consumer societies and the energy--‐intensive lifestyles they support and promote. 5. THE RADICAL IMPLICATIONS OF A ZERO-­GROWTH ECONOMY The implications of the foregoing analysis can hardly be exaggerated. For two centuries economic growth has been deemed a proxy for human progress, held up as the solution to all our problems and the surest path to prosperity. But today the legitimacy (even the viability) of the growth project has been radically called into question, at least with respect to the most developed regions of the world. If we accept that the global economy is already in ecological overshoot; that the poorest nations on the planet have a right to increase their standards of living to some dignified level; and that the global population will exceed 9 billion within a few decades, then by force of reason it would seem that the richest nations must give up the pursuit of continued growth and create some zero--‐ growth or ‘steady state’ economy. In fact, the extent of the global predicament implies that the richest nations even need go through a phase of planned economic contraction, or ‘degrowth,’ before stabilising in a steady state economy of a sustainable scale (Alexander, 2012a). The situation would be different, perhaps, if there were firm grounds for thinking that technology and renewable energy could radically and rapidly reduce the ecological impact of the global economy and sustain energy--‐intensive lifestyles for all in a sustainable fashion. But for the reasons outlined above, there are no such grounds. 6 If people were to accept this diagnosis, or something like it, what would that actually mean for the most developed, growth--‐based economies? Trainer (2011) argues that even those who essentially agree with the diagnosis outlined above, and who accept that the world has indeed reached the ‘limits to growth,’ rarely perceive the radical implications that would flow from giving up the growth economy. To be sure, ecological economists have been pointing out the contradiction between the limitless pursuit of economic growth and ecological sustainability for many decades. Herman Daly (1996), for example, has been arguing for the necessity of a ‘steady state’ economy, and in recent years the critique of growth has gained some momentum (Jackson, 2009). But Trainer maintains that the implications of a steady state economy have not been understood well at all, especially but its advocates. Most advocates proceed as if we can and should eliminate the growth element of the present economy while leaving remaining structures more or less as they are. Trainer provides three main criticisms of this position. His first criticism is that eliminating the growth element of the present economy, while leaving the rest more or less as it is, cannot be done. This is because the present economy ‘is not an economy which has growth; it is a growth-­economy, a system in which the core structures and processes involve growth’ (Trainer, 2011: 71). It follows, he argues, that ‘if growth is eliminated then radically different ways of carrying out many fundamental processes have to be found’ (Trainer, 2011: 71). Most importantly, giving up growth would seem to necessitate changing the fundamentals of the existing finance and banking systems, as Trainer explains: If you do away with growth then there can be no interest payments. If more has to be paid back than was lent or invested, then the total amount of capital to invest will inevitably grow over time. The present economy literally runs on interest payments of one form or another; an economy without interest payments would have to have totally different mechanisms for carrying out many processes…. Therefore almost the entire finance industry has to be scrapped, and replaced by arrangements whereby money is made available, lent, invested, etc. without increasing the wealth of the lender. Critics of growth rarely discuss or even acknowledge this issue, and yet it seems fundamental. Abolishing interest payments would touch the very core of growth--‐based economies, and it is not clear that a zero--‐growth economy could ever emerge if an interest--‐based system were to persist (Douthwaite and Fallon, 2011). This is certainly an issue to which progressive economists must dedicate much more attention, because people are unlikely to give up the present monetary system until they have a detailed picture of a viable alternative. On a different note, eliminating poverty in a zero--‐growth economy could not be achieved by continued growth (i.e. by a rising tide lifting all boats), since growth comes to an end (Woodward and Simms, 2006). Instead, eliminating poverty in a zero--‐growth economy could only be achieved by a redistribution of wealth and power, both nationally and globally. Among other things, this would need to include the Third World being allowed access to and control over their own resources, which are sufficient to provide a dignified quality of life but which are presently syphoned away by ‘development’ (see Trainer, 2010a: Ch 5). Thus a zero--‐ growth economy must be much more egalitarian than any capitalist society, past or present. Fortunately, this broad--‐based distribution of wealth is likely to produce healthier and happier societies compared to those societies in which wealth is highly polarised (Wilkinson and Pickett, 2010). But the mechanisms for redistribution are so controversial that they are rarely discussed (Alexander, 2011c). Trainer’s second major point of criticism is that critics of growth typically proceed as if economic systems were the only or the primary things that have to be fixed. But Trainer (2011: 71) argues that the major global problems facing us cannot be solved 7 ‘unless several fundamental systems and structures within consumer--‐capitalist society are radically remade.’ For example, and most importantly, there would need to be a radical change in cultural attitudes toward consumption. This is because a zero--‐growth economy would never voluntarily arise, or be able to function, within cultures generally comprised of individuals seeking ever--‐higher levels of income and consumption. Accordingly, before growth economics can be overcome, some notion of economic sufficiency must be embraced at the cultural level (Alexander, 2011c; 2012b). As Trainer frankly notes: ‘What is required is much greater social change than Western society has undergone in several hundred years’ (Trainer, 2011: 17). The point is that a zero--‐ growth economy depends on much more than changing the fundamentals of economic structures. It also implies ‘an utterly different worldview and driving mechanism’ (Trainer, 2011: 77). For present purposes, Trainer’s third and final major point of criticism – which again distinguishes his position from most other growth sceptics – relates to what he believes is the inextricable connection between growth and the market system. If there is to be no growth, he argues, ‘there can be no role for market forces’ (Trainer, 2011: 78, his emphasis), a point he develops in the following terms: The market is about maximising; i.e., about producing, selling and investing in order to make as much money as possible from the deal, and then seeking to invest, produce and sell more, in order to again make as much money as possible. In other words, there is an inseparable relation between growth, the market system and the accumulation imperative that defines capitalism. If we must cease growth, we must scrap the market system (Trainer, 2011: 78). There are two issues with this analysis that deserve comment, although I wonder whether the first is merely a criticism of expression, one that is nevertheless important (for reasons of clarity) but which is potentially easily resolved. When Trainer asserts without any qualification that ‘there can be no role for market forces’ in a zero--‐growth economy, and that ‘we must scrap the market system,’ I worry that he simply misrepresents his own position, given that a close reading of his entire oeuvre shows that his position is much more nuanced. For example, when Trainer talks of ‘scrapping’ the market system he does not mean that this must be done all in one go, as his language implies. His subtler position is that it would be a long process of phasing down the current economy and building up the new one. Furthermore, in the most complete statement of his perspective, Trainer (2010a) never calls for the abolishment of money per se (although he does call for its significant diminishment and reconceptualisation);2 nor does he deny that people in a zero--‐growth economy would still exchange goods and services with each other (although again, he argues that such practices would play much less of a role than they do in consumer societies today and be driven by different motives). But if a zero--‐growth economy could and should involve money and formal exchange to some degree, then it seems to me that it does not scrap the market system, as the above passages claim. After all, to purchase or formally exchange anything is to engage in ‘market activity’ (according to conventional usage of that phrase, at least), and there is no reason to think that such market activity is necessarily always driven by an ethics of profit--‐maximisation. Indeed, in Trainer’s vision of a zero--‐growth economy (described in section 7 below), market activity would not be driven by an ethics of profit--‐maximisation, but presumably by some ethics of genuine mutual benefit and concern. It is important that Trainer refines or clarifies his expression of these points, because his blunt claim that the market must be ‘scraped’ is not going to gain any 2 In Trainer’s economic model, money essentially becomes a record of account merely, as opposed to the current monetary system in which banks issue money as debt on which they get interest (see Trainer, 2010a: 101--‐2). 8 support from those of us who are certain that market activity of some form, to some degree, will always have the potential to advance the human situation, even in a zero--‐ growth economy. As the new economy is built, however, it is likely that the ethics of profit--‐maximisation would wither away and become a mere artefact of history, but one must also acknowledge that presently this is a very distant ideal. My second concern is a more technical one, arising out of critical legal theory. In the passages quoted above, Trainer refers regularly to ‘the market’ or ‘the market system’ as if these were concepts with clear and unambiguous meanings. ‘The market is about maximising,’ he tells us, and when he writes that growth and ‘the market’ are incompatible, the implication is that ‘the market’ has one and only one meaning. But as I have argued at length elsewhere (Alexander, 2011c: Ch. 2) and implied above, there is no such thing as the market, if that is meant to imply a determinate structure that all market societies share. Given that ‘the market’ is an indeterminate concept, there are actually infinite varieties of market systems, each of which augment or diminish human freedom to varying degrees. Markets driven by profit--‐maximisation are but one variety, albeit the dominant form today. The question, therefore, is not a black and white one of ‘free markets’ versus forms of ‘regulation.’ Rather, the question is a normative one about how a society chooses to structure power relations in bargaining, and such a structure can take any number of forms, each of which could fall under the rubric of ‘the free market,’ depending on how the essentially contested idea of ‘freedom’ is defined. After all, it could be argued that a genuinely free market would require considerable social control and look nothing like market systems today. Although I cannot do these arguments (or Trainer’s arguments) justice in the space available, I should note that the same type of anti--‐essentialist analysis can be directed toward the concept of ‘private property,’ for it is also an indeterminate concept that can take any number of institutional forms. It is up to each society to collectively define and limit the contours of property rights, according to some vision of the common good, since property rights are not self--‐defining. It is my view, therefore, that once people free their imaginations of the assumption that ‘private property’ or ‘the market’ necessarily implies growth capitalism, it becomes clear that radically different market systems are possible. It all depends on the normative frameworks or social values that give those vague concepts concrete institutional content. With some justification Trainer levels a highly charged critique of all market activity that is driven by an ethics of profit--‐ maximisation, which he argues is morally repugnant in terms of human interaction, even leaving aside its connection with growth economics. But that seems to be a criticism of the values presently driving market activity, rather than a criticism of market activity, as such, which could be driven by very different values. My point is that there is no need to ‘scrap the market system’ in order to create a zero--‐growth economy. But there is certainly a need for existing market economies to give their market systems radically new content and a much more limited operation, and this depends on them being informed by a new value system. 6. A FRIENDLY CRITIQUE OF TRANSITION INITIATIVES AND PERMACULTURE If the world ever manages to create a tapestry of highly localised, zero--‐growth economies, and by doing so arguably solve the greatest ecological and social challenges of our times, Trainer believes that it will have to be due to something like the Transition Towns movement (Hopkins, 2008). This fast--‐expanding movement is primarily a community--‐orientated response to the dual crises of peak oil and climate change (among other things) and is based on the principles of permaculture (Holmgren, 2002). Although framed in slightly different terms, Trainer and others in the ‘deep green’ environmentalist camp have been arguing for something akin to Transition and permaculture for decades (Trainer, 1985; Trainer, 1995), and so Trainer justly finds it immensely encouraging to see these movements bursting onto the global scene in recent 9 years. But for all their promise, Trainer worries that these movements need to radically alter their visions and goals if they hope to make a significant contribution to solving the global predicament. In his ‘friendly critique’ of the Transition Towns movement, Trainer (2009a, 2009b) articulated his concerns in some detail. ‘Everything depends,’ he begins, ‘on how one sees the state of the planet, and the solution’ (Trainer, 2009a: 1). He goes on to argue that if people do not understand the nature and extent of the crises we face, they will tend to misconceive the best responses to those crises, and set about working toward goals that cannot solve the problems. That is his primary concern about the Transition movement. He is worried that there is too much emphasis merely on building ‘resilience’ within consumer--‐capitalist society, and too little attention given to what Trainer believes is the more ambitious but necessary goal of replacing the fundamental structures of consumer--‐capitalist society. Setting up community gardens, food co--‐ops, recycling centres, Permaculture groups, skill banks, home--‐craft courses, local currencies, etc. are all good things, and the Transition movement is doing all of these things, and much more. But Trainer (2009a: 1) contends that it is a ‘serious mistake’ to think these types of activities are enough, on their own, to create a new society. The existing economy, he argues, is quite capable of accommodating these types of activities without being threatened by them, prompting Trainer to speak of ‘the insufficiency of resilience’ (Trainer, 2009a: 1). What is required, he insists, is that Transition adopts a more radical vision, one which involves replacing the core institutions of consumer--‐capitalism, not merely reforming them or building resilience within them. Trainer’s ‘friendly critique’ understandably received some serious attention by participants in the Transition movement, including prominent figures, Rob Hopkins (2009) and Brian Davey (2009). Although Hopkins (2009: 1) senses that he and Trainer ultimately ‘agree on most things’ in terms of what needs to happen, he did respond to some of Trainer’s concerns in ways that deserve attention. Most importantly, Hopkins (2009: 1) drew the distinction between ‘what is made explicit in Transition and what is kept implicit.’ While Hopkins acknowledged that Trainer is right about the need to replace consumer capitalism, he did not accept that explicitly stating that goal should be a central part of Transition, for the simple reason that most people will be overwhelmed to the point of paralysis by so ambitious a project, or alienated by the language it employs. Hopkins is probably the most prominent figure in the Transition movement and his advocacy of the movement is a large part of its successes. Ever the diplomat, he masterfully walks the fine line between radical and reformer, and I believe he does this for pedagogical reasons. Whereas Trainer calls a spade a spade – and a revolution a revolution – Hopkins is more circumspect. My sense is that Hopkins is equally as radical as Trainer in terms of his vision, but in the hope of gaining a greater audience (which is obviously a necessary and important goal) Hopkins seems less prepared to state his radical vision quite so openly. This does not imply that Hopkins has a secret agenda that he is hiding from people. The point is simply that when activists for change talk about what needs to be done and how we might get there, we must put our minds to the extremely important question of how best to express ourselves, what language to use, and what means of persuasion best advances the causes at hand. After all, it is no good speaking the truth if it is expressed in such a way that most people are unwilling or unable to absorb the message. Indeed, it is probably fair to say that poor ‘advocacy’ is one of the greatest failures of the broader Green Movement to date. At the same time, it is no good being listened to if the message is misconceived. These are some of the complex challenges faced by the Transition movement and the Green Movement more generally, and Trainer and Hopkins deserve credit for grappling with them. Unsurprisingly, how best to proceed remains (and may always remain) an open question – one about which reasonable people can disagree. Brian Davey’s heartfelt response to Trainer’s analysis was more fiery and less diplomatic than Hopkins’, but it raises an equally important point. Like Hopkins, Davey 10 does not so much reject Trainer’s position on what needs to be done so much as he calls for greater realism in terms of the practical challenges faced by Transition. As Davey explains in terms directed at Trainer: ‘it took me years with others to develop a successful community garden project. When I look at your description of all the things that you say the Transition Movement must do I want to scream with frustration’ (Davey, 2009: 1). Davey hastens to add that his is not an ideological objection to Trainer’s critique but a practical one: ‘We are struggling already – the number of people with organisational and social entrepreneurial skills to set things up is small. There are lots willing to follow but few willing, or able, to lead’ (Davey, 2009: 1). Furthermore, Davey laments that Trainer’s vast agenda and critique of existing Transition practices ‘serves more to discourage than anything else because it tells us all the things that we have to do and that are already doing, in many cases run ragged with voluntary overwork – is still not enough.’ We can be certain that Trainer never intended his message to discourage (Trainer, 2009b), but if that could be its effect then it provides Trainer and other sympathetic critics with some food for thought. At the same time, if it is to fulfil its potential, Transition must welcome constructive criticism and be prepared to discuss its weaknesses and failures. It is likely that Davey’s legitimate concerns could have been ameliorated had Trainer expressed himself somewhat differently from the outset. Trainer’s point, which I feel is a valid one, is that existing Transition practices can be easily accommodated within consumer capitalism, and that more is required if fundamental change is ever to eventuate. But by insisting on more radical change, Trainer did not adequately acknowledge the immense practical challenges of such an undertaking (challenges of which he is very aware), and this led to Davey’s exasperated reply. In my view, many people in Transition probably agree with something like Trainer’s ambitious vision (outlined in more detail below), but the practical realities of realising the project are painfully present to activists at every turn, and so less ambitious projects are undertaken in order to achieve something rather than nothing. This is indeed my experience of the Transition Initiative with which I am personally involved. For these reasons I would suggest that Transition may not actually lack a sufficiently radical vision (or visions); instead, it may simply be that the limited resources and energies presently available to the Transition Movement results in actions that seem and are moderate and inadequate, but which are nevertheless necessary building blocks for more ambitious undertakings in the future. From little things big things grow. That must be the hope the Transition Movement clings to as it struggles unsuccessfully (at present) to bring about the enormous changes that are necessary. Without that hope, many people would probably be immobilised by despair. We should always keep one eye on the big picture, no matter how distant or imposing it may seem, which is Trainer’s point. But Hopkins and Davey remind us that any big picture will inevitably be comprised of countless, seemingly insignificant brushstrokes, each of which is a necessary part of the whole. 7. ANARCHISM AND THE SIMPLER WAY In this final substantive section I wish to provide some more detail on the new society that Trainer envisions (2010: Ch. 4), as well as outline the strategy he believes is essential to its realisation. Some people might find the following vision somewhat utopian in its outlook – which would not, in itself, necessarily be a fault. But for several decades now Trainer has been living this vision on his homestead at Pigface Point, in New South Wales, Australia, which he has developed as an educational site promoting The Simpler Way (Trainer, 2012b). Accordingly, he is uniquely placed to evaluate the feasibility of The Simpler Way and describe both its difficulties and delights. 11 7.1. What would The Simpler Way look like? Perhaps the most important feature of The Simpler Way economy is that it moves away from the highly industrialised and globalised growth economies we know today, and moves toward small and highly self--‐sufficient local economies which use mainly local resources to meet local needs. These will be zero--‐growth economies that are sustained on much lower levels of resource consumption and ecological impact – perhaps 90% lower (Trainer, 2010a: 2). This implies that material living standards will be far lower than what is common in consumer societies today – which is an absolutely essential part of any adequate response to the global predicament – but basic needs for all will be met and high living standards will be maintained because people will be living and working cooperatively in enjoyable and spiritually rewarding communities. These lifestyles of voluntary simplicity, therefore, do not mean hardship or deprivation (Alexander, 2012c; Alexander and Ussher, 2012). They just mean focusing on what is sufficient to live well, rather than constantly seeking increased consumption and greater affluence. Although private firms will remain in the new economy, cooperative enterprises will be common too, and where necessary financing of appropriate new ventures will be obtainable on zero interest from a community owned bank. The most important decisions about how the economy should meet the needs of the community will be under social governance. Town meetings will be held regularly to discuss matters of social, economic, and ecological importance, and a Community Development Cooperative (Trainer, 2010a: 303) will be established to help organise and administer the community’s essential goals and ventures, such as full employment and the elimination of poverty. Because overall consumption and production levels will be so greatly reduced from levels common in consumer societies today, the energy demands of this new economy will also be greatly reduced, meaning that renewable energy will easily be able to supply the energy required. The new economy, therefore, will be a post--‐ carbon economy. Aside from renewable energy systems, however, technology would be quite basic – Trainer suggests we imagine something like 1950s technology – but this would nevertheless be more than sufficient for the purposes outlined above. How would the community’s needs be met? Organically grown food would be eaten in season and mainly produced in intensive home gardens and community gardens, and in small farms on the edge of urban settlements. For ecological and social justice reasons, meat consumption would reduce significantly. Permaculture principles and animal labour would greatly reduce the need for agricultural machinery, although Trainer (2010a: 82) anticipates that a small number of motorised vehicles and farming machines would still make sense, which would run on very limited ethanol produced from biomass, or electricity. Surplus production would be sold or exchanged in local markets for other necessary items, or left at the community centre for distribution. Common property – including much land that was once roads or parking lots – would be dug up and redeveloped productively into ‘food forests’ and maintained by community working bees. The concrete and bitumen could be recycled as building materials and the bitumen lumps could be stacked to create animal pens. The fashion industry would essentially come to an end, and a new aesthetic would develop based on functional, long lasting, and locally produced clothing. Houses would be small and humble but well designed or retrofitted, and they would be more densely inhabited than is common in many Western societies today. Most furniture would be homemade, and overall home production of necessary goods and services would increase significantly. Given the extent of home production and the minimal consumption of material goods, time spent in paid employment would decline dramatically, to as little as one or two days per week, but life would always remain busy and exciting because there would always be so much important work to do. Indeed, Trainer (2010a: 96) argues that in The Simpler Way the work / leisure distinction collapses. Furthermore, he anticipates that the cultural significance of things like television and computerised entertainment would 12 decline markedly or even disappear, and this would leave much more time for engaging in creative, productive and more fulfilling activity. ‘There would be little need for transport to get people to work,’ Trainer (2010a: 93) explains, ‘because most work places would be localised and accessible by bicycle or on foot…. Railway and bus production would be one of the few activities to take place in large centralised heavier industrial centres.’ Another implication of the new circumstances would be that international travel and trade would be rare, due to the greater appreciation and productivity of one’s own locality, as well as the far greater fuel costs associated with travel and shipping in an age of declining petroleum supplies (Rubin, 2008). Trainer (2010a, 2012c) also presents some interesting calculations regarding the ecological footprints and dollar costs implied by the type of communities described above. While acknowledging that his calculations are not exact, the data he presents (based primarily on his own practices and ‘ecological footprint’ analyses) suggest that per capita resource and energy use, and GDP per capita, could be reduced by as much as 90% of current levels in consumer societies (Trainer, 2012c). Trainer notes that it may be that such great reductions will not be necessary, but he presents a case showing that ‘it would be possible and easy to cut our resource consumption and ecological impact to very small proportions of present rates if we adopted the ways discussed’ (Trainer, 2010a: 111). This brief outline of The Simpler Way no doubt raises as many questions as it answers, but it should suffice to provide some insight into the nature of the society Trainer envisions (see also, Batterbury, 1996). For more details on the new economy – including Trainer’s views on water, building materials, law, media, retirement, medicine and healthcare, education etc. – the reader is referred especially to Chapter 4 of Trainer’s (2010a) Transition text. 7.2 Trainer’s Anarchist Response to the Question of Strategy It should perfectly clear, even from the brief description above, that Trainer believes that the changes required to existing consumer societies are profound and far--‐reaching. The final matter to be considered, therefore, is the critically important question of how The Simpler Way can best be realised, because it is not enough to merely ‘envision’ a sustainable, just, and flourishing human society. We must figure out how best to get there, and Trainer gives this question of ‘strategy’ due attention (Trainer, 2010a: Part III). Trainer’s analysis begins with what is essentially a Marxist critique of the capitalist state and proceeds to offer what is essentially an anarchist solution. The Marxist line of thinking holds that the capitalist state is essentially an instrument of the ruling elites, which functions mainly to promote and secure the interests of the rich and powerful, at the expense of almost everyone else. The primary aim of state capitalism is capital expansion, plain and simple. Although framed in slightly differently terms, Trainer is largely sympathetic to this critical understanding of state capitalism, and with good reason. It certainly seems to be the case that governments in capitalist societies treat economic growth as their primary and overriding concern (Hamilton, 2003), so appealing to those governments to create a more egalitarian, zero--‐growth economy seems more or less doomed to failure. This type of analysis of the state prompted Marx (and the orthodox Left more generally) to argue that radically changing society requires taking control of the state for socialist purposes – by way of violent revolution, if necessary. This is where Trainer parts company with Marx and shifts to the anarchist camp. While Trainer agrees that capitalism cannot be fixed, he argues that the state is so bound up in the values, structures, and mechanisms of growth that the imperative to grow is essentially a necessary element of all states, not merely capitalist states. Generally speaking, Marx and the orthodox Left never considered this to be a problem, because they too were 13 firmly situated within the growth model. After all, they hoped to take control of the state but then distribute the proceeds of growth more equitably. But if Trainer is correct that all states are inextricably committed to growth, then advocates of a zero--‐growth economy should not waste their time lobbying governments to advance their cause. Indeed, as a matter of strategy, Trainer argues that advocates of a zero--‐growth economy must essentially ignore state capitalism to death by setting about building the alternative economy themselves, without expecting any help from the state (and probably receiving a lot of resistance from it). More radically still, Trainer even maintains that ‘the Green Politics goal of parliamentary solutions, [is] mistaken and useless now’ (Trainer, 2010a: 13), perhaps even ‘counter--‐productive’ (2010a: 256), on the assumption that the state will never voluntarily dissolve the structures of growth that drive ecological degradation. We have limited time, resources, and energies, Trainer argues, so we should not waste them running for office or even campaigning for the Greens, because the state will be either unwilling or unable to help us. Advocates of zero--‐growth should just get active in their local communities and begin building the new society amongst the grassroots, here and now. This is the sense in which Trainer positions himself as an anarchist.3 It seems to me that even those who do not agree with Trainer on the question of anarchism will nevertheless benefit from thinking through his original, incisive, and provocative analysis of these issues. To what extent can we rely on governments to solve our problems? To what extent must we solve them ourselves, at the personal and community levels? How best can we direct our limited time, resources, and energies to bring about the radical changes that are needed? A full critical assessment of Trainer’s response to these questions lies well beyond the scope of this essay, but allow me tentatively to offer some probing, cursory remarks. My first point concerns the fact that our lifestyles decisions, including our consumption decisions, do not take place in a vacuum. Instead, they take place within social, economic, and political structures of constraint, and many of those structures are a function of laws and policies created by the state. Those structures make some lifestyles decisions easy or necessary and other lifestyle decisions difficult or impossible. Currently, as I have argued elsewhere (Alexander, 2012d), those structures not only promote consumerist lifestyles but they also make oppositional lifestyles of voluntary simplicity very difficult, and in some respects impossible. In my own experience, I discovered that I could live very happily on 10% of the average fulltime Australian income, albeit it in unusual circumstances, and I did so for two years until my simple living experiment was ended by the force of law (see Alexander, 2010). This type of structural ‘lock in,’ which is often subtle and insidious, can suffocate any attempt to create ways of life and social movements based on post--‐consumerist values, because current laws and structures make the practice of living more simply extremely challenging, even for those who already hold post--‐consumerist values. This is highly problematic because The Simpler Way and the zero--‐growth economy it promotes depend on the emergence of a post--‐consumerist culture. In one sense this seems to support Trainer’s view that the state is intimately implicated in the growth model – so implicated, it would seem, that it can even function to ‘lock’ people into consumerist lifestyles (Sanne, 2002). There is much to be said in support of this argument, and it casts further doubt on the prospect that governments 3 Trainer (2009b) recognises that the term ‘anarchism’ has severe public relations issues to overcome, but he uses the term nevertheless on the basis that it is the most accurate term to describe the position he holds. I wonder, however, whether the terms ‘radical democracy,’ ‘direct democracy,’ or ‘participatory democracy’ might serve him better. The term anarchism seems to terrify or alienate most people, and it is widely misused in media. My concern is that persuading people to The Simpler Way will be challenging enough without having to deal with the popular misconceptions of anarchism. 14 will ever give up the growth paradigm. Accordingly, as Trainer suggests, perhaps we should not waste our time on trying to persuade our political leaders to do so – just like we should not try to persuade zebras to change their stripes. From another angle, however, the argument casts some doubt on the viability of Trainer’s anarchist strategy, because if people are indeed locked into consumerist lifestyles to some extent, then ‘top down’ structural change may be needed to ‘unlock’ people from those lifestyles. If the structures were changed, different consumption practices and ‘ways of life’ would or could emerge. Only then, it could be argued, will participants in a post--‐consumerist social movement be sufficiently free to create a new economy in the ‘grassroots’ manner Trainer envisions. One reply to this line of questioning would be to acknowledge that the structure of growth economies can indeed ‘lock’ people into consumerist lifestyles but insist that changing those structures does not require state action, only committed community action. While I would be sympathetic to this reply, it does not change the fact that existing structures function to oppose the necessary community action. I offer no solution to these unsettled issues. My purpose is only to outline questions that can be raised when Trainer’s anarchist strategy is viewed through the lens of law. My second point about Trainer’s strategy concerns the optimistic assumptions he seems to make about the chances of human beings working peacefully and cooperatively together for common good, in the absence of state coercion. This is an issue all anarchists must deal with, for despite the undeniable beauty of their assumptions, many would argue that there are just too many people out there with strangely configured worldviews and behavioural histories, and that state coercion is therefore necessary to keep these people from imposing themselves on society in oppressive or violent ways. This is a challenge that has a long history in the literature on anarchism, and I acknowledge that anarchists are not without their counter--‐arguments. But this is not the place to review and evaluate that thorny debate. I merely point out that the debate is ongoing and is unlikely ever to be closed. I should add, however, that Trainer’s vision would seem much less ‘utopian’ if a case could be made that it is actually in people’s immediate self--‐interest to live simpler lives of reduced consumption and engage in the creative process of building a new society. This may seem like a counter--‐intuitive possibility in an age that glorifies consumption as never before, but an impressive body of evidence is mounting which suggests otherwise (see Alexander, 2012c). In accordance with ancient wisdom traditions, this research indicates that once our basic material needs are met, getting richer does not contribute much to our overall wellbeing compared to things like community engagement, social relations, and creative activity. What this means is that most people leading high consumption lives could actually live better on less (and Trainer certainly believes this to be the case). This is extremely encouraging news, because if this message ever entered the collective consciousness of consumer societies, it could well spark the cultural revolution in attitudes toward consumption upon which a sustainable and just world relies. That is, if people en masse came to see that a simple life is a very good life, quickly the world would change in fundamental ways. My final point about Trainer’s anarchist strategy builds upon the point just made. Let us optimistically suppose that post--‐consumerist values were mainstreamed over the next decade and a critical mass of people began to see the desirability and necessity of The Simpler Way. Let us suppose further that this social movement began building the new society more or less according to Trainer’s vision described above. My question is this: Would there not come a time when this social movement was so large and well organised that the state simply could not ignore its demands? And at that time, could not the state be employed to advance the goals of The Simpler Way and facilitate the transition to a sustainable and just world? These are questions that I ask myself in optimistic moods, and in those moods I confess to answering them in the affirmative. After all, if one is entitled to make optimistic assumptions about the possibility of a 15 culture embracing The Simpler Way, it seems equally permissible to assume that our governments might one day be capable of acting in more enlightened ways too. If one is an anarchist ‘on principle,’ this will be unsatisfactory because it still involves the state (however enlightened it may become); but if one is currently a ‘pragmatic anarchist’ more as a matter of strategy than principle, then this possibility should not be closed off in advance, because strategies might need to change when the world changes (as it promises to do!). Indeed, those who rule out the possibility of more enlightened state action should at least take a moment to mull over Ludwig Wittgenstein’s remarks on the future (as quoted in Rorty, 1979: viii): When we think about the future of the world, we always have in mind its being at the place where it would be if it continued to move as we see it moving now. We do not realize that it moves not in a straight line, but in a curve, and that its direction constantly changes.

### Lowering Consumption Key-Tech Can’t Solve

Growth is unsustainable----technological innovations and decoupling will not solve. We must lower our rates of consumption.

Alexander and Ussher 12 (\* Dr. Samuel Alexander (primary and corresponding author), Co-­‐Director of the Simplicity Institute and lecturer at the Office for Environmental Programs, University of Melbourne., \*\* Dr. Simon Ussher, Co-­‐Director of the Simplicity Institute., “The Voluntary Simplicity Movement: A Multi-­ National Survey Analysis in Theoretical Context”, AN ABRIDGED AND REVISED VERSION OF THIS REPORT IS APPEARING IN THE JOURNAL OF CONSUMER CULTURE 12(1) (2012)., http://simplicityinstitute.org/wp-content/uploads/2011/04/The-Voluntary-Simplicity-Movement-Report-11a.pdf)

Many credible scientific studies have shown that the human economy is degrading the planet’s ecosystems in ways that are unsustainable (Wackernagel, 2002; Millennium Ecosystem Assessment, 2005; WWF, 2010; Hansen, 2011). While this is hardly news, the full implications of the ecological crisis are rarely acknowledged or understood, at least with respect to what it means for the ‘Western-­‐style’ consumption practices of the global consumer class.1 It is clear enough that human beings need to consume differently and produce commodities more efficiently (Arrow et al, 2004). But few people (and no governments, in the developed world, at least) are prepared to accept that attaining an ecologically sustainable global economy requires the global consumer class to consume less. On the contrary, the mainstream position [is] on sustainability seems to be that economies around the world simply need to adopt ‘sustainable development,’ which in theory means continuing to pursue economic growth (i.e. increases in GDP per capita) while employing science and technology to produce and consume more cleanly and efficiently (e.g. UNDP, 2007/8, p. 15). This mainstream vision of how to achieve a sustainable world is coherent in theory, at best, but demonstrably it does not reflect empirical reality. Although many economies around the world are indeed getting better at producing commodities more cleanly and efficiently (a process known as ‘relative decoupling’), overall ecological impact is nevertheless still increasing, because every year increasing numbers of commodities are being produced, exchanged, and consumed as a result of growing economies (Jackson, 2009, Ch. 5). We might have more fuel-­‐efficient cars, for example, but the rebound effect is that we are also driving more and buying more cars. This is but one example of the ‘Jevons Paradox’ that permeates market societies and beyond (Polimeni et al, 2008) – a paradox, so-­‐ called, because a per unit reduction in the throughput of commodities does not actually lead to reduced ecological impact, since those efficiency improvements are outweighed by the increasing amounts of commodities that are consumed (Holm and Englund, 2009). The obvious implication of this is that technology and efficiency improvements are not going to solve the ecological crisis, as their most optimistic advocates suggest they can – at least, not unless the global consumer class also downshifts to some significant extent from its currently unsustainably high levels of consumption. Since voluntary simplicity as a way of life generally implies ‘choosing to live on less,’ we see the mainstreaming of its ethos into the global consumer class as being an absolutely necessary part of any effective response to the ecological crisis.

### Lowering Consumption Key-Resource Depletion

Growth is unsustainable---the rates of consumption will far exceed the amounts of available resources.

Friedrichs 10 (Jorg, University of Oxford, Department of International Development, “In the long run we are all dead Confronting the Transitory Nature of Industrial Society”, Paper presented to the 7th Pan-European IR Conference in Stockholm, 9-11 September 2010, http://www.stockholm.sgir.eu/uploads/Paper%20Friedrichs.pdf)

Industrial society will pass away. This is as sure as the fact that we must die. Short of a miraculous technological breakthrough, industrial society cannot outlast the availability of finite energy resources such as oil, gas, coal, and uranium. The spectre of catastrophic climate change indicates that it may become unviable even before the resource base is exhausted.4 The reason is simple: in a world where material resources are finite and environmental sinks have limited capacity to absorb emissions, the extractive and polluting intensity of industrial society is not sustainable. Once vital resources have been depleted, world population cannot continue – as it does today – exceeding the “carrying capacity” of the planet. In the meantime, industrial society is already testing the absorptive capacity of the atmosphere. Accordingly, even a steady state without further economic growth is unsustainable. But industrial society as we know it is premised on growth. Without the expectation of growth, credit markets must break down and sustained investment becomes impossible. However, if world economic output grew by 3% per annum, it would double after 23 years and quadruple after 46 years. This means that, other things being equal, humanity would consume 16 times more resources and emit 16 times more pollutants a century from now. If you believe that resource intensity and pollution can be reduced by 50% due to technological progress, a century from now the world economy would still consume 8 times as many resources and emit 8 times as many pollutants as today. Although demographics is moving away from the historical pattern of exponential growth, world population is projected to grow from 6.9 Billion (2010) to 9.15 Billion (2050).5 Now imagine a world of 9.15 Billion people where the global economy was 8 or 16 times larger than it is now. The planet would hardly be able to yield sufficient food and energy resources, and to absorb the carbon and other emissions generated. And yet, industrial society depends on the wasteful use of finite energy resources, as well as the capacity of the environment to absorb anthropogenic pollutants and waste products. In short, the problem with industrial society in a finite world is that it depletes natural resources and strains environmental sinks.

Growth is unsustainable and technology can’t solve---if we sustain current rates the economic system will multiply by 20 by 2050 and rapidly outstrip our resources.

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Most people have little idea how serious the main problems are, or how far beyond sustainable levels we are. The 2007 IPCC Report said that if greenhouse gas emissions are to be kept to a ‘safe’ level they must be cut by 50-­‐80% by 2050, and more after that. (Now, even bigger reductions are generally thought to be required.) The 50% figure would mean that the average American or Australian would have to go down to under 5% of their present per capita emission rate. By 2050 the amount of productive land on the planet per capita will be .8 ha (assuming we will cease destroying land.) The present amount required to give each Australian their lifestyle is 8 ha. We are 10 times over a sustainable amount, and there is not the slightest possibility of all the world’s people ever rising to anywhere near our level. Australians use about 280 GJ of energy per capita p.a. We are heading for 500 GJ/person/y by 2050. If all the world’s expected 9 billion people were to live as we live world energy supply would have to be around 4,500 EJ/y – which is 9 times the present world energy production and consumption. Many of the world’s ecosystems are in alarmingly rapid decline. This is essentially because humans are taking so much of the planet’s area, and 40% of the biological productivity of the lands. We are causing a biodiversity die-­‐off holocaust mainly because we are taking the habitats other species need. Of about 8 billion ha of productive land we have taken 1.4 billion ha for cropland, and about 3.5 billion ha for grazing. We are depleting most of the fisheries. We are destroying around 15 million ha of tropical forest every year. And if all 9 billion people expected are going to live as we do now, resource demands will be about 10 times as intense as they are now. There are many other environmental impacts that are either past the limits biologists think are tolerable, or approaching them, including the rate of nitrogen release, ozone destruction and atmospheric aerosol loads (Rockstrom, 2009). These and many other facts and figures only indicate the magnitude of the present problems caused by over-­‐production and over-­‐consumption. To this alarming situation we must now add the fact that our society is committed to rapid and limitless increases in living standards” and GDP; i.e., economic growth is the supreme goal. If we Australians have 3% p.a. economic growth to 2050, and by then all 9 billion people will have come up to the ‘living standards’ we will have by then, the total amount of economic output in the world each year will be about 20 times as great as it is now. The present amount of production and resource use is grossly unsustainable, yet we are committed to economic system which will see these rates multiplied by 20 by 2050. Huge figures such as these define the magnitude of the problem for technical-­‐fix believers. We are far beyond sustainable levels of production and consumption; this society is grossly unsustainable, yet its fundamental determination is to increase these without limit. If technical advance is going to solve the problems caused by all that producing and consuming it must cut resource use and impacts by a huge multiple, and keep it down there despite endless growth. Now ask the tech-­‐fix believers what precisely they think will enable this.

### Growth Unsustainable-Laundry List

Growth is unsustainable and collapse is inevitable---rising populations, ecological overshoot, climate change, peak oil, and exceeded carrying capacity.

Alexander 12 (Dr. Samuel Alexander is Co-­‐Director of the Simplicity Institute and a lecturer at the Office for Environmental Programs, Ground Floor, Walter Boas Building (163), University of Melbourne, Victoria, 3010, Australia., “Degrowth implies Voluntary Simplicity: Overcoming Barriers to Sustainable Consumption”, Simplicity Institute Report 12b, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/OvercomingBarrierstoSustainableConsumptionReport-12b.pdf)

The global economy is exceeding the sustainable carrying capacity of the planet, and it has been for some time (Global Footprint Network, 2012; Millennium Ecosystem Assessment, 2005). This ‘ecological overshoot’ is being driven by the escalation and expansion of Western-­‐style consumer lifestyles, which are highly resource and energy intensive. It is now commonplace to acknowledge that humankind would need more than five planets if North American lifestyles were universalised (e.g. Scott, 2009: 2). With the global population expected to reach 9 billion by mid-­‐century, it is increasingly clear that these high consumption lifestyles are unsustainable and certainly not universalizable. The science of climate change, furthermore, implies that we must decarbonise consumer lifestyles without delay (Hansen, 2011), and the spectre of ‘peak oil’ suggests that the supply of cheap petroleum upon which consumer societies and their growth-­‐orientated economies are based, may be coming to an end (Heinberg, 2011; Alexander, 2011a). All this means that ‘business as usual’ is simply not an option, and it may well be that the persistent delays in responding to these serious issues means that it is now too late to avoid some form of ‘great disruption’ to life as we know it (Gilding, 2011). What makes this admittedly gloomy situation even more troubling is that empirical research shows that many of those who have attained the Western-­‐style consumerist ideal may not be finding such lifestyles all that fulfilling (Lane, 2000). Technological progress and economic growth, it would seem, cannot solve all our problems or answer for us the question of how we ought to live. For these reasons, among others, it has never been more urgent to rethink contemporary practices of consumption.

### Growth Unsustainable-Complexity

Complexity and productivity only arise in response to problems and if we continue to over consume we will no longer have the resources to respond to these crisis and society will collapse. Empirics are on our side---

Alexander 12 (Samuel Alexander, Dr. Samuel Alexander is co‐director of the Simplicity Institute and a lecturer with the Office for Environmental Programs, University of Melbourne., “Resilience through Simplification: Revisiting Tainter’s Theory of Collapse”, Simplicity Institute Report 12h, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/ResilienceThroughSimplificationSimplicityInstitute.pdf)

The foundation of Tainter’s position, as already noted, is that social complexity increases when human beings set out to solve the problems with which they are confronted. Since problems continually arise, there is persistent pressure for growth in complexity (Tainter, 2011b: 91). Both historically and today, such problems might include securing enough food, adjusting to demographic, climatic, or other environmental changes, dealing with aggression within or between societies, organising society, and so on. Indeed, the challenges any society might face are, for practical purposes, ‘endless in number and infinite in variety’ (Tainter, 2011a: 33). As societies respond to the problems they face, they often develop their technical abilities, establish new institutions, diversify social, economic, and political roles, as well as increase production and information flows, all of which require energy and resources. Social or cultural ‘complexity’ is the term Tainter uses to describe this development in human organisation and behaviour. In order to understand the dynamics of social complexity, it can be helpful to begin by focusing on prehistoric times (prior to the uptake of agriculture), when human life was about as simple as can be. During these times, the main problem human beings faced was securing an adequate food supply, and this was solved relatively easily by hunting wild animals and gathering wild plants. Interestingly, anthropologists have concluded that prehistoric hunter-­‐gatherers were the most leisured societies to have ever existed (Sahlins, 1974; Diamond, 1998), which confirms that food supply was generally secure and easily obtained. It seems that once essential biophysical needs were adequately met, hunter-­‐gatherers stopped labouring and took rest rather than work longer hours to create a material surplus for which they did not seem to desire. This form of life was sustained by a minimal and largely static supply of energy – essentially just food, and eventually fire. This tightly constrained energy supply placed strict bounds on the types of society that could arise, for the reason that more ‘complex’ social organisations and behaviours require greater supplies of energy. In other words, hunter-­‐gatherer societies had no food (i.e. energy) surplus to feed any non-­‐food specialists – such as soldiers, craftspeople, bureaucrats, aristocrats, and so forth – so there was very little differentiation in social roles. Accordingly, for hundreds of thousands of years, early hunter-­‐gatherer societies did not develop any significant degree of social complexity, in Tainter’s sense of the term. Things began to change, however, around 10,000 years ago as a consequence of the agricultural revolution (Diamond, 1998: Ch 6). The greater productivity of agriculture for the first time gave human societies a significant boost in their food (i.e. energy) supply, and this set in motion the development of social complexity that continues to this day. Being so much more productive than foraging, agriculture meant that not everyone had to spend their time producing food, and this gave rise to an array of non-­‐ food specialists, including those noted above and many more. Furthermore, the sedentary nature of agricultural societies made it practical to begin producing and accumulating new material artefacts (e.g. houses, furniture, collections of tools, etc), all of which would have been too cumbersome for nomadic peoples to justify creating, or too energy-­‐intensive. Eventually wind energy (boats, windmills, etc) and hydro energy (waterwheels) further enhanced humankind’s energy surplus (Smil, 2004), paving the way for further increases in social complexity. The greatest energy revolution, however, was of course initiated early in the 18th century, when humankind first began harnessing on a large scale the extraordinary potential of fossil fuels. This provided the vast energy foundations required to establish and maintain a form of life as complex as industrial civilisation. While it is believed that hunter-­‐gatherers had no more than a dozen distinct social personalities, modern European censuses recognise as many as 20,000 unique occupational roles, and industrial societies may contain more than 1,000,000 different kinds of social personalities (Tainter, 2011a: 25). If nothing else, this is evidence of unprecedented social complexity. At this stage it is important to note that social complexity does not always follow an energy surplus, but often precedes a surplus. In fact, Tainter argues that complexity typically precedes an energy surplus (Tainter, 1988; Tainter, 2000). While he accepts that historically there were a few isolated ‘revolutions’ in energy supply that certainly made further complexity possible, he argues that normally complexity arises when new problems present themselves, and in solving those problems societies are forced to find a way to produce more energy, if that is possible. This contrasts with the isolated situations (following an energy revolution) when societies voluntarily become more complex due to an availability of surplus energy. As Tainter puts it, ‘Complexity often compels the production of energy, rather than following its abundance.’ (Tainter, 2006: 92). This is significant because it means that increasing complexity often is not voluntary, in that it is typically a response to the emergence of unwanted problems, rather than being a creative luxury chosen in response to the availability of surplus energy. This is a point to which we will return. At the centre of Tainter’s theory lies his idea that social complexity is an economic function that has diminishing marginal returns. Complexity is an economic function in the sense that it involves a balancing of costs and benefits. That is, when a society solves a problem by becoming more complex it will receive the benefits of solving the problem, but it will also incur the costs of doing so. These costs will include, most importantly, energy and resources, but also costs like time and annoyance. For example, when hunter-­‐gatherer societies discovered agriculture and became aware that its methods could produce more food than foraging, they had to balance the benefits of transitioning to an agricultural society with the costs. The costs were that early farming techniques were more labour-­‐intensive than foraging; the benefits were that agriculture was much more productive per acre, and this extra productivity might have provided a welcome opportunity to support non-­‐food specialists or solved a society’s food crisis (perhaps brought on by overpopulation or overhunting depleting available resources). This same balancing exercise takes place every time a society considers responding to a problem by creating a new institution, adding new bureaucrats, developing some new technology, or establishing some new social system, etc. Societies choose complexity – that is, choose to solve the problems they face – when it seems that the benefits of doing so will outweigh the costs. Critically, there must also be the energy and resources available to actually subsidise the problem-­‐solving activity (or at least the potential to acquire more energy and resources, if current supplies are already exhausted in simply maintaining existing complexity). Tainter’s central thesis, however, is that complexity is subject to diminishing returns, which is to say, over time the benefits of complexity diminish and the ongoing costs of maintaining or increasing complexity augment. He explains that this is because ‘humans always tend to pick the lowest hanging fruit first, going on to higher branches only when those lower no longer hold fruit. In problem-­‐solving systems, inexpensive solutions are adopted before more complex and expensive ones’ (Tainter, 2011a: 26). In other words, over time increments of investment in complexity begin to yield smaller and smaller increments of return, which is another way of saying that the marginal return on complexity starts to decline (see Figure 1 below). Figure 1: The marginal productivity of increasing complexity. At a point such as B1, C3, the costs of complexity exceed the benefits, and complexity is a disadvantageous approach to problem solving (Tainter, 2011a: 27). Eventually, Tainter argues, the costs of solving a problem will actually be higher than the benefits gained. At this point further problems will not or cannot be solved, and societies become vulnerable to deterioration or even rapid collapse. Another way of expressing this is to say that there comes a point in the evolution of societies when all the energy available to that society are exhausted in simply maintaining the existing level of complexity. When further problems arise, as history tells us they inevitably will do, the lack of an energy surplus means that new problems cannot be solved and thus societies become liable to collapse. This highlights the point explained above about how complexity is not always, and not even normally, a voluntary response to surplus energy, but instead is usually required for a society to sustain itself as new problems emerge. Societies can be destroyed, however, when the costs of sustaining their complexity become unaffordable. This is the essential dynamic that Tainter argues ‘can explain collapse as no other theory has been able to do’ (Tainter, 1995: 400).

### Tech Won’t Solve-Degrowth Key

Technological innovations and decoupling do not solve---de-growth is the only way to sustain a model in which ecological consumption does not exceed production.

Alexander 12 (Dr. Samuel Alexander is Co-­‐Director of the Simplicity Institute and a lecturer at the Office for Environmental Programs, Ground Floor, Walter Boas Building (163), University of Melbourne, Victoria, 3010, Australia., “Living Better on Less? Toward an Economics of Sufficiency”, Simplicity Institute Report 12c, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/LivingBetterOnLess5.pdf)

The ecological critique of growth holds that the global economy already significantly exceeds the regenerative and absorptive capacities of Earth’s ecosystems, a crisis driven by the developed nations which are demonstrably overconsuming their fair share of Earth’s resources (Meadows et al, 2004). This situation is especially troubling since the poorest nations still need to develop their economic capacities in some form simply to provide for themselves a dignified standard of living. In response to the argument that techno-­‐ efficiency improvements will ‘decouple’ growth from ecological impact – and thus allow for ‘sustainable development’ or ‘green growth’ – evidence shows absolute ecological impacts are still increasing, despite the relative decoupling achieved by techno-­‐efficiency improvements (Jackson, 2009). For these reasons, it is argued that to achieve ecological sustainability, the developed nations need to initiate a degrowth process of planned economic contraction, in the sense of reducing the absolute level (not merely per unit level) of ecological impact caused by economic activity. Ideally, this process should continue until ecological sustainability has been achieved, at which point the developed nations should adopt a ‘steady-­‐state’ economic model (Daly, 1996). In the poorest nations, a phase of clean, efficient, and equitable growth is still required to achieve a dignified standard of living – facilitated, ideally, by some global redistribution of wealth – but eventually those developing nations too will need to transition to a steady-­‐state economy (Lawn and Clarke, 2010). The steady-­‐state model is of a physically non-­‐growing but qualitatively developing economy which is maintained by a sustainable rate of resource throughput. Within a steady-­‐state economy, renewable resources would be harvested at rates that do not exceed regeneration rates; the rate of depletion of non-­‐renewable resources would not exceed the rate of creation of renewable substitutes; and waste emission rates would not exceed the natural assimilative capacities of ecosystems into which they are emitted (Daly, 1990). These guiding principles would help ensure that an economy remains within the sustainable carrying capacity of the environment.

### Tech Won’t Solve-Elites

Be skeptical of their overly optimistic claims of technological innovation---technological fixes increase error replication and normalize the exploitation that occurs in the process. Capitalists will always re-appropriate the technology to make profit.

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The development of technology in consumer culture has been criticized on a number of fronts including the tendency of technology, when linked to a capitalist economy, to outrun its resource base (Wackernagel, (et al.), 2002: 9266-­‐9271). It happens that in some quarters, people not only admit the damage that technology can do, but continue to look to even more technology to fix it (Homer-­‐Dixon, 2001). Yes, it is generally agreed, consumerism as a way of life has polluted large expanses of the Earth, but nanotechnology and biotechnology will lead to machines and organisms that will safely dispose of the wastes from previous rounds of over-­‐ consumption. How soon we forget that one of the key reasons automotive technology was embraced so enthusiastically was that it helped eliminate solid waste and health problems associated with wide use of horses in urban areas—thus ultimately trading a manure problem for climate change, traffic congestion, and the highway death toll. Herman Daly has pointed out that, while it is hazardous to underestimate human ingenuity and technical innovation, there are few historical examples of new technologies offered as answers to old problems which have not also brought their own new problems and risks in the bargain (Daly, 1995: 180-­‐194). Cars speed up long distance travel but incur serious casualties and are a major source of air pollution. Nuclear fission promised energy “too cheap to meter,” but incurred highly toxic waste handling challenges and major security issues. Antibiotics initially cured serious diseases but have now given rise to even more virulent antibiotic-­‐resistant pathogens. Jet air travel allowed circumnavigation of the planet in a few hours but now presents a significant terrorist threat, a conveyor belt for pandemics, and a high altitude threat to climate stability and the ozone layer. As Daly also pointed out, no matter how much ingenuity we have on hand, every idea requires high quality resources and available waste sinks before it can actually be built and used. If the current growth-­‐oriented lifestyle of over-­‐consumption runs its course, it may be that high quality resources will be so scarce that new ideas cannot take material form as economic goods and services, no matter what their merits might be (Beriault, 2005). Yet another consideration is the seldom mentioned time lag between the invention of a new technology in the lab and actually getting it into the homes of billions of people. Technological optimists are anxious to announce every new innovation or gadget as if merely to have thought of it makes it so. But every entrepreneur knows in his or her bones the many hurdles yet to cross between the geniuses in the lab and the customers in the marketplace. Taking a technology from concept to production poses a whole range of challenges in procuring adequate enough supplies of appropriate materials, obtaining the necessary licenses, studies and approvals before production can being, securing financing, scaling a process up from demonstration to actual production, meeting whatever challenges might be encountered in transport and distribution of the new widget, and then convincing the public to buy it, even if it does represent a real improvement over existing ways of meeting the same need. And all of this has to be achieved at a “competitive” price in the marketplace. This is not a short process even with expert leadership under ideal conditions, and conditions are seldom ideal. Another concern that was pointed out over a generation ago by E. F. Schumacher is the fact that under capitalism, new technology tends to be labour-­‐replacing (Schumacher, 1973). Since labour is a cost of production, reducing this cost will increase profit. Work is therefore “bad,” and if machines can be built that replace human labour, there are powerful incentives to do so. Thus, the advance of technology tends also to increase unemployment with all the negative social and personal consequences that follow from it. It is ironic that a society that celebrates high incomes and the consumption of material things as defining the good life tolerates an economic system that grows unemployment even as it grows profits, thus assuring that fewer and fewer people can participate in the good life it promises. One way to obscure this unpleasant reality is to try to grow the economy so fast that jobs lost in one industry are replaced by jobs created in another, thus making it appear that “employment” is growing. But one “job” is not necessarily interchangeable with every other job. Jobs may be created in an economy without this necessarily translating into employment for flesh and blood human beings. “Job numbers” look fine, but there may still be many people who cannot find a way to make a living without sacrificing other important determinates of quality of life—friends, rootedness in place, community, a mortgage-­‐free home, etc. Research and development costs money. Under capitalism, money tends to be appropriated by capitalists (shareholders). This implies a concentration of control over technology, because it is corporations who have the most funds to develop new technologies which are then patented to limit access to and secure control over them. As technical development moves forward, control over the technology tends to become more centralized and more privatized. This isn’t necessarily the most favorable arrangement for people who have well-­‐being in mind rather than profit. It is mainly the profitability of a technology (constrained only by whatever regulatory formalities are in place) and not its contribution to overall well-­‐ being that determine what we eventually see in the marketplace.4 The development of new technologies are seldom if ever subject to public review. Lobbyists are paid large fees to ensure that new technologies escape as many regulatory screens as possible. Suffice it then to note that the purpose of technology in consumer culture is, first and foremost, the generation of profit, but also social and environmental control, comfort and convenience, entertainment, and design obsolescence and marketing that stoke further rounds of consumption, hence making the system self-­‐perpetuating. The development and implementation of technology tends to be capital-­‐intensive, concentrated under corporate control, labour replacing rather than job-­‐creating, and relatively unmindful of the promotion of overall well-­‐being when compared to its other purposes. In this context, should we be looking to technology itself for the solution to the sustainability challenge?

### Tech Won’t Solve-Negative Effects O/W

Technological innovations will always be re-appropriated by the capitalist market and the negative effects will always outweigh the positive ones.

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First, we have already argued that current technology serves the values of consumer culture. It aims to deliver mass material affluence, the very meaning of which implies waste, so as to generate profits which must continually grow. Consumption is the opposite of conservation, and growth without limits is the opposite of a stead-­‐state economy which might have a hope of persisting over the long term. It is logically impossible that any technology can conserve and consume its resource and energy endowments at the same time. It’s also logically impossible for any technology to deliver “sustainable affluence” when the very meaning of affluence implies generating ever-­‐increasing mountains of indigestible wastes. The very definition of “sustainable development” framed by the Brundtland Commission (meeting the needs of the current generation without compromising the ability of future generations to meet their own needs), while certainly appealing to our wish fulfillment fantasies of being able to have our cake while eating it too, doesn’t seem achievable with any presently imaginable technology and our current understanding of the laws of nature. We will not be investing in conservation technologies as long as our economy is oriented toward consumption instead, except when conservation can be shown to reduce production costs and hence increase profits. But this sort of conservation applies only to inputs which can be priced and generally entirely ignores externalized costs. Small won’t be beautiful until we really believe it is. And more will be better as long as we continue to conflate quality of life with quantity of consumption. Technical development in consumer culture is generally driven by capitalist markets. The operative motive then is greed, not planetary sustainability. In practice this means that technologies which might be environmentally restorative but which have little or no profit potential tend not to be developed or implemented, no matter what their merits. Conversely, technologies that have large profit potential tend to be implemented no matter how disastrous their environmental or social impacts. For example, technology has been proposed to construct artificial trees to scrub carbon dioxide from the atmosphere (as if living trees just aren’t up to the challenge) so as to mitigate climate change, but it is not at all clear where the “profit center” would be for such a technology, except perhaps from industries hoping to offset their carbon emissions by paying for artificial trees. On the other hand, all lights are green for the further exploitation of Alberta’s Athabasca tar sands which is an environmental disaster from beginning to end, but immensely profitable nevertheless (CBC-­‐TV, 2001). Third, technology has limits inherent in the laws of nature. No technology can arbitrarily reverse the laws of thermodynamics, for example, or the law of conservation of matter and energy. It is precisely because natural laws operate with ironclad consistency that marvelous things can be done which appear to violate those laws. Powered flight of heavier than air craft which appear to defy gravity, for example, is possible only because of the laws of aerodynamics. Therefore, unless and until scientists discover a way of making water flow uphill, creating matter out of energy, arbitrarily changing the properties of chemical elements or increasing their quantities, we must find a way of fashioning a good life on the planet we have, with the resources available, and within the general conditions needed to sustain a productive community of other living things. Such limits, while we often aren’t entirely sure precisely where they are, are immovable whenever we hit them (Robert, (et al.), 2002: 197-­‐214). Fourth, no technology ever solves just one problem without creating other problems of its own (Tenner, 1996). This is probably because every technological introduction is being made within an already hugely complex and interdependent system of pre-­‐existing relationships which can result in consequences that are difficult to foresee. An example of this “mixed bag principle” can be found in the construction of large scale hydro-­‐electric dams. Dam building projects are often sold by appealing to the many advantages they can bring to people including electrification, flood control, providing recreational water in dam back-­‐bays, water for irrigation and drought mitigation, and jobs both during construction and following commissioning. But such projects also have their downsides. It’s impossible, for example, to optimize a dam to deliver all of its potential benefits. If we want maximum power generation then water retention will be compromised. If we want maximum irrigation water available, we may have to reduce power generation and take a loss on power revenues. If we want to maximize tourism and recreational potential, then both irrigation withdrawals and flow-­‐ through for power generation must be curtailed. While large dams operating at design efficiency can indeed generate cheap electricity, they have very high capital costs which must be serviced whether or not the dam is operating at peak output, and the availability of cheap energy may attract other industries into the area which can have other unwelcome consequences for both human and non-­‐human residents. On top of all these trade-­‐offs are a myriad of potential negative effects such as changes in downstream water ecology due to damming the river in the first place, flooding of back bays with possible displacement of pre-­‐ existing natural and human communities (the Three Gorges Dam project in China, for example, has displaced nearly 3 million people from their homes and traditional livelihoods), back bay siltation which eventually renders the dam useless, land subsidence and increased seismic risks due to the weight of water behind the dam, and of course the potential for dam collapse with downstream flooding and loss of life. The larger the scale at which any technology is implemented, the larger the scale of both its potential benefits and its damages. While technological mega-­‐projects can certainly produce mega-­‐problems, the mixed bag principle operates at small scales as well. For example, 70% of the contestants in Paralympics events are road accident victims. Low-­‐nicotine tobacco has doubled the consumption of cigarettes. Motorists who have airbags and seat belts drive on average 20% faster than other motorists. More highways create more traffic; more lanes on the roads cause more queues. Crosswalks lead to more accidents involving pedestrians. To prevent the destruction of police cameras by speed demons, cameras have been installed to keep an eye on the speed cameras. The sturdier the chassis of a car, the harder it is to free the causalities trapped inside. Air conditioning affects the ozone layer, and contributes to the greenhouse effect. The cooling of offices, in other words, contributes to the heating of the atmosphere. Mad cows are the result of recycled butchers’ waste. The consumption of paper in offices has increased since the introduction of computers. The development of cushioned jogging shoes intended to protect the knees has increased wear and tear on the hips. Filters for purifying tap water have proved an ideal breeding ground for bacteria. Suntan lotion is now suspected to cause skin cancer (von Boxsel, 2004).

### Tech Turn-Exploitation

Romanticizing technological innovation expands the endless expansion of the capitalist market and veils the oppression and exploitation that is behind the creation of the technology.

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The role of technology in consumer culture is parallel to its role in capitalism as a powerful driver of economic growth. The goal of capitalism is the expansion, accumulation and concentration of profit. The purpose of technology under capitalism is to secure competitive advantages that increase profits. Any technology that increases profits and is not illegal, or that can even temporarily be fit into a loophole in the law, tends to get developed. Unprofitable technologies, or those which might compromise existing patterns of profit-­‐taking, no matter how beneficial they might be, are generally not developed. Even most “pure” scientific research tends to be biased toward problems which may hold future profit potential. Subordinate, but clearly linked, to the profit motive as a driver of technical development are its other goals in consumer culture: social and environmental control; comfort and convenience; entertainment; and obsolescence. Next to profit, military and security technologies are of major importance in consumer cultures—the social control focus for technical development. Indeed, the partnership is close to perfect, since military and security-­‐related technologies are also immensely profitable, quickly become obsolete, and when used in war to destroy more important infrastructure become a means for multiplying profit even more as rebuilding follows conflict. Since capitalism is an inherently paranoid economic system, it is prone to become obsessed with security issues.2 Since capitalism appropriates an ever-­‐increasing fraction of resources and carrying capacity in order to fuel growth, it is continually in danger of over-­‐shooting the carrying capacity of the Earth (Wackernagel & Rees, 1996: 97-­‐98). And since the extraction of resources can create resource scarcities and inequities, it can spark both regional and international conflict (Homer-­‐ Dixon, 1996: 359-­‐365). Finally, it has been estimated that worldwide, as much as 35% of all research and development funding, capital investment, and scientists and engineers, are engaged in military or security-­‐related industries (Renner, 1990). In fact, so entrenched is military research and production in the economies of developed countries that, in the unlikely event that people actually did “give peace a chance”, it would cost hundreds of billions of dollars to demilitarize them (Renner, 1995). Clearly, if war, the preparation for war, and operation of peacetime security establishments can be considered examples of “social control,” then the technology necessary for these tasks must be an important priority in consumer culture to command such a large fraction of its creative talent and investment capital (Wikipedia (a), 2012). Parallel with the control of people is technology for the control of nature. In its pleasanter forms most of us can recognize technology at work in our home heating systems, refrigerators, and houses. These technologies shelter (some would say isolate) us from, or moderate the effects of climate on our daily activities. If the normal changes occurring in an environment make us uncomfortable or present an inconvenience, we use technology to modify them. So we heat our houses in winter, chill our food all year round, and almost everywhere use technology to protect ourselves from “the elements.” The level of comfort and convenience we now enjoy is shared by more people in more different ways than at any previous time in history, even though it is mostly made possible because of cheap fossil fuels and the truly remarkable levels of power they place in the hands of individuals. But environmental control technologies can also be applied at much larger scales. Examples include damming or diverting rivers, applying pesticides or herbicides to control “pests” or defoliate landscapes, modifying watersheds to make them more congenial for agriculture and most recently, modifying the very genomes of living things so as to bring the processes of evolution under human control. Biotechnology, while offering considerable promise to improve human welfare in many respects, has so far been used largely to consolidate corporate control over Earth’s genetic resources and expand corporate profits through the patenting of life forms (King & Stabinski, 1999: 73-­‐89; Mooney, 1999: 21; Shiva, 1991: 231-­‐264). Many biotech innovations have arisen not from popular demand for a product like Roundup-­‐Ready™ canola seed, but apparently from a desire to increase corporate profits at the expense of farmers and consumers, especially in developing countries. So far, such innovations appear to offer only marginal increases in yields or improvements in the nutritional characteristics of crops, but they are very effective at establishing corporate monopolies on the use of seeds.3 One could hardly offer an account of technology in consumer culture without mentioning its role in providing comfort and convenience. The last century saw an enormous bloom of gadgets intended to take over, or at least reduce and speed up, many tasks of daily living like cooking, cleaning, shopping, and communication. This process reached what could easily be considered a stage of over-­‐development where the applications of technology reflect less a real need for something and more an obsession to mechanize everything that can be mechanized, even if it requires creation of an artificial market. Electric carving knives, battery powered tooth brushes, leaf blowers, foot spas, electric blankets, heated water beds, and cooking appliances designed for only one food like popcorn poppers, waffle irons, bagel toasters, wiener heaters—the list is practically endless. While everyone needs a bed to sleep in, one might understandably ask whether, in a world where millions of people have not even one bed, how North Americans can justify vibro-­‐massage, automated self-­‐adjusting, heated beds, or refrigerators with liquid crystal screens on their doors allowing internet access while looking for the pickles. Our culture of entitlement leads us to think that because we work hard we’re entitled to high incomes, and high incomes entitle us to whatever nonsensical excesses we can afford, simply because we can afford them. Riches become self-­‐justifying and marketing marginally useful products to gullible consumers is just considered good business. This practice is particularly questionable on the grounds that psychologists are now discovering that the very multiplication of “choice” can itself diminish our quality of life (Schwartz, 2004). While there’s certainly nothing morally wrong with being comfortable, the pursuit of comfort and convenience can create a momentum all its own that can lead to an inversion of values. Eating chocolate may be comforting and innocent enough as a “simple pleasure.” But the pleasure is neither simple nor innocent when the cocoa was harvested by child slaves in West Africa (Robins, 2003). Oppression can even be found closer to home when one considers carefully the full cost of many of the gadgets that are flogged day and night as guaranteed to save us time and labour—which we hope to spend with our families and neighbors or engaged in other good works—only to discover that the time we need to earn the money to pay for these conveniences can sometimes leave us with less free time to enjoy them than we had without them. Moreover, it has been a perennial insight in the literature of voluntary simplicity that what is necessary to a decent life is relatively easy to obtain at little cost in time, money or labour. But luxury consumption is often provisioned only through excessive toil, dangerous enterprise, or exploitation of one form or another (Woolman, 1991). Consumer culture also invests heavily in the technology of entertainment. When the daily round of one’s activity loses most connection to the actual work of getting a living, then all that remains is to seek amusement. Home entertainment electronics and the vast communications infrastructure needed to support it is one of the fastest growing sectors of the economy. It is also certainly one of the fields which is most completely enmeshed with technical development. Middle class North Americans invest billions of dollars in computer systems, communication devices and services, and home theatre systems, to say nothing of the thousands of hours spent playing computer games and watching television (Inside Facebook, 2009). This technology has enabled a head-­‐long plunge by an entire generation into various “virtual realities” that taken together can only be considered an electronically mediated mass fantasy. One young man of my acquaintance proudly described the hundreds of pages of detailed maps he had compiled while playing “Ages of Camelot,” a popular on-­‐line computer game. He knew every nook and cranny of this imaginary kingdom and all its denizens. But he was embarrassed to admit that he probably could not locate Sierra Leone or Myanmar on a world map. Even living in an officially bilingual country, he speaks more Klingon than French, and knows more about the history of Myst® than of the Canadian Federation. In essence, despite being intellectually gifted, he inhabits an imaginary world at precisely the time when his abilities are desperately needed in the real one. Finally, we develop technology which itself is intended to increase consumption (and hence profits), namely: the science and techniques of design obsolescence on the one hand, and mass marketing on the other. Planned obsolescence has already been well documented but, inexplicably, most people in consumer cultures just shrug and accept rank exploitation of their time and incomes as part of “normal” living. I won’t re-­‐till this soil here, but only wish to point out that a great deal of product design and development effort is applied to assure that products which could last much longer don’t. This forces us back into the marketplace to replace goods which have now become waste and which could have been designed for much longer and more efficient service. One example of misapplied engineering that I find particularly odious is the efforts of truck manufacturers to “tune” engine designs to make sounds that potential buyers recognize as “powerful,” “capable,” and “rugged.” Engine efficiency, durability, and perhaps even safety are in the balance over against the impression the manufacturer wants to make on potential buyers. In the same category is the enormous effort, expense and ingenuity invested in marketing goods and services, including over-­‐packaging, excessive and uninformative advertising, and the whole machinery of public relations that promotes consumerism. All of this is especially egregious when the technology concerned is approaching the limits of efficiency that are theoretically possible. For example, we can now manufacture home furnaces that are 94% efficient in converting natural gas to heat. With this level of performance available, why are such devices being manufactured to last only about 10 years when we could design them to last 100 years? Could this really be because consumers demand the right to replace their furnace often? What is to be gained by unnecessarily replacing a furnace nine times except increased waste and corporate profit?

Technological innovations ignore the socially constructed roots and values that over consumption stems from.

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It is important to keep in mind that there are several factors which typically determine the gains a technical advance actually enables are well below those that seem possible at first. Engineers and economists make the following distinctions. Technical potential: This is what the technology could achieve if fully applied with no regard to cost or other problems. Economic (or ecological) potential: This is usually much less than the technical potential because to achieve all the gains that are technically possible would cost too much. For instance it is technically possible for passenger flights to be faster than sound, but it is far too costly. It would be technically possible to recycle all lead used, but it would be much too costly in dollars and convenience to do so. Some estimate that it would be technically possible to harvest 1,400 million ha for biomass energy per year, but when ecologically sensitive regions are taken out some conclude that the yield could only be 250 million ha or less (World Wildlife Fund, 2010, p. 181). The WWF study quotes Smeets and Faiij (2007) as finding that it would be technically possible for the world’s forests to produce another 64 EJ/y of biomass energy p.a., but that the ecologically tolerable potential is only 8 EJ/y. What are the net gains? Enthusiastic claims about a technical advance typically focus on the gains and not the costs which should be subtracted to give a net value. For instance the energy needed to keep buildings warm can be reduced markedly, but it costs a considerable amount of energy to do this, in the electricity needed to run the air-­‐conditioning and heat pumps, and in the energy embodied in the insulation and triple glazing. The WWF Energy Report (2010) claims that big savings can be made in building heating and cooling, but their Figs. 3 – 11 and 3 – 12 show that although their measures would reduce heat used in buildings by 90%, electricity used would increase c. 50% (and there is no reference to what the embodied energy cost of manufacturing the equipment and insulation might be.) The graphs don’t seem to show any net reduction in building energy use. The Green Revolution doubled food yields, but only by introducing crops that required high energy inputs in the form of expensive fertilizer, seeds and irrigation. One result was that large numbers of very poor farmers went out of business because they couldn’t afford the inputs. Similarly, it is possible to solve some water supply problems by desalination, but only by increasing the energy and greenhouse problems. What is socially/politically possible? Then there are limits set by what people will accept. It would be technically possible for many people in Sydney to get to work by public transport, but large numbers would not give up the convenience of their cars even if they saved money doing so. The energy efficiency of American cars is much lower than what is technically possible, and in fact lower than it was decades ago (because many people want energy-­‐intensive vehicles). Australians are now building the biggest and most energy wasteful houses in the world. A beautiful, tiny, sufficient mud brick house could be built for less than $10,000 – but most people would not want one. These examples make it clear that the problems of over-­‐consumption in many realms are mainly social rather than technical, and that they can’t be solved by technical advance. The essential tech-­‐fix issue is to do with whether or not the problems can be solved by technical advances which allow us to go on living and consuming as we were before, or whether we must change to values and behaviour that don’t cause problems. The Jevons or ‘rebound’ effect: Then there is the strong tendency for savings made possible by a technical advance to be spent on consuming more of the thing saved or something else. For instance if we found how to get twice the mileage per litre of petrol many would just drive a lot more, or spend the money saved on buying more of something else. The Indians have recently developed a very cheap car, making it possible for many more low income people to drive, consume petrol and increase greenhouse gases. So it is always important to recognise that an announced technical miracle breakthrough probably refers to its technical potential but the savings etc. that it is likely to enable in the real world will probably be well below this.

## \*\*\*Environment\*\*\*

### 1nc─Environment Shell

Growth is collapsing the environment and resources – causes extinction.

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The remarkable charts that introduce this book reveal the story of humanity’s impact on the natural earth.' The pattern is clear: if we could speed up time, it would seem as if the global economy is crashing against the earth—the Great Collision. And like the crash of an aster- oid, the damage is enormous. For all the material blessings economic progress has provided, for all the disease and destitution avoided, for all the glories that shine in the best of our civilization, the costs to the natural world, the costs to the glories of nature, have been huge and must be counted in the balance as tragic loss. Half the world ’s tropical and temperate forests are now gone.’ The rate of deforestation in the tropics continues at about an acre a second.’ About half the wetlands and a third of the mangroves are gone.‘ An estimated 90 percent of the large predator fish are gone, and 75 percent of marine fisheries are now overfished or fished to capacity.’ Twenty percent of the corals are gone, and another 20 percent severely threatened. Species are disappearing at rates about a thousand times faster than normal.’ The planet has not seen such a spasm of extinction in sixty-ﬁve million years, since the dinosaurs disappeared.” Over half the agricultural land in drier regions suffers from some degree of deterioration and desertification.° Persistent toxic chemicals can now be found by the dozens in essentially each and every one of us.” Human impacts are now large relative to natural systems. The earth’s stratospheric ozone layer was severely depleted before the change was discovered. Human activities have pushed atmospheric carbon diox- ide up by more than a third and have started in earnest the dangerous process of warming the planet and disrupting climate. Everywhere earth’s ice ﬁelds are melting." Industrial processes are fixing nitrogen, making it biologically active, at a rate equal to nature’s; one result is the development of more than two hundred dead zones in the oceans due to overfertilization.” Human actions already consume or destroy each year about 40 percent of nature ’s photosynthetic output, leaving too little for other species." Freshwater withdrawals doubled globally between 1960 and 2000, and are now over half of accessible runoff." The following rivers no longer reach the oceans in the dry season: the Colorado, Yellow, Ganges, and Nile, among others." Societies are now traveling together in the midst of this unfolding calamity down a path that links two worlds. Behind is the world we have lost, ahead the world we are making. It is difficult to appreciate the abundance of wild nature in the world we have lost. In America we can think of the pre-Columbian world of 1491, of Lewis and Clark, and of John James Audubon. It is a world where nature is large and we are not. It is a world of majestic old-growth forests stretching from the Atlantic to the Mississippi, of oceans brimming with fish, of clear skies literally darkened by passing ﬂocks of birds. As William MacLeish notes in T he Day beﬁnre Amer- ica, in 1602 an Englishman wrote in his journal that the ﬁsh schooled so thickly he thought their backs were the sea bottom. Bison once roamed east to Florida. There were jaguars in the Southeast, griz- zly bear in the Midwest, and wolves, elk and mountain lions in New England.“ Audubon described the breathtaking multitudes of the passenger pi- geon migration, as well as the rapacity of their wild and human preda- tors: “Few pigeons were to be seen before sunset; but a great number of persons, with horses and wagons, guns and ammunition, had already established encampments. . . . Suddenly, there burst forth a general cry of ‘Here they come!’ The noise which they made, though yet distant, reminded me of a hard gale at sea. . . . As the birds arrived, and passed over me, I felt a current of air that surprised me. Thousands were soon knocked down by polemen. The current of birds, however, still kept increasing. . . . The pigeons, coming in by thousands, alighted every- where, one above another, until solid masses . . . were formed on every tree, in all directions. . . . The uproar continues . . . the whole night. . . . Toward the approach of day, the noise rather subsided. . . . The howlings of the wolves now reached our ears; and the foxes, lynxes, cougars, bears, raccoons, opossums, and pole-cats were seen sneaking off from the spot. Whilst eagles and hawks, of different species, accom- panied by a crowd of vultures, came to supplant them, and enjoy their share of the spoil. It was then that the authors of all this devastation began their entry amongst the dead, the dying, and the mangled. The pigeons were picked up and piled in heaps, until each had as many as he could possibly dispose of, when the hogs were let loose to feed on the remainder.”" The last passenger pigeon on earth expired in a zoo in Cincinnati in 1914. Some decades later, forester and philosopher Aldo Leopold offered these words at a ceremony on this passing: “We grieve because no living man will see again the onrushing phalanx of victorious birds, sweeping a path for spring across the March skies, chasing the defeated winter from all the woods and prairies. . . . Men still live who, in their youth, remember pigeons. Trees still live who, in their youth, were shaken by a living wind. . . . There will always be pigeons in books and in museums, but these are eﬂigies and images, dead to all hard- ships and to all delights. Book-pigeons cannot dive out of a cloud to make the deer run for cover, or clap their wings in thunderous ap- plause of mast-laden woods. Book-pigeons cannot breakfast on new- mown wheat in Minnesota and dine on blueberries in Canada. They know no urge of seasons; they feel no kiss of sun, no lash of wind and weather.” ‘8 Human societies are moving, rapidly now, between the two worlds. The movement began slowly, but now we are hurtling toward the world directly ahead. The old world, nature’s world, continues, of course, but we are steadily closing it down, roping it off. It ﬂourishes in our art and literature and in our imaginations. But it is disappearing. Economic historian Angus Maddison reports that in the year 1000 there were only about 270 million people on earth—fewer than today’s U.S. population. Global economic output was only about $120 billion. Eight hundred years later, the man-made world was still small. By 1820, populations had risen to about a billion people with an output of only $690 billion. Over this eight hundred years, per capita income increased by only a couple of hundred dollars a year. But shortly thereafter the take-off began. By 2000, populations had swelled by an additional ﬁve billion, and, astoundingly, economic output had grown to exceed forty trillion dollars.” The acceleration continues. The size of the world economy doubled since 1960, and then doubled again. World economic activity is projected to quadruple again by midcentury. Historian R. McNeill has stressed the phenomenal expansion of the human enterprise in the twentieth century. It was in the twentieth century, and especially since World War II, that human society truly left the moorings of its past and launched itself on the planet with unprecedented force. McNeill observes that this exponential century “shattered the constraints and rough stability of old economic, demo- graphic, and energy regimes.” “In environmental history,” he writes, “the twentieth century qualifies as a peculiar century because of the screeching acceleration of so many of the processes that bring eco- logical change.”Z° We live now in a full world, dramatically unlike the world of 1900, or even that of 1950. Physicists have a precise concept of momentum. To them momentum is mass times velocity, and velocity is not ust speed but also direction. Today the world economy has gathered tremendous momentum—it is both huge in size and growing fast. But what is its direction? I am seated in my study as I write this, looking at a stack of books about two feet high. They share a common theme, and it is not a happy one to contemplate. We can see this theme immediately in their titles.” By a conservative jurist: Richard A. Posner, Catastrophe: Risk and Response By the president of the Royal Society in the United Kingdom: Martin Rees, Our Final Hour: How Yerror, Error and Environmental Disaster Threaten Human/cind’s Future By a leading American scholar: Jared Diamond, Collapse: I-low Societies Choose to Fail or Succeed By a British scientist: James Lovelock, The Revenge ofGaia.' Why the Earth Is Fighting Bad: and How We Can Still Save Humanity By an American expert: James Howard Kunstler, The Long Emergency: Surviving the End of Oil, Climate Change, and Other Converging Catastrophes of the Twang-first Century By a U.S. expert on conﬂict: Michael T. Klare, Resource Wars: The New Landscape of Global Conflict By an Australian diplomat and historian: Colin Mason, The 2q3o Spi/re: The Countdown to Global Catastrophe That is but a sample of the “collapse” books now on the market. Each of these authors sees the world on a path to some type of col- lapse, catastrophe, or breakdown, and they each see climate change and other environmental crises as leading ingredients of a devil’s brew that also includes such stresses as population pressures, peak oil and other energy supply problems, economic and political instabilities, ter- rorism, nuclear proliferation, the risks of various twenty-ﬁrst-century technologies, and similar threats. Some think a bright future is still possible if we change our ways in time; others see a new dark ages as the likely outcome. For Sir Martin Rees, “the odds are no better than ﬁfty-ﬁfty that our present civilization on earth will survive to the end of the present century.””2 Personally, I cannot imagine that the risks are so great, but Rees is a thoughtful individual. In any case, it would be foolish to dismiss these authors. They provide a stark warning of what could happen. The escalating processes of climate disruption, biotic impoverish- ment, and toxiﬁcation that continue despite decades of warnings and earnest effort constitute a severe indictment, but an indictment of what exactly? If we want to reverse today's destructive trends, forestall fur- ther and greater losses, and leave a bountiful world for our children and grandchildren, we must return to fundamentals and seek to understand both the underlying forces driving such destructive trends and the economic and political system that gives these forces free rein. Then we can ask what can be done to change the system. The underlying drivers of today’s environmental deterioration have been clearly identiﬁed. They range from immediate forces like the enormous growth in human population and the dominant technolo- gies deployed in the economy to deeper ones like the values that shape our behavior and determine what we consider important in life. Most basically, we know that environmental deterioration is driven by the economic activity of human beings. About half of today’s world popu- lation lives in abject poverty or close to it, with per capita incomes of less than two dollars a day. The struggle of the poor to survive cre- ates a range of environmental impacts where the poor themselves are often the primary victims—for example, the deterioration of arid and semiarid lands due to the press of increasing numbers of people who have no other option. But the much larger and more threatening impacts stem from the economic activity of those of us participating in the modern, increas- ingly prosperous world economy. This activity is consuming vast quantities of resources from the environment and returning to the en- vironment vast quantities of waste products. The damages are already huge and are on a path to be ruinous in the future. So, a fundamental question facing societies today—perhaps the fundamental question—is how can the operating instructions for the modern world economy be changed so that economic activity both protects and restores the natural world? With increasingly few exceptions, modern capitalism is the operat- ing system of the world economy. I use “modern capitalism” here in a broad sense as an actual, existing system of political economy, not as an idealized model. Capitalism as we know it today encompasses the core economic concept of private employers hiring workers to produce products and services that the employers own and then sell with the intention of making a proﬁt. But it also includes competitive markets, the price mechanism, the modern corporation as its principal institu- tion, the consumer society and the materialistic values that sustain it, and the administrative state actively promoting economic strength and growth for a variety of reasons. Inherent in the dynamics of capitalism is a powerful drive to earn proﬁts, invest them, innovate, and thus grow the economy, typically at exponential rates, with the result that the capitalist era has in fact been characterized by a remarkable exponential expansion of the world economy. The capitalist operating system, whatever its shortcomings, is very good at generating growth. These features of capitalism, as they are constituted today, work together to produce an economic and political reality that is highly destructive of the environment. An unquestioning society-wide commitment to economic growth at almost any cost; enormous investment in technologies designed with little regard for the environment; powerful corporate interests whose overriding objective is to grow by generating profit, including profit from avoiding the environmental costs they create; markets that systematically fail to recognize environmental costs unless corrected by government; government that is subservient to corporate interests and the growth imperative; rampant consumerism spurred by a worshipping of novelty and by sophisticated advertising; economic activity so large in scale that its impacts alter the fundamental biophysical operations of the planet—all combine to deliver an ever-growing world economy that is undermining the planet’s ability to sustain life.

### 2nc─Environment Impact Calculus

Environment impact is more probable.

Sullivan ‘7 (Gen. Gordon, Chair of CNA Corporation Military Advisory Board and Former Army Chief of Staff, in "National Security and the Threat of Climate Change", http://securityandclimate.cna.org/report/National%20Security%20and%20the%20Threat%20of%20Climate%20Change)

“We seem to be standing by and, frankly, asking for perfectness in science,” Gen. Sullivan said. “People are saying they want to be convinced, perfectly. They want to know the climate science projections with 100 percent certainty. Well, we know a great deal, and even with that, there is still uncertainty. But the trend line is very clear.” “We never have 100 percent certainty,” he said. “We never have it. If you wait until you have 100 percent certainty, something bad is going to happen on the battlefield. That’s something we know. You have to act with incomplete information. You have to act based on the trend line. You have to act on your intuition sometimes.” In discussing how military leaders manage risk, Gen. Sullivan noted that significant attention is often given to the low probability/high consequence events. These events rarely occur but can have devastating consequences if they do. American families are familiar with these calculations. Serious injury in an auto accident is, for most families, a low probability/high consequence event. It may be unlikely, but we do all we can to avoid it. During the Cold War, much of America’s defense efforts focused on preventing a Soviet missile attack—the very definition of a low probability/high consequence event. Our effort to avoid such an unlikely event was a central organizing principle for our diplomatic and military strategies. When asked to compare the risks of climate change with those of the Cold War, Gen. Sullivan said, “The Cold War was a specter, but climate change is inevitable. If we keep on with business as usual, we will reach a point where some of the worst effects are inevitable.” “If we don’t act, this looks more like a high probability/high consequence scenario,” he added. Gen. Sullivan shifted from risk assessment to risk management. “In the Cold War, there was a concerted effort by all leadership—political and military, national and international—to avoid a potential conflict,” he said. “I think it was well known in military circles that we had to do everything in our power to create an environment where the national command authority—the president and his senior advisers—were not forced to make choices regarding the use of nuclear weapons.

Environmental collapse causes extinction, nuclear war doesn’t – nuclear winter is impossible.

Zutell 88 (Eugene, Arizona Dept. of Emergency and Military Affairs, Division of Emergency Services. 6-19-88. http://www.fortfreedom.org/s05.htm)

When Dr. Carl Sagan and his associates, Drs. Turco, Toon, Ackermann and Pollack announced their nuclear winter theory to the world in the fall of 1983, they received such an incredible amount of publicity for such an extended period of time that they managed to convince many people that in the event of a nuclear war, nuclear winter would be a reality. Unfortunately, those who disputed the nuclear winter theory have received very little publicity. Without going into great detail, let's look at just a few of the more glaring discrepancies in the theory. It is based on their assumption that a large quantity of smoke will be emitted into the atmosphere by burning cities and forests. Sagan and associates estimate that following a nuclear ex- change, approximately 225 million tons of smoke particles, generated by a baseline 5000 megaton exchange, will be injected into the tropo- sphere and, over a period of two weeks, will be evenly distributed around the globe in the northern hemisphere. During the following weeks and months, this smoke will cause a temperature increase at the tropopause as it absorbs the radiant energy of the sun and conse- quently blocks that energy from reaching the surface of the earth. Surface temperatures on the continents in the northern hemisphere, between latitudes 30 degrees north and 70 degrees north, might drop as low as -30 degrees Celsius. The theory does not however, consider the highly relevant question of how much smoke will actually remain aloft after two weeks. Normal meteorological processes, rain, snow, temperature differentials between land masses and the oceans, etc., are not factored into the nuclear winter theory by Sagan et al. Studies of the discharge rates of manmade and natural smoke and observa- tions of the average amounts of smoke found in the atmosphere, done prior to and since the promulgation of the nuclear winter theory, have shown that smoke particles have an average residence time of one week or less. And, the average residence time of water vapor in the atmo- sphere is little longer than a week. The amount of atmospheric water vapor in tons, in the northern latitudes exceeds the 225 million tons of smoke postulated by Sagan and his associates by a factor of at least ten thousand. It is therefore fairly obvious that in seven to ten days, which is before the theoretical initiation of the widespread cooling effect, an amount of water far greater than the weight of smoke generated by the nuclear exchange, will rain out of the atmo- sphere and in doing so, will have an obviously significant cleansing effect. Couple this with the commonly demonstrated fact that smoke and dust particles injected into the atmosphere spontaneously create rain conditions, by themselves being the locus around which water molecules coalesce until they form rain droplets. This phenomena is frequently demonstrated over forest fires in the form of capping clouds which develop over columns of smoke. The clouds consist of smoke particles and water vapor, generated by the fire, that combine with water molecules already in the atmosphere. The resultant water droplets in turn capture more particles as they ascend from the fire. Even before they are large enough to form rain, their increasing size reduces dramatically, the number of smoke and dust particles in the size range that is most effective in absorbing and scattering sun- light. Historical records describe a black rain that fell within a few hours after the explosion of the nuclear weapon over Hiroshima. That rain was the first manifestation of the atmosphere cleansing itself after the sudden injection of an abnormal amount of smoke and dust particles. To enumerate some other problems with the nuclear winter mechanism: 1. The cooling mechanism as Sagan and associates describe it, could only operate over land masses. Ocean surface water is continually supplied with heat from below. Even if sunlight were blocked for many months, the temperature at the ocean surface would remain virtually unchanged. Consequently, weather patterns would continue, with warm moisture laden air from the oceans sweeping over the land masses and as it cools, rain clouds would form and even more of the sun blocking smoke and dust particles would be washed out of the atmosphere. 2. Sagan et al indicated that at the very least, 100 million tons of smoke particles would have to be injected into the atmosphere if the nuclear winter mechanism were to be triggered. They also indicated that cities are the primary source of that smoke. They therefore proposed a nuclear war scenario in which cities are the primary targets. Since the mid 1960s, the primary targets for both U.S. and Soviet nuclear missiles and nuclear bombs have not been population centers or cities. They have been the other guy's nuclear missile launch sites, nuclear bomber bases and other military targets. If those can be eliminated, the cities will be held hostage. The current list of ten target classes ascribed to Soviet planners by DOD and FEMA, does not specifically contain any population centers. The list does of course include target classes that in many instances will be located in or adjacent to metropolitan areas. But, even in those instances, the nuclear weapons employed will not be the huge multi- megaton area destruction bombs of the late 1950s and early 1960s. ICBM systems and MIRVs are now so accurate that a target may be pin-pointed even within a metropolitan area, by a relatively small weapon. This is not in any way to say that the effects will not be catastro- phic. It is to say though that the city wide firestorms necessary for the onset of nuclear winter as described by Sagan and associates, are less than predictable. In fact, they are improbable.

Turns war.

Richard Heinberg 4 , Senior Fellow of Post Carbon Institute and faculty member at New College of California, 4 (“Book Excerpt: Powerdown: Options and Actions for a Port-Carbon World”, http://web.archive.org/web/20071228045639/http://www.energybulletin.net/2291.html

Last One Standing – The path of competition for remaining resources. If the leadership of the US continues with current policies, the next decades will be filled with war, economic crises, and environmental catastrophe. Resource depletion and population pressure are about to catch up with us, and no one is prepared. The political elites, especially in the US, are incapable of dealing with the situation. Their preferred “solution” is simply to commandeer other nations’ resources, using military force. The worst-case scenario would be the general destruction of human civilization and most of the ecological life-support system of the planet. That is, of course, a breathtakingly alarming prospect. As such, we might prefer not to contemplate it – except for the fact that considerable evidence attests to its likelihood.   The notion that resource scarcity often leads to increased competition is certainly well founded. This is general true among non-human animals, among which competition for diminishing resources typically leads to aggressive behaviour.   Iraq is actually the nexus of several different kinds of conflict – between consuming nations (e.g., France and the US); between western industrial nations and “terrorist” groups; and – most obviously – between a powerful consuming nation and a weaker, troublesome, producing nation.  Politicians may find it easier to persuade their constituents to fight a common enemy than to conserve and share. War is always grim, but as resources become more scarce and valuable, as societies become more centralized and therefore more vulnerable, and as weaponry becomes more sophisticated and widely dispersed, warfare could become even more destructive that the case during the past century.

Environment outweighs everything

Wilson 85 – This guy literally invented the concept of biodiversity, Pellegrino University Research Professor in Entomology for the Department of Organismic and Evolutionary Biology at Harvard University and a Fellow of the Committee for Skeptical Inquiry. He is a Humanist Laureate of the International Academy of Humanism, EO, http://www.fathom.com/course/21701785/session1.html

The worst thing that can happen during the 1980s is not energy depletion, economic collapse, limited nuclear war, or conquest by a totalitarian government. As terrible as these catastrophes would be for us, they can be repaired within a few generations. The one process ongoing in the 1980s that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly that our descendents are least likely to forgive us.

Err on the side of caution—every species that goes extinct pushes us closer and closer to human extinction.

Diner 94 – Judge Advocate General’s Corps of US Army [David N., Military Law Review, Winter, 143 Mil. L. Rev. 161, LN]

No species has ever dominated its fellow species as man has. In most cases, people have assumed the God-like power of life and death -- extinction or survival -- over the plants and animals of the world. For most of history, mankind pursued this domination with a single-minded determination to master the world, tame the wilderness, and exploit nature for the maximum benefit of the human race. n67 In past mass extinction episodes, as many as ninety percent of the existing species perished, and yet the world moved forward, and new species replaced the old. So why should the world be concerned now? The prime reason is the world's survival. Like all animal life, humans live off of other species. At some point, the number of species could decline to the point at which the ecosystem fails, and then humans also would become extinct. No one knows how many [\*171] species the world needs to support human life, and to find out -- by allowing certain species to become extinct -- would not be sound policy. In addition to food, species offer many direct and indirect benefits to mankind. n68 2. Ecological Value. -- Ecological value is the value that species have in maintaining the environment. Pest, n69 erosion, and flood control are prime benefits certain species provide to man. Plants and animals also provide additional ecological services -- pollution control, n70 oxygen production, sewage treatment, and biodegradation. n71 3. Scientific and Utilitarian Value. -- Scientific value is the use of species for research into the physical processes of the world. n72 Without plants and animals, a large portion of basic scientific research would be impossible. Utilitarian value is the direct utility humans draw from plants and animals. n73 Only a fraction of the [\*172] earth's species have been examined, and mankind may someday desperately need the species that it is exterminating today. To accept that the snail darter, harelip sucker, or Dismal Swamp southeastern shrew n74 could save mankind may be difficult for some. Many, if not most, species are useless to man in a direct utilitarian sense. Nonetheless, they may be critical in an indirect role, because their extirpations could affect a directly useful species negatively. In a closely interconnected ecosystem, the loss of a species affects other species dependent on it. n75 Moreover, as the number of species decline, the effect of each new extinction on the remaining species increases dramatically. n76 4. Biological Diversity. -- The main premise of species preservation is that diversity is better than simplicity. n77 As the current mass extinction has progressed, the world's biological diversity generally has decreased. This trend occurs within ecosystems by reducing the number of species, and within species by reducing the number of individuals. Both trends carry serious future implications. Biologically diverse ecosystems are characterized by a large number of specialist species, filling narrow ecological niches. These ecosystems inherently are more stable than less diverse systems. "The more complex the ecosystem, the more successfully it can resist a stress. . . . [l]ike a net, in which each knot is connected to others by several strands, such a fabric can resist collapse better than a simple, unbranched circle of threads -- which if cut anywhere breaks down as a whole." n79 By causing widespread extinctions, humans have artificially simplified many ecosystems. As biologic simplicity increases, so does the risk of ecosystem failure. The spreading Sahara Desert in Africa, and the dustbowl conditions of the 1930s in the United States are relatively mild examples of what might be expected if this trend continues. Theoretically, each new animal or plant extinction, with all its dimly perceived and intertwined affects, could cause total ecosystem collapse and human extinction. Each new extinction increases the risk of disaster. Like a mechanic removing, one by one, the rivets from an aircraft's wings, [hu]mankind may be edging closer to the abyss.

### 2nc─Growth 🡪 Ecocide

Dedev inevitable – transition now solves inevitable extinction from ecocide.

Barry 10—President and Founder of Ecological Internet. Ph.D. in "Land Resources" from the University of Wisconsin-Madison, a Masters of Science in "Conservation Biology and Sustainable Development" also from Madison, and a Bachelor of Arts in "Political Science" from Marquette University, Glen, Resisting Global Ecological Change, 5 January 2010

The human family faces imminent and (Copenhagen would suggest) inevitable collapse of the biosphere – the thin layer of life upon an otherwise lifeless planet – that makes Earth habitable. Marshes and rivers and forests and fish are far more than resources – they and all natural ecosystems are a necessity for humanity’s existence upon Earth. A few centuries of historically unprecedented explosion in human numbers and surging, albeit inequitable, consumption and resultant resource use, ecosystem destruction and pollution; is needlessly destroying being for all living things. Revolutionary action such as ending coal use, reforming industrial agriculture and protecting and restoring old forests and other natural ecosystems, is a requirement for the continuation of shared human being. Earth is threatened by far more than a changing atmosphere causing climate change. Cumulative ecosystem destruction – not only in climate, but also water, forests, oceans, farmland, soils and toxics -- in the name of “progress” and “development” -- threatens each of us, our families and communities, as well as the Earth System in total and all her creatures. Any chance of achieving global ecological sustainability depends urgently upon shifting concerns regarding climate change to more sufficiently transform ourselves and society to more broadly resist global ecological change. Global ecological, social and economic collapse may be inevitable, but its severity, duration and likelihood of recovery are being determined by us now. It does not look good as the environmental movement has been lacking in its overall vision, ambition and implementation. The growing numbers of ecologically literate global citizens must come forward to together start considering ecologically sufficient emergency measures to protect and restore global ecosystems. We need a plan that allows humans and as many other species as possible to survive the coming great ecological collapse, even as we work to soften the collapse, and to restore to the extent practicable the Earth’s ecosystems. This mandates full protection for all remaining large natural ecosystems and working to reconnect and enlarge biologically rich smaller remnants that still exist. It is time for a hard radical turn back to a fully functioning and restored natural Earth which will require again regaining our bond with land (and air, water and oceans), powering down our energy profligacy, and taking whatever measures are necessary to once again bring society into balance with ecosystems. This may mean taking all measures necessary to stop those known to be destroying ecosystems for profit. As governments dither and the elite profit, it has become dreadfully apparent that the political, economic and social structures necessary to stop human ecocide of our and all life’s habitats does not yet exist. The three hundred year old hyper-capitalistic and nationalistic growth machine eating ecosystems is not going to willingly stop growing. But unless it does, human and most or all other life will suffer a slow and excruciating apocalyptic death. Actions can be taken now to soften ecological collapse while maximizing the likelihood that a humane and ecologically whole Earth remains to be renewed. Geoengineering Won’t Work The only “Plan B” offered by the ruling elite is to actively consider geoengineering global ecological processes and countless other techno-fixes. Rather than power down or sacrifice, it appears we as a species are willing to gamble with long odds with our and all lives. As if scouring all sorts of ecosystems of their life, global polluting industrialism, and embrace of consumption as the meaning of life is not enough of a load for global ecosystems. Now it is proposed we further alter oceans and the atmosphere unnaturally at a global scale to engineer a biosphere. Humans cannot control most invasive species, keep oil out of water, or feed everyone; yet now we are fit to run the biosphere? Unintended, inequitable and horrendous consequences are assured. Gaia – the Earth System – is far too complex to engineer and trying will seal the demise of our shared, finely honed, and naturally evolved biosphere. Geoengineering and the blind faith in technology it represents can only lead to further degradation of ecosystems and biosphere, over population and consumption, while virtually annihilating any chance of maintaining a natural and habitable Earth. It would be far better to embrace ecological restoration and other necessary policy measures including ending coal, industrial agricultural and old forest logging. A biosphere can never be engineered, but it may be planted, tended and assisted to restore itself. First you take the pressure off ecosystems, and then allow and assist them to naturally recover. Global ecological protection and restoration is the only sort of human ecosystem manipulation that can save us now. Given the momentum of seven billion super-predators consuming ecosystems to meet their every (and endless) whims, it is not possible to stop social, economic and ecological collapse. But there is a still chance of a worthy human society post economic and ecological collapse if we return to the land, power down and resist. It is all about having as much intact ecosystems as possible to lighten the blow and reconstitute society and ecosystems post-collapse. Here, and in my forth-coming book “New Earth Rising”, as a political ecologist I offer a very different plan to the blind faith in technological progress that removes us more from natural life-giving ecosystem processes and patterns. Perhaps this can be called Plan “ER” for Earth Restoration. Powering Down It is a global ecological imperative that we begin dismantling the industrial growth machine to return to honest, well-lived and simple lifestyles – protecting, tending and restoring natural agro-ecosystems. Though terribly difficult given the choices society presents us, each of us must begin the process of getting off the grid, dramatically cutting our energy use and refusing to consume energy from burning fossil fuels. There will come a time where dismantling roads, industries and cities will be appropriate. We must insist that society’s resources are used towards these ends. But make no mistake, no amount of “renewable energy” can allow current, much less predicted, excessive energy usage for everything from our food to our transport to our housing to continue. The “slowing” economy in the over-developed world is the logical conclusion of disease like growth in human populations, resource use and consumption. Highly satisfying for some for awhile, but such ecocidal resource binging cannot and will not last. And now the entire world, including the 2 billion that live on under $2 a day, understandably and justly want better lives. Sadly though, through the power of corporate media, most poor style the ideal life upon the excesses of the West. This means they undervalue their own more ecologically sustainable and personally satisfying lifestyles and livelihoods driven by community and sharing. Life is clearly more than what you own and consume, it is what you do and who you are that counts. And it is never too late to make positive changes. Both personally and societally we must wean ourselves from gluttonous energy use and conspicuous over-consumption, and demand political and social structures that compel others do so as well. As individuals we are faced with much outside of our control, so it won’t all happen at once, but each of us must begin disengaging ourselves from the dominant growth paradigm, and begin to achieve some measure of self-sufficiency. Start by becoming as independent from slave wage labor and marketing neuroses as fast as financially feasible. Those that voluntarily begin to power down will be at an enormous advantage as the ecological shit hits the fan. And there is no better place to start than loving and being one with a piece of land. The land, think always of the land. Back to the Land The age of Ecological Restoration will be predicated upon a return to the land to practice local agrarian democracy. There is no chance of survival post economic, social and ecological collapse if you do not have a homestead – a piece of land, with water, good soils, tools, seeds and other implements of self-sufficiency. Cities are artificial constructs that consume resources from far and wide, and whose resource use and pollution can never be sustained. When collapse hits, billions will die there in a very short time, as the modern and ecologically illiterate learn food and water does not come from grocery stores and taps. Living the good life – or for that matter any life at all – will soon not be possible unless you have prepared your land and are willing and able to defend it. This does not necessarily suggest survivalist paranoia, as when the rains stop and Earth grows parched, it is highly likely mobility will cease and we will be left to live where we are. Prepare to live upon land within the limits of your bioregion. There are many opportunities to pursue alternative sharing communities. Large numbers of well-networked people locally, and on the Internet for as long as it lasts, going back to the land to live in an ecologically sustainable manner is the second component of a radical turn away from inappropriate technology and economic growth; to a restoration economy, living more fulfilling lives with the land and reintegrating humans with nature. Even the richest countries still possess relatively inexpensive land with remnant ecosystems that can be assisted to enlarge. Not-yet-over-developed countries still hold much potential for self-support. We must all relearn to plant and tend our forest gardens, organic permaculture and native ecosystems starting now and for eternity. As with any animal, we cannot long persist without intact habitat. Human well-being all comes back to the state of the land and its soil and biota. When we protect and restore land – water, oceans and atmosphere are much improved as well. It has long been known that full and sensible lives are possible from living within a local bioregion’s bounty. The explosive growth in everything is a new phenomenon and cannot and will not be sustained under any conditions. It is not necessary to work so hard to acquire stuff. Much satisfaction comes from being one with land, having a loving family and community, and enjoying the arts, sports, literature and other aspects of culture we love. Ecological collapse will still be wrenching, but on the land you and a civilized way of life have a fighting chance. Live simply, laugh often and love deeply. Ecological Resistance The next stage towards ecological enlightenment and serving Gaia is passive refusal to participate in the system, escalating through various stages of resistance until known ecocidal activities are ended – and ecosystems protected and widely restored – as soon as possible. No one including this political ecologist is suggesting that imminently we should start waging violent revolution against the speculative industrial growth machine that is killing us all. At this time we would lose an outright fight. But clearly it is time to have a conversation regarding what other types of protest activities besides petitions and protests are valid in a dying world, even within supposed democracies. What the Earth System needs badly right now is a million acts of resistance to obstruct and eventually destroy the ecologically unsustainable economic growth machine. There is an immediate need to vigorously obstruct the growth machine through active non-participation in the speculative industrial system. At some point others may wish to consider destruction of Earth destroying equipment through carefully targeted acts of sabotage. And if this fails, we may come to realize a need to pursue more revolutionary acts, such as insurgency and guerrilla warfare. From time to time through human history it has been necessary to wage war to promote greater justice, equity and freedom – and now perhaps ecological sustainability as well.

### Biodiversity Impact Extension

Biodiversity loss = extinction

Science Daily 11 - Biodiversity Key to Earth's Life-Support Functions in a Changing Worldhttp://www.sciencedaily.com/releases/2011/08/110811084513.htm

ScienceDaily (Aug. 11, 2011) — The biological diversity of organisms on Earth is not just something we enjoy when taking a walk through a blossoming meadow in spring; it is also the basis for countless products and services provided by nature, including food, building materials, and medicines as well as the self-purifying qualities of water and protection against erosion. These so-called ecosystem services are what makes Earth inhabitable for humans. They are based on ecological processes, such as photosynthesis, the production of biomass, or nutrient cycles.Since biodiversity is on the decline, both on a global and a local scale, researchers are asking the question as to what role the diversity of organisms plays in maintaining these ecological processes and thus in providing the ecosystem's vital products and services. In an international research group led by Prof. Dr. Michel Loreau from Canada, ecologists from ten different universities and research institutes, including Prof. Dr. Michael Scherer-Lorenzen from the University of Freiburg, compiled findings from numerous biodiversity experiments and reanalyzed them. These experiments simulated the loss of plant species and attempted to determine the consequences for the functioning of ecosystems, most of them coming to the conclusion that a higher level of biodiversity is accompanied by an increase in ecosystem processes. However, the findings were always only valid for a certain combination of environmental conditions present at the locations at which the experiments were conducted and for a limited range of ecosystem processes.

### Agriculture Scenario

Growth kills agricultural diversity

 Chen 2k Professor of Law and Vance K. Opperman Research Scholar, University of Minnesota Law School (Jim, Globalization and Its Losers, Winter 2000, 9 Minn. J. Global Trade 157, Lexis)

There is one respect in which dispersed farm ownership may improve agriculture's environmental performance. Smaller, owner-operated farms excel in preserving rare animal breeds and heirloom seeds. The precise contours of agriculture's relationship with biodiversity preservation, however, still fail to justify legal interference with globalization. Like America, the impulse toward species conservation "was born in the country and moved to the city." n296 Our awareness of extinction began on the farm. The opening chapter of The Origin of Species explored variation in domesticated plants and animals. n297 As industrialization forced smaller farms to fold or consolidate, entire landraces, varieties, and breeds vanished. The biological crisis of Darwin's England has spread to the rest of the globe. Agriculture's shallow genetic pool is being drained at a breakneck pace "as human population and economic pressures [\*205] accelerate the pace of change in traditional agricultural systems." n298 Globalization portends dire consequences for agricultural biodiversity. Rural communities preserve rare animal breeds and plant varieties in situ. Over many generations, traditional foraging and agrarian communities have amassed volumes of ethnobiological knowledge. n299 The world's untapped ethnobiological knowledge, "if gathered and catalogued, would constitute a library of Alexandrian proportions." n300 Much of this knowledge, locked as it is in endangered languages, will be irretrievable if linguistic diversity continues to decline. n301

Solves extinction.

Mulvany 1 senior policy adviser at Practical Action. Chair of the UK Food Group. Has been a trustee of Oxfam, Action Aid and CIIR and adviser to many other international NGOs. He was a founder editorial board member of Development in Practice journal. Masters degree from Oxford University and is a chartered member of the Institute of Biology AND Rachel Berger climate change Policy Advisor with Practical Action (Patrick, Agricultural Biodiversity: Farmers Sustaining the Web of Life, http://practicalaction.org/docs/advocacy/fwn\_bio-div\_briefing.pdf)

Agricultural biodiversity embraces the living matter that produces food and other farm products, supports production and shapes agricultural landscapes. The variety of tastes, textures and colours in food is a product of agricultural biodiversity. This biodiversity is the result of the interaction by smallholder farmers, herders and artisanal ﬁsherfolk with other species over millennia. Selecting and managing these for local nutritional, social and economic needs has produced the agricultural biodiversity on which humanity depends. Food production systems need to be rooted in sustaining agricultural biodiversity so that farmers everywhere can continue to provide food and livelihoods and maintain life on Earth. STRENGTH IN DIVERSITY At a time of unprecedented changes in society, population and the environment, agricultural biodiversity also provides some security against future adversity, be it from climate change, war, industrial developments, biotechnological calamities or ecosystem collapse. There is greater strength in diversity than in susceptible uniformity. A diversity of varieties, breeds and species will ensure that there will continue to be agricultural production whatever the threat, and hidden in the genetic code of today's crop plants and livestock are many invisible traits that may become useful in confronting future challenges

### Decline Solves Agriculture

Modern industrial agriculture destroys ecosystems and uses chemicals such as pesticides – economic collapse is key to shift to permaculture farming systems, which are more sustainable

Ethan A. Huff, April 7th, 2012 (Huff is a staff writer for Natural News, a non-profit collection of public education websites covering topics that empower individuals to make positive changes in their health, environmental sensitivity, consumer choices and informed skepticism, “Four ways to creatively grow your own fruits and vegetables using principles of permaculture,” <http://www.naturalnews.com/035497_permaculture_gardens_vegetables.html> >:)

(NaturalNews) Modern industrial agriculture is a disastrous failure, as it defies practically every natural law related to food cultivation, ecological and environmental protection and stewardship, and human nutrition. But there is a new agricultural revolution sweeping the land that is changing the way humans eat and grow food, and its methods are derived from the concepts found in permaculture. Permaculture is basically an all-encompassing term used to identify the strategic and creative ways through which human structures and agricultural systems are unified into harmonious, sustainable entities. As opposed to factory farming systems, which rely heavily on chemical and fertilizer inputs and destroy the environment and human health in the process, permaculture farming systems take advantage of the many unique ways that natural systems work together to complement one another and sustain life. With food costs on the rise and the economy increasingly on the brink of collapse, more and more people are turning to the self-sustaining methods of food production found in permaculture that will persist in the event of a regional or national crisis. So NaturalNews has put together a list of ways you can begin growing your own fruits and vegetables at home in ways that draw from permaculture growing concepts. The Mandala Garden If you have a fairly sizable growing area, you may want to consider creating a mandala garden. This unique setup utilizes moveable chicken "tractors" that can be rotated around for the purpose of naturally fertilizing and tilling soil, and creating an environment in which fruits and vegetables grow easily with minimal labor. You can learn more about the mandala garden concept by visiting: http://www.small-farm-permaculture-and-sustainable-living.com Vertical, indoor farming A surprising number of herbs, greens, nuts, and even grains can be grown indoors with a little creative thinking and conscious placement of growing containers around windows that get lots of natural sunlight. And even if sunlight is limited, special growing lights can also be used to grow food indoors in otherwise dark areas. When stacked and tiered around these light sources, vertical, indoor farms can thrive. Check out this VertiCrop design for an idea of how this might work for you on a smaller scale at home: http://www.verticrop.com/about.html You can also learn more about indoor farming at: http://www.veganorganic.net Hydroponics If land and suitable soil area is in limited supply, hydroponics is another self-sustaining growing option that relies on water and nutrients to grow food. Hydroponic systems work well in urban settings where physical space, and even natural sunlight, is in short supply. Hydroponic systems can be stacked in small spaces, which allows for maximized growing capacity in a small amount of space. You can learn more about hydroponics by visiting: http://www.aces.uiuc.edu/vista/html\_pubs/hydro/hydroponic.html Aquaponics Just like hydroponics, aquaponics is a method of growing food at home using water. But instead of just fruits and vegetables, aquaponics systems incorporate fish and other sea creatures into the mix as well. A hybrid of the two systems, aquaponics provides some city dwellers with adequate space the ability to produce their own fish for meat, and even sell it to generate revenue. You can learn more about aquaponics by visiting: http://www.backyardaquaponics.com/ http://www.urbanaquaponics.com/ Learn more: <http://www.naturalnews.com/035497_permaculture_gardens_vegetables.html#ixzz21YrEpsPr>

### Industrial Farming Fails-Studies

Industrial farming is not more productive than organic farming – their studies are flawed and their authors are paid to write them

Alice Elliott Brown, May 2nd, 2012 (Alice Elliott Brown is the author of five books in the Giant Magnet series published by River Landing Press. She is a software executive, an electrical engineer, and an MBA. She has over thirty years of experience in corporate management and technology startups, “‘Nature’ Study says Industrial Farming Outperforms Organic (Until you read it),” <http://themomu.wordpress.com/2012/05/02/nature-study-says-industrial-farming-outperforms-organic-until-you-read-it/> >:)

One of our regular commenters pointed us to a study [studies] in the Journal “Nature” which purports to say that industrial farming outperforms organic farming. We weren’t able to read it, because it was a paid subscription. But the headline and the summary said that was its conclusion. Fortunately, Tom Philpott had a subscription. He said: “First of all, it’s important to understand what the researchers did. They rounded up all the rigorously documented studies, both domestic and global, they could find that compared organic yields and conventional yields (66 studies met their criteria) and averaged them out.” My exact point about Death by Powerpoint. Studies say what the person who paid for the study wants it to say. Or, in the case of university researchers, what the person who writes the study wants to be known for. There is so much subjectivity and assumption involved in preparing the criteria, it can’t be any other way. By a lucky coincidence, Mother Jones posted Philpott’s analysis today. Some points I took away from reading the analysis (Sadly, I still haven’t been able to read the research itself.) 1. The only focus was gross output per acre. No account was taken for the damage being done to those acres. So the conclusion that growing more food would take more acres, if done organically, was a faulty conclusion. 2. The averaging method meant U.S. corn was included in the analysis. U.S. corn, mostly all of which is genetically modified, does produce mountains of product. Product that goes into ethanol and high fructose corn syrup, both of which are questionable uses of a pseudo-food (I use the word pseudo-food to describe GMO products.). It is an unfair comparison to suggest the loss of this entire product would even need to be replaced. Our world would be a better place without high fructose corn syrup in it. Our cattle would be better off eating grass. Our humans would be better off eating less cattle. So the conclusion that we would need to replace this system on a one to one basis, thus needing more land, is faulty. 3. Most importantly, thanks to Mother Jones and Tom Philpott for providing this link to the Millenium Institute. Philpott says, in his article: QUOTE “Moreover, by focusing on yield, the authors presume that maximizing production should be the chief goal for ag policymakers. But as the eminent agriculture-development expert Hans Herren, president of the Millennium Institute, told me, the globe’s farms are already producing 4,600 calories per day—enough in gross terms to support a population twice as large as the current one. “We don’t need to grow more food, we need to shift what we grow, where we grow it, and who grows it,” Herren told me. He said that in places like Africa, east Asia, and South America, crop yields could be doubled “almost overnight” if farmers had the training and infrastructure to proper organic and/or low-input farming. Their crops yields might still lag behind, say, those of industrial-scale corn farmers in Iowa. “But they wouldn’t need all of those inputs [like fertilizer and pesticides], and they’d produce more than enough food,” he said. “ UNQUOTE So I’m back where I started. Studies say whatever studies are paid to say. There was a time in my life when I said what I was paid to say, to earn a living. But I stopped, because internal disingenuity is the root cause of all disease. Saying what you can see is not true makes you sick. Whether there’s a “peer-reviewed” study that proves it or not.

### Industiral Farming 🡪 Disease Spread

Industrial farming creates deadly diseases – factory farms require use of antibiotics which causes infections to develop immunities

Rachael Ludwick, April 15th, 2012 (writer, ‘R343L,’ cites Morton N. Swartz, MD, Chief, Infectious Disease Unit @ MGH, author, ‘Human diseases caused by foodborne pathogens of animal origin,’ “Is Industrial Farming Causing Antibiotic Resistant Infections?” <http://www.r343l.com/blog/2012/04/15/industrial-farming-causing-antibiotic-resistance/> >:)

In my last post, I summarized a few of the, to put it politely, bad outcomes of industrial animal agriculture (“factory farms”). This style of very intense animal husbandry is mainly feasible because of antibiotics1. But the current attempts to regulate antibiotic use [has] have little to do with abuse of animals and everything to do with fears of disease in humans. In the previous post, I mentioned that there were “surprisingly few documented cases” of antibiotic-resistant bacteria being bred in livestock and then transferring to humans. I based this on my fairly limited memory of cases mentioned in Superbug by Maryn McKenna. I’d remembered being surprised when I read that book how few cases she gave. I should have dug into this more. The reality is that there is much more evidence for it that I’d imagined, but that the evidence is complicated. Why is it hard to answer? The cases I’d remembered from Superbug were the (seemingly) straightforward cases where a human infection was found to be from a[n] antibiotic-resistant bacteria and there was a simple causal link back to a farm where antibiotics were used and the animals carried the same strain. It’s not actually simple or easy to prove these. The steps seem simple enough: Human is sick with an antibiotic-resistant bacterial infection. Human recently interacted with a source for the infection, such as eating contaminated meat or working on a farm. Animals on the farm are carrying the same strain as the human. The animals were treated with a related antibiotic. But all of these steps are remarkably hard to prove in practical terms. All kinds of problems can crop up: How do you prove that the resistant bacteria X causing an infection didn’t gain the resistance factors from normally harmless bacteria Y that the patient already had? You can’t identify the source of the human infection clearly. This is especially difficult if you don’t have full data. What if the infection is Salmonella but the patient hasn’t eaten any obvious source (chicken)? The possible sources include every food item that might have been cross-contaminated. The FDA has become really good at this for food products not expected to have contamination (candy, vegetables, etc) but generally no one bothers to trace infectious agent origins unless a lot of people are affected. The source (such as meat) has to be traced back to the originated farm. This can be really hard. If you buy conventional ground beef in a grocery store, it could contain meat (and bacteria) from any of hundreds or thousands of animals from multiple farms, slaughtered at different times, etc. By the time you find the farm, maybe none of the animals living there were part of the population from which your source was taken, so the expected strain may not exist in the population any more. There are of course more complications possible. My main sources for the following are several review articles234. If you read only one of them, I recommend Swartz2. Evidence Straightforward Evidence These are cases where someone has traced a specific infection back to a zoonotic source. A major outbreak of Salmonella in 1985 was traced from human consumption of hamburgers, through the meat-processing plants and eventually all the way back to dairy farms where the cattle were raised25 (dairy cows are often made into hamburger at end of productive life). A specific case of ceftriaxone-resistant Salmonella occurred in a child in Nebraska that was eventually traced back to cattle treated with antibiotics on his father’s farm. Notably the strain was actually found to be resistant to a large number of antibiotics (not all used to treat Salmonella infections in humans, of course): “ampicillin, chloramphenicol, tetracycline, sulfisoxazole, kanamycin, and streptomycin as well as to broad-spectrum cephalosporins (e.g., cephalothin) and expanded-spectrum cephalosporins (e.g., ceftriaxone, which is used in humans, and ceftiofur, which is used in animals), aztreonam, cefoxitin, gentamicin, and tobramycin.”6 A comparison study7 was done with poultry workers at both battery and free-range style farms. The battery farms were fed antibiotics (as is typical). The workers were tested before and after for Escherichia coli, specifically looking for resistant varieties. The results showed that workers caring for birds being fed antibiotics quickly began to harbor resistant varities of E. coli in their stool, similar to the poultry. These are some of the major direct cases that I’ve found (no doubt I’ve missed some!) The indirect evidence for particular organisms is much more substantial, indicating that zoonotic-origin antibiotic-resistant infections are probably relatively common, but proving it for particular cases is much harder. Indirect Evidence Campylobacter Several Campylobacter spp. cause a significant proportion of gastroenteritis cases in the United States (otherwise known as “food poisoning”). It is not usually treated with antibiotics because for most individuals it doesn’t greatly improve recovery speed. Chickens are treated with quinolone antibiotics to prevent infections and quinolone-resistant strains of Campylobacter have been found in chickens, chicken products, and human beings289. Significantly, a Danish study10 demonstrated that domestically acquired infections were significantly less likely to be quinolone-resistant strains: quinolones are rarely used on chickens in Denmark. Salmonella Salmonella of the food-poisoning variety is usually acquired from food: undercooked meat or eggs or food that has been cross-contaminated (though you can also catch it from wild and pet reptiles such as turtles!) There are numerous strains of it and they are frequently the subject of recalls due to major outbreaks. There have been several cases where a particular strain is more prevalent in animals and human infections are linked to animal reservoirs11. Antibiotic-resistant Salmonella has been found in ground meat12. A US federal government program (NARMS) monitors Salmonella cases and tests for resistance on a proportion, allowing us to know over time which strains exist and which are resistant. Swartz2 summarizes this confusing data. The results are mixed: some strains look to be gaining resistance and affecting humans, other perhaps not. Resistant strains of Salmonella may even be associated with more frequent bloodstream infections and hospitalizations13. Enterococcus Vancomycin-Resistant Enterococcus (VRE) are often acquired in the hospital and are nearly untreatable. There is some evidence that a similar antibiotic (avoparcin) used in animals creates a reservoir for continued VRE infections in humans, at least in Europe which decreased when avoparcin use decreased (summarized in Swartz2 and Smith14). The evidence here is fairly confusing to me, but certainly worrisome. Convincing? Should we worry? Considering I’m a dilettante just poking around PubMed and other sources, this is not exactly a complete review of the literature. Previous to looking into this a bit more, I had a vague notion that treating animals with antibiotics (subtherapeutically in most cases) definitely led to resistant infections in humans. After looking the literature, I’m well convinced that it does indeed happen. But like all things in science, it’s more complicated. For example, for Salmonella it may only be happening for some strains and not others. Why is that? Is it a risk for humans? Moreover, transfer of resistance genes between bacteria is really hard to demonstrate in practice, which is one of the major fears I’ve read about. Still, what would happen if we greatly decreased (or even banned) subtherapeutic — prophylactic and growth-enhancing — uses of antibiotics on animals [in industrial farming]? The main outcome seems that we would be able to raise fewer animals, but in better conditions generally, and meat and dairy would become a bit more expensive. Lipsitch3 and Smith15 argue that perhaps there would be little medical impact from restricting antibiotics in animals in cases where there are already resistant-bacteria in humans — the horse has left the barn. In any case, the research supports reducing many uses of antibiotics in animals to mitigate demonstrable effects in human beings.

### Water Wars Scenario

Continued growth and consumption guarantees violent conflicts over clean water

Speth, 8 – Rhodes Scholar @ Oxford University, Chairman of Council on Environmental Quality for Executive Office, Founder of World Recourses Institute (Think-Tank), Led the Western Hemisphere Dialogue on Environment and Development, Administrator of United Nations Development Program, Dean of Yale School of Forestry and Environmental Studies, Leader of the President’s Task Force on Global Recourses and the Environment, Holds multiple awards—National Wildlife Federation’s Recourse Defense Award and Lifetime Achievement Award of Environmental Law Institute, and Blue Planet Prize [James, “The Bridge at the Edge of the World”)

It has been said that there are alternative sources of energy, but there are no alternatives to water. There are several dimensions to what has  correctly been called the world water crisis.40    First, there is the crisis of natural watercourses and their attendant  wetlands. No natural areas have been as degraded by human activi  ties as freshwater systems. Natural water courses and the vibrant life  associated with them have been extensively affected by dams, dikes,  diversions, stream channelization, wetland filling and other modifica  tions, and, ofcourse, pollution. Six percent of the world's major river  basins have been severely or moderately fragmented by dams or other  construction. Since 1950 the number of large dams has increased from  5,700 worldwide to more than 41,000. Much of this activity is done  to secure access to the water, but power production, flood control,  navigation, and land reclamation have also been important factors.  As freshwater is diverted from natural sources, ecosystems dependent  on that water suffer, including aquatic systems, wetlands, and forests.  About half the world's wetlands have been lost, and more than a fifth of  known freshwater species have already been driven to extinction.41  The second crisis is the crisis of freshwater supply. Human demand  for water climbed sixfold in the twentieth century, and the trend continues today. Humanity now withdraws slightly over half of accessible  freshwater, and water withdrawals could climb to 70 percent by 2025.42  Meeting the world's demands for freshwater is proving problematic.  About 40 percent of the world's people already live in countries that are  classified as "water stressed," meaning that already 20 to 40 percent of liate pressures the available freshwater is being used by human societies. Projections  indicate that the percentage of people living in water-stressed countries  could rise to 65 percent by 2025.43  A large portion of freshwater withdrawals, about 70 percent, goes  to agriculture. Since 1960, acreage under irrigation has more than  doubled. A special problem is occurring in India, China, and elsewhere in Asia where tens of millions of tube wells are depleting "fossil"  ground waters. The New Scientist reports that "hundreds of millions of  Indians may see their land turned to desert.,,44 Overall, according to a  study by top water specialists from around the world, world demand  for water could double by 2050.45 "At the worst," the New York Times  reported, "a deepening water crisis would fuel violent conflicts, dry  up rivers and increase groundwater pollution.... It would also force  the rural poor to clear ever-more grasslands and forests to grow food  and leave many more people hungry."46  Last, there is the crisis of pollution. Pollutants of all types are discharged into the world's waters in enormous quantities, reducing the  capacities of bodies of water to support life in the water and to support human communities. Contamination denies a large portion of  the world's population access to clean water supplies. About a billion  people, a fifth of the world's population, lack clean drinking water;  40 percent lack sanitary services. The World Health Organization  calculates that each year about 1.6 million children die from diseases  caused by unsafe drinking water and lack of water for sanitation and  hygiene.47  Water supply issues will become increasingly prevalent in the United  States. Freshwater withdrawals per capita from surface and ground waters in the United States are twice that of the OECD (Organisation  for Economic Co-operation and Development) as a whole. The Environmental Protection Agency estimates that if current American water  use remains constant at a hundred gallons per person per day, thirtysix states will face water shortages by 2013. As a result, humanity's  "first need" will soon be privatized. Investors are moving into a water related market that is estimated to be worth at least $15° billion in the  United States by 20IO. "Water is a growth driver for as long and as  far as the eye can see," a Goldman Sachs water analyst told the New  York Times in 2006. 48

Water wars go nuclear

Weiner, 90 – Professor at Princeton (The Next 100 Years p.270)

If we do not destroy ourselves with the A-bomb and the H-bomb, then we may destroy ourselves with the C-bomb, the Change Bomb. And in a world as interlinked as ours, one explosion may lead to the other. Already in the Middle East, tram North Africa to the Persian Gulf and from the Nile to the Euphrates, tensions over dwindling water supplies and rising populations are reaching what many experts describe as a flashpoint A climate shift in that single battle-scarred nexus might trigger international tensions that will unleash some at the 60.000 nuclear warheads the world has stockpiled since Trinity.

### Deforestation Scenario

Decline is key to solve Amazon deforestation─

Begley, 9 (Sharon, senior editor at Newsweek, Newsweek, March 16, “The Recession’s Green Lining”)

 For some victims of the recession, using the downturn to institute greener practices is more of a challenge. About two thirds of Brazil's 200 million head of cattle graze in the Amazon where virgin forest once stood, making cattle the single biggest cause of deforestation there. Now falling beef prices (down 51 percent over the past 12 months) plus the shortage of farm credit have done what "save the rainforest" campaigns didn't: give Amazonia a reprieve. "The economic downturn is a natural brake on forest destruction," says Carlos Nobre, a climatologist at Brazil's National Institute for Space Research. The rate of deforestation from last November through January, the institute just announced, fell 70 percent from the same period a year before. The environment minister believes that's a result of greater enforcement, however, not of the recession's effect on ranchers. But you can say this for the downturn: it's much easier to enforce forest-protection laws when ranchers aren't all that eager to chop down the jungle.

Extinction─

Takacs, 96 (David, Instructor in Department of Earth Systems Science and Policy at California State-Monterey Bay. Philosophies of Paradise, http://www.dhushara.com/book/diversit/restor/takacs.htm

As we might expect, ecologists and conservation biologists proclaim biodiversity's ecological value. These ecological arguments can be interpreted as human-value-centered and selfish or nonhuman-value-centered and unselfish, or some permutation of these. "Ecosystem services" may have value of and for themselves-in other words, it may be argued that keeping ecosystems healthy and functioning has value apart from any human valuer or any value humans may obtain from them. We may thus value biodiversity because we value the continued healthy functioning of ecosystems as such, regardless of any services biodiversity performs for us. More often, however, humans are said to benefit from such ecosystem services. Half a century ago, Aldo Leopold warned: "Recent discoveries in mineral and vitamin nutrition reveal unsuspected dependencies in the up-circuit: incredibly minute quantities of certain substances determine the value of soils to plants, of plants to animals. What of the down-circuit? What of the vanishing species, the preservation of which we now regard as an esthetic luxury. They helped build the soil; in what unsuspected ways may they be essential to its maintenance?" More recently, Jane Lubchenco feels very strongly that people are in fact much more dependent on ecosystem services that are provided by both managed and unmanaged ecosystems than is generally perceived to be the case. So I think it's sheer folly for us to act in ways that are undermining the ability of both managed and unmanaged ecosystems to provide these services that we're depen dent on. And that we're doing that more and more as we pollute and destroy habitats, or alter habitats in one fashion or another. And I guess the bottom line is that we're changing the environment faster than our ability to understand the consequences of how we're changing it." Most predictions of eco-doom are predicated on this argument, and many are stated in much more dramatic terms than those Lubchenco employs. As the argument runs, a myriad of organisms, especially "little things," comprise ecosystems that provide countless services that keep the Earth's biotic and abiotic processes up and running.' According to Souls, "Many, if not all, ecological processes have thresholds below and above which they become discontinuous, chaotic, or suspended." Biodiversity may regulate these processes; among its many talents, biodiversity is said to create soil and maintain its fertility, control global climate, inhibit agricultural pests, maintain atmospheric gas balances, process organic wastes, pollinate crops and flowers, and recycle nutrients.' Confusion in this line of argumentation ties back into why the concept of biodiversity has risen to prominence. Remember that biologists have scant understanding of the roles that species or populations play in maintaining ecosystems. In interviews, Lovejoy, Falk, and Ray confessed that you can strip away many species from an ecosystem without loss of ecosystem function. Ehrlich points out that by the time a species is endangered, it has probably stopped playing an important role in keeping the system functioning anyway." Furthermore, it is not clear whether we should focus on species as functional cogs in the ecosystem wheel, or whether ecological services are emergent properties of ecosystems themselves. With the biodiversity concept, these dilemmas become nearly moot. Biodiversity embraces lists of species, lists of ecosystems, the interactions of species within ecosystems, and the processes that species may maintain or control. When arguing on behalf of bio-diversity, one need not focus on the specifics-specifically, the specifics of what we don't know. It is enough to explicate some of the functions that keep ecosystems running, or that ecosystems provide for us, and then extrapolate to the dangers associated with declining biodiversity. Peter Raven bases his thinking on Leopold's observation "To keep every cog and wheel is the first precaution of intelligent tinkering": "In every sense, in the sense of communities that will preserve soil, promote local climate, keep the atmosphere, preserve water, and every thing else, the first rule of being able to put together communities well or have the world go on functioning well, or to keep climates as they are, or to retard disease, to produce products we want sustainably, be cause, after all, plants, algae, and photosynthetic bacteria are the only device we have to capture energy from the sun effectively-in all those senses, and in the sense that we're losing the parts so rapidly, I consider the loss of biological diversity to be the most serious problem that we have-far more serious than global climate change or stratospheric ozone depletion, or anything else." "Habitat destruction and conversion are eliminating species at such a frightening pace that extinction of many contemporary species and the systems they live in and support ... may lead to ecological disaster and severe alteration of the evolutionary process," Terry Erwin writes." And E. 0. Wilson notes: "The question I am asked most frequently about the diversity of life: if enough species are extinguished, will the ecosystem collapse, and will the extinction of most other species follow soon afterward? The only answer anyone can give is: possibly. By the time we find out, however, it might be too late. One planet, one experiment."" So biodiversity keeps the world running. It has value in and for itself, as well as for us. Raven, Erwin, and Wilson oblige us to think about the value of biodiversity for our own lives. The Ehrlichs' rivet-popper trope makes this same point; by eliminating rivets, we play Russian roulette with global ecology and human futures: "It is likely that destruction of the rich complex of species in the Amazon basin could trigger rapid changes in global climate patterns. Agriculture remains heavily dependent on stable climate, and human beings remain heavily dependent on food. By the end of the century the extinction of perhaps a million species in the Amazon basin could have entrained famines in which a billion human beings perished. And if our species is very unlucky, the famines could lead to a thermonuclear war, which could extinguish civilization.""

### Ozone Scenario

Decline prevents the worst industrial pollution

 Begley, 9 (Sharon, senior editor at Newsweek, Newsweek, March 16, “The Recession’s Green Lining”)

To savvy snowboarders, Baikalsk has long been the beautiful resort where visitors are so few you can feel as though you own the mountain, at least temporarily: for about 5,000 rubles ($175), you can have exclusive use of one of the six long runs for the day and never see another soul as you schuss through forests. Of course, you've had to tolerate a smell that seemed to be a blend of rotten cabbage and New Jersey Turnpike. For in addition to the resort, this town on Siberia's Lake Baikal—the oldest, largest and deepest freshwater lake in the world—is home to the Baikal Pulp and Paper Mill, which has been belching foul-smelling sulfates into the air and chlorides, phenols and other chemicals into the lake since it was built during the Cold War. The pollution killed plants, crabs and fish and threatened the world's only freshwater seal, the earless nerpa. Environmentalists have been trying to shut down the mill since 1964, getting precisely nowhere. But where greens failed, the global recession succeeded all too well. In November, the plant ceased production. "The economic crisis," says Marina Rikhvanova, the head of the environmental group Baikal Wave, worked "like magic." It is no coincidence that some of the dirtiest industrial operations are falling victim to the global recession. Over the past two decades, much of the world's manufacturing moved to where pollution standards are little more than mild suggestions. Since small, corner-cutting, inefficient facilities tend to both flout pollution laws and be most vulnerable to a sudden drop in demand, the global recession has hit such operations especially hard. Thousands of factories in China's Pearl River Delta have shut their doors since late last year, for instance; output of autos, electronics and other goods from factories in Mexico's Ciudad Juárez, Monterrey and Toluca has fallen so sharply that the amount of cargo trucked across the U.S. border has dropped 40 percent. In India, enough small steel-rolling mills around Delhi have closed that levels of sulfur dioxide (which forms acid rain) fell 85 percent in October 2008 compared with a year earlier. The recession is bringing a green dividend in the developed world, too. Reduced economic activity is projected to cut Europe's emissions of carbon dioxide, the chief man-made greenhouse gas, by 100 million tons in 2009, and the United States' by about the same amount.

Solves ozone depletion

EC, 3 (Environment Canada, the department of the Government of Canada with responsibility for coordinating environmental policies and programs as well as preserving and enhancing the natural environment and renewable resources, 8/22, “FAQ on Ozone Depletion,” http://www.atl.ec.gc.ca/msc/as/ozone\_faq.html)

What human activities cause ozone depletion? Emissions of chlorine and bromine containing synthetic compounds known as industrial halocarbons are the cause of stratospheric ozone depletion. Why are industrial halocarbons so effective at destroying ozone? Industrial halocarbons are effective ozone-depleters for two reasons. The first is that they are not reactive, which means they survive long enough in the atmosphere to drift up into the stratosphere. The second is that they help the natural reactions that destroy ozone. Unlike most chemicals released into the atmosphere at the Earth's surface, industrial halocarbons are not "washed" back to Earth by rain or destroyed in reactions with other chemicals. They simply do not break down in the lower atmosphere and they can remain in the atmosphere from 20 to 120 years or more. Once they reach the stratosphere, UV-C radiation breaks up these molecules into chlorine (from CFCs, methyl chloroform, carbon tetrachloride) or bromine (from halons, methyl bromide) which, in turn, break up ozone (O3). Both chlorine and bromine activate and speed up the ozone destruction reactions without being altered or destroyed themselves. Thus, a single chlorine atom can destroy up to 100,000 ozone molecules before it finally forms a stable compound and diffuses out of the stratosphere.

Extinction

Greenpeace, 95 “Full of Homes: The Montreal Protocol and the Continuing Destruction of the Ozone Layer,” <http://archive.greenpeace.org/ozone/holes/holebg.html>.

When chemists Sherwood Rowland and Mario Molina first postulated a link between chlorofluorocarbons and ozone layer depletion in 1974, the news was greeted with scepticism, but taken seriously nonetheless. The vast majority of credible scientists have since confirmed this hypothesis. The ozone layer around the Earth shields us all from harmful ultraviolet radiation from the sun. Without the ozone layer, life on earth would not exist. Exposure to increased levels of ultraviolet radiation can cause cataracts, skin cancer, and immune system suppression in humans as well as innumerable effects on other living systems. This is why Rowland's and Molina's theory was taken so seriously, so quickly - the stakes are literally the continuation of life on earth.

## \*\*\*Warming\*\*\*

### 1nc─Warming Shell

Warming causes extinction and only de-development solves

Li 10 – Assistant Prof Economics @ U of Utah, Minqi, The 21st Century Crisis: Climate Catastrophe or Socialism, Paper prepared for the David Gordon Memorial Lecture at URPE Summer Conference 2010, www.econ.utah.edu/~mli/Economics%25207004/Article%2520Forthcoming%2520RRPE%2520David%2520Gordon%2520Lecture.doc

The global average surface temperature is now about 0.8°C (0.8 degree Celsius) higher than the pre-industrial time. Under the current trend, the world is on track towards a long-term warming between 4°C and 8°C. At this level of global warming, the world would be in an extreme greenhouse state not seen for almost 100 million years, devastating human civilization and destroying nearly all forms of life on the present earth (Conner and McCarthy 2009). The scientific community has reached the consensus that the current global warming results from the excessive accumulation in the atmosphere of carbon dioxide (CO2) and other greenhouse gases (such as methane and nitrous oxide) emitted by human economic activities.1 The capitalist historical epoch has been characterized by the explosive growth of material production and consumption. The massive expansion of the world economy has been powered by fossil fuels (coal, oil, and natural gas). Since 1820, the world economy has expanded by about seventy times and the world emissions of carbon dioxide from fossil fuels burning have increased by about sixty times (see Figure 1). At the United Nations conference on climate change concluded at Copenhagen in December 2009, the world’s governments officially committed to the objective of limiting global warming to no more than 2°C. However, according to the “Climate Action Tracker”, despite the official statement, the national governments’ current pledges regarding emission reduction in fact imply a warming of at least 3°C by the end of the 21st century with more warming to come in the following centuries (Climate Action Tracker 2010). In reality, all the major national governments are committed to infinite economic growth and none of them is willing to consider any emission reduction policy that could undermine economic growth. This is not simply because of intellectual ignorance or lack of political will. The pursuit of endless accumulation of capital (and infinite economic growth) is derived from the basic laws of motion of the capitalist economic system. Without fundamental social transformation, human civilization is now on the path to self-destruction. The next section (Section 2) reviews the basic scientific facts concerning the climate change crisis. Without an end of economic growth, it is virtually impossible for meaningful climate stabilization to be achieved (Section 3). However, both capitalist enterprises and states are constantly driven to expand production and consumption. The system of nation states effectively rules out a meaningful global political solution to the climate change crisis (Section 4). The climate change crisis is but one of several long-term historical trends that are now leading to the structural crisis of capitalism (Section 5). The resolution of the crisis and the survival of the humanity require the building of a fundamentally different social system that is based on social ownership of the means of production and society-wide planning (Section 6).

### 2nc Warming Impact Calculus

Warming causes extinction, nuclear war doesn’t – nuclear winter is impossible.

Zutell 88 (Eugene, Arizona Dept. of Emergency and Military Affairs, Division of Emergency Services. 6-19-88. http://www.fortfreedom.org/s05.htm)

When Dr. Carl Sagan and his associates, Drs. Turco, Toon, Ackermann and Pollack announced their nuclear winter theory to the world in the fall of 1983, they received such an incredible amount of publicity for such an extended period of time that they managed to convince many people that in the event of a nuclear war, nuclear winter would be a reality. Unfortunately, those who disputed the nuclear winter theory have received very little publicity. Without going into great detail, let's look at just a few of the more glaring discrepancies in the theory. It is based on their assumption that a large quantity of smoke will be emitted into the atmosphere by burning cities and forests. Sagan and associates estimate that following a nuclear ex- change, approximately 225 million tons of smoke particles, generated by a baseline 5000 megaton exchange, will be injected into the tropo- sphere and, over a period of two weeks, will be evenly distributed around the globe in the northern hemisphere. During the following weeks and months, this smoke will cause a temperature increase at the tropopause as it absorbs the radiant energy of the sun and conse- quently blocks that energy from reaching the surface of the earth. Surface temperatures on the continents in the northern hemisphere, between latitudes 30 degrees north and 70 degrees north, might drop as low as -30 degrees Celsius. The theory does not however, consider the highly relevant question of how much smoke will actually remain aloft after two weeks. Normal meteorological processes, rain, snow, temperature differentials between land masses and the oceans, etc., are not factored into the nuclear winter theory by Sagan et al. Studies of the discharge rates of manmade and natural smoke and observa- tions of the average amounts of smoke found in the atmosphere, done prior to and since the promulgation of the nuclear winter theory, have shown that smoke particles have an average residence time of one week or less. And, the average residence time of water vapor in the atmo- sphere is little longer than a week. The amount of atmospheric water vapor in tons, in the northern latitudes exceeds the 225 million tons of smoke postulated by Sagan and his associates by a factor of at least ten thousand. It is therefore fairly obvious that in seven to ten days, which is before the theoretical initiation of the widespread cooling effect, an amount of water far greater than the weight of smoke generated by the nuclear exchange, will rain out of the atmo- sphere and in doing so, will have an obviously significant cleansing effect. Couple this with the commonly demonstrated fact that smoke and dust particles injected into the atmosphere spontaneously create rain conditions, by themselves being the locus around which water molecules coalesce until they form rain droplets. This phenomena is frequently demonstrated over forest fires in the form of capping clouds which develop over columns of smoke. The clouds consist of smoke particles and water vapor, generated by the fire, that combine with water molecules already in the atmosphere. The resultant water droplets in turn capture more particles as they ascend from the fire. Even before they are large enough to form rain, their increasing size reduces dramatically, the number of smoke and dust particles in the size range that is most effective in absorbing and scattering sun- light. Historical records describe a black rain that fell within a few hours after the explosion of the nuclear weapon over Hiroshima. That rain was the first manifestation of the atmosphere cleansing itself after the sudden injection of an abnormal amount of smoke and dust particles. To enumerate some other problems with the nuclear winter mechanism: 1. The cooling mechanism as Sagan and associates describe it, could only operate over land masses. Ocean surface water is continually supplied with heat from below. Even if sunlight were blocked for many months, the temperature at the ocean surface would remain virtually unchanged. Consequently, weather patterns would continue, with warm moisture laden air from the oceans sweeping over the land masses and as it cools, rain clouds would form and even more of the sun blocking smoke and dust particles would be washed out of the atmosphere. 2. Sagan et al indicated that at the very least, 100 million tons of smoke particles would have to be injected into the atmosphere if the nuclear winter mechanism were to be triggered. They also indicated that cities are the primary source of that smoke. They therefore proposed a nuclear war scenario in which cities are the primary targets. Since the mid 1960s, the primary targets for both U.S. and Soviet nuclear missiles and nuclear bombs have not been population centers or cities. They have been the other guy's nuclear missile launch sites, nuclear bomber bases and other military targets. If those can be eliminated, the cities will be held hostage. The current list of ten target classes ascribed to Soviet planners by DOD and FEMA, does not specifically contain any population centers. The list does of course include target classes that in many instances will be located in or adjacent to metropolitan areas. But, even in those instances, the nuclear weapons employed will not be the huge multi- megaton area destruction bombs of the late 1950s and early 1960s. ICBM systems and MIRVs are now so accurate that a target may be pin-pointed even within a metropolitan area, by a relatively small weapon. This is not in any way to say that the effects will not be catastro- phic. It is to say though that the city wide firestorms necessary for the onset of nuclear winter as described by Sagan and associates, are less than predictable. In fact, they are improbable.

Counterforce strikes mean only 2 million die.

Mueller 2009 (John Mueller, Woody Hayes Chair of National Security Studies and Professor of Political Science @ Ohio State University, 2009, Atomic Obsession: Nuclear Alarmism from Hiroshima to Al-Qaeda, p. 8-9)

To begin to approach a condition that can credibly justify applying such extreme characterizations as societal annihilation, a full-out attack with hundreds, probably thousands, of thermonuclear bombs would be required. Even in such extreme cases, the area actually devastated by the bombs’ blast and thermal pulse effects would be limited: 2,000 1-MT explosions with a destructive radius of 5 miles each would directly demolish less than 5 per- cent of the territory of the United States, for example. Obviously, if major population centers were targeted, this sort of attack could inflict massive casualties. Back in cold war days, when such devastating events sometimes seemed uncomfortably likely, a number of studies were conducted to estimate the consequences of massive thermonuclear attacks. One of the most prominent of these considered several possibilities. The most likely scenario—one that could be perhaps be considered at least to begin to approach the rational—was a “counterforce” strike in which well over 1,000 thermonuclear weapons would be targeted at America’s ballistic missile silos, strategic airﬁelds, and nuclear submarine bases in an effort to destroy the country’s strategic ability to retaliate. Since the attack would not directly target population centers, most of the ensuing deaths would be from radioactive fallout, and the study estimates that from 2 to 20 million, depending mostly on wind, weather, and sheltering, would perish during the ﬁrst month.” That sort of damage, which would kill less than 10 percent of the population, might or might not be enough to trigger words like “annihilation.” However, the study’s ultimate scenario undoubtedly would do so for just about everyone. It considered the impact of an attack in which thousands of thermonuclear warheads, most having yields of a megaton or more, were rained down not only on military targets but also on urban and industrial ones. In this extreme scenario, the study calcu1ates—or, to use its word, speculates—that something like 20 to 55 million would likely perish in the lowest set of estimates, and between 155 and 165 million in the highest. And there would also be, needless to say, catastrophic negative societal aftereffects.”

Warming is more probable.

Sullivan ‘7 (Gen. Gordon, Chair of CNA Corporation Military Advisory Board and Former Army Chief of Staff, in "National Security and the Threat of Climate Change", http://securityandclimate.cna.org/report/National%20Security%20and%20the%20Threat%20of%20Climate%20Change)

“We seem to be standing by and, frankly, asking for perfectness in science,” Gen. Sullivan said. “People are saying they want to be convinced, perfectly. They want to know the climate science projections with 100 percent certainty. Well, we know a great deal, and even with that, there is still uncertainty. But the trend line is very clear.” “We never have 100 percent certainty,” he said. “We never have it. If you wait until you have 100 percent certainty, something bad is going to happen on the battlefield. That’s something we know. You have to act with incomplete information. You have to act based on the trend line. You have to act on your intuition sometimes.” In discussing how military leaders manage risk, Gen. Sullivan noted that significant attention is often given to the low probability/high consequence events. These events rarely occur but can have devastating consequences if they do. American families are familiar with these calculations. Serious injury in an auto accident is, for most families, a low probability/high consequence event. It may be unlikely, but we do all we can to avoid it. During the Cold War, much of America’s defense efforts focused on preventing a Soviet missile attack—the very definition of a low probability/high consequence event. Our effort to avoid such an unlikely event was a central organizing principle for our diplomatic and military strategies. When asked to compare the risks of climate change with those of the Cold War, Gen. Sullivan said, “The Cold War was a specter, but climate change is inevitable. If we keep on with business as usual, we will reach a point where some of the worst effects are inevitable.” “If we don’t act, this looks more like a high probability/high consequence scenario,” he added. Gen. Sullivan shifted from risk assessment to risk management. “In the Cold War, there was a concerted effort by all leadership—political and military, national and international—to avoid a potential conflict,” he said. “I think it was well known in military circles that we had to do everything in our power to create an environment where the national command authority—the president and his senior advisers—were not forced to make choices regarding the use of nuclear weapons.

Warming causes nuclear war and makes economic collapse inevitable.

Stott ‘7 (Robin, Vice Chair @ Grayson Centre, Journal of the Royal Society of Medicine, “Climate change, poverty and war”, 100:9, p. 399-402)

These alterations in global ecology are aggravating the already parlous state of the world's most vulnerable populations, and if not tackled will lead to widespread social and economic devastation; the consequences of which, though caused by the rich, fall most heavily on the poor, in an all too familiar story. The impact of climate change is to widen the already substantial resource gulf between the rich and the poor. This gap is increasingly recognized as a significant cause of the increasing levels of despair and desperation among the dispossessed,2 emotions which frequently spiral into violent conflict. The widening gap is mirrored in the deteriorating health status of the poor (Box 3). The security implications of climate change have been debated in the UN Security Council; Margaret Beckett, the UK Foreign Secretary at the time, stated that ‘An unstable climate will exacerbate some of the core drivers of conflict’.3 The US Senate is debating a Bill to have climate change recognized as a security concern,4 and in a report on US National Security, senior American military personnel described climate change as a ‘threat multiplier’ for instability.5 It is not surprising that when considering the major threats to the health of humanity, the interrelated problems of climate change and the gulf between the rich and poor are seen as triggers for war, risking the ultimate health crisis of nuclear war. Resolving these interrelated risks is therefore the key to reducing the possibilities of violent conflict and improving global public health. The Intergovernmental Panel on Climate Change, the World Bank and the World Health Organization (WHO), amongst others, unequivocally state that these global problems can only be resolved through the development and implementation of a global framework.6-8 One framework which fulfils the demanding requirements of controlling atmospheric carbon dioxide levels at the same time as reducing the inequity between rich and poor is Contraction and Convergence, developed by the Global Commons Institute.9

### DeDev Solves Warming

Only economic collapse solves warming.

Siegel 9 - Reporting on a study by University of Utah associate professor of atmospheric sciences Tim Garrett, Lee, IS GLOBAL WARMING UNSTOPPABLE?, University of Utah, 11-22, http://unews.utah.edu/old/p/112009-1.html

In a provocative new study, a University of Utah scientist argues that rising carbon dioxide emissions - the major cause of global warming - cannot be stabilized unless the world's economy collapses or society builds the equivalent of one new nuclear power plant each day. "It looks unlikely that there will be any substantial near-term departure from recently observed acceleration in carbon dioxide emission rates," says the new paper by Tim Garrett, an associate professor of atmospheric sciences. Garrett's study was panned by some economists and rejected by several journals before acceptance by Climatic Change, a journal edited by renowned Stanford University climate scientist Stephen Schneider. The study will be published online this week. The study - which is based on the concept that physics can be used to characterize the evolution of civilization - indicates: Energy conservation or efficiency doesn't really save energy, but instead spurs economic growth and accelerated energy consumption. Throughout history, a simple physical "constant" - an unchanging mathematical value - links global energy use to the world's accumulated economic productivity, adjusted for inflation. So it isn't necessary to consider population growth and standard of living in predicting society's future energy consumption and resulting carbon dioxide emissions. "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." Getting Heat for Viewing Civilization as a "Heat Engine" Garrett says colleagues generally support his theory, while some economists are critical. One economist, who reviewed the study, wrote: "I am afraid the author will need to study harder before he can contribute." "I'm not an economist, and I am approaching the economy as a physics problem," Garrett says. "I end up with a global economic growth model different than they have." Garrett treats civilization like a "heat engine" that "consumes energy and does 'work' in the form of economic production, which then spurs it to consume more energy," he says. "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 says his study's key finding "is that accumulated economic production over the course of history has been tied to the rate of energy consumption at a global level through a constant factor." That "constant" is 9.7 (plus or minus 0.3) milliwatts per inflation-adjusted 1990 dollar. So if you look at economic and energy production at any specific time in history, "each inflation-adjusted 1990 dollar would be supported by 9.7 milliwatts of primary energy consumption," Garrett says. Garrett tested his theory and found this constant relationship between energy use and economic production at any given time by using United Nations statistics for global GDP (gross domestic product), U.S. Department of Energy data on global energy consumption during1970-2005, and previous studies that estimated global economic production as long as 2,000 years ago. Then he investigated the implications for carbon dioxide emissions. "Economists think you need population and standard of living to estimate productivity," he says. "In my model, all you need to know is how fast energy consumption is rising. The reason why is because there is this link between the economy and rates of energy consumption, and it's just a constant factor." Garrett adds: "By finding this constant factor, the problem of [forecasting] global economic growth is dramatically simpler. There is no need to consider population growth and changes in standard of living because they are marching to the tune of the availability of energy supplies." To Garrett, that means the acceleration of carbon dioxide emissions is unlikely to change soon because our energy use today is tied to society's past economic productivity. "Viewed from this perspective, civilization evolves in a spontaneous feedback loop maintained only by energy consumption and incorporation of environmental matter," Garrett says. It is like a child that "grows by consuming food, and when the child grows, it is able to consume more food, which enables it to grow more." Is Meaningful Energy Conservation Impossible? Perhaps the most provocative implication of Garrett's theory is that conserving energy doesn't reduce energy use, but spurs economic growth and more energy use. "Making civilization more energy efficient simply allows it to grow faster and consume more energy," says Garrett. He says the idea that resource conservation accelerates resource consumption - known as Jevons paradox - was proposed in the 1865 book "The Coal Question" by William Stanley Jevons, who noted that coal prices fell and coal consumption soared after improvements in steam engine efficiency. So is Garrett arguing that conserving energy doesn't matter? "I'm just saying it's not really possible to conserve energy in a meaningful way because the current rate of energy consumption is determined by the unchangeable past of economic production. If it feels good to conserve energy, that is fine, but there shouldn't be any pretense that it will make a difference." Yet, Garrett says his findings contradict his own previously held beliefs about conservation, and he continues to ride a bike or bus to work, line dry family clothing and use a push lawnmower. An Inevitable Future for Carbon Dioxide Emissions? Garrett says often-discussed strategies for slowing carbon dioxide emissions and global warming include mention increased energy efficiency, reduced population growth and a switch to power sources that don't emit carbon dioxide, including nuclear, wind and solar energy and underground storage of carbon dioxide from fossil fuel burning. Another strategy is rarely mentioned: a decreased standard of living, which would occur if energy supplies ran short and the economy collapsed, he adds. "Fundamentally, I believe the system is deterministic," says Garrett. "Changes in population and standard of living are only a function of the current energy efficiency. That leaves only switching to a non-carbon-dioxide-emitting power source as an available option." "The problem is that, in order to stabilize emissions, not even reduce them, we have to switch to non-carbonized energy sources at a rate about 2.1 percent per year. That comes out to almost one new nuclear power plant per day." "If society invests sufficient resources into alternative and new, non-carbon energy supplies, then perhaps it can continue growing without increasing global warming," Garrett says. Does Garrett fear global warming deniers will use his work to justify inaction? "No," he says. "Ultimately, it's not clear that policy decisions have the capacity to change the future course of civilization."

### DeDev Solves Warming

Collapse will sufficiently reduce emissions to keep levels of warming safe – we have data.

Garrett 12 T. J. Garrett Department of Atmospheric Sciences, University of Utah, No way out? The double-bind in seeking global prosperity alongside mitigated climate change, Earth Syst. Dynam., 3, 1–17, 2012

Abstract. In a prior study (Garrett, 2011), I introduced a simple economic growth model designed to be consistent with general thermodynamic laws. Unlike traditional economic models, civilization is viewed only as a well-mixed global whole with no distinction made between individual nations, economic sectors, labor, or capital investments. At the model core is a hypothesis that the global economy’s current rate of primary energy consumption is tied through a constant to a very general representation of its historically accumulated wealth. Observations support this hypothesis, and indicate that the constant’s value is λ = 9.7 ± 0.3 milliwatts per 1990 US dollar. It is this link that allows for treatment of seemingly complex economic systems as simple physical systems. Here, this growth model is coupled to a linear formulation for the evolution of globally well-mixed atmospheric CO2 concentrations. While very simple, the coupled model provides faithful multi-decadal hindcasts of trajectories in gross world product (GWP) and CO2. Extending the model to the future, the model suggests that the well-known IPCC SRES scenarios substantially underestimate how much CO2 levels will rise for a given level of future economic prosperity. For one, global CO2 emission rates cannot be decoupled from wealth through efﬁciency gains. For another, like a long-term natural disaster, future greenhouse warming can be expected to act as an inﬂationary drag on the real growth of global wealth. For atmospheric CO2 concentrations to remain below a “dangerous” level of 450 ppmv (Hansen et al., 2007), model forecasts suggest that there will have to be some combination of an unrealistically rapid rate of energy decarbonization and nearly immediate reductions in global civilization wealth. Effectively, it appears that civilization may be in a double-bind. If civilization does not collapse quickly this century, then CO2 levels will likely end up exceeding 1000 ppmv; but, if CO2 levels rise by this much, then the risk is that civilization will gradually tend towards collapse.

### AT-Tech Solves

Technological innovations cannot solve warming.

Trainer 12 (Ted, Dr. Ted Trainer is a Conjoint Lecturer in the School of Social Sciences, University of New South Wales, and a contributing author at the Simplicity Institute. This Report is an improved version of a paper published in Energy Policy (2010), made possible by the recent publication of better cost and output data., “CAN RENEWABLE ENERGY SUSTAIN CONSUMER SOCIETIES? A NEGATIVE CASE”, Simplicity Institute Report 12e, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/CanRenewableEnergySustainConsumerSocietiesTrainer.pdf)

The total investment sum arrived at above is considerably less than that derived in Trainer [112], but the derivation is much more soundly based mainly due to recent access to more confident estimates of output and future capital costs. The general conclusion supported by this discussion is that the capital costs for a totally renewable global energy supply would be far beyond affordable. This means that greenhouse and energy problems cannot be solved by action on the supply side, i.e., by technical developments which promise to provide quantities taken for granted in energy-­‐ intensive societies. This general “limits to growth” perspective is that these and the other major global problems can only be solved by action on the demand side, i.e., by moving to ways, values, institutions and systems which greatly reduce the need for materials, energy and ecological resources. It should be stressed that the 700 EJ/y supply target would give the world’s expected 10 billion people by 2050 a per capita energy consumption of 70 GJ/y, which is around only one-­‐third of the present Australian level. Thus if renewable sources were to provide all the world’s people in 2050 with the present Australian per capita energy consumption, the supply target would have to be three times that taken in this exercise. This analysis is not an argument against transition to full reliance on renewable energy sources. It is only an argument against the possibility of sustaining high energy societies on them. Trainer [113] and [114] detail the case that the limits to growth predicament cannot be solved by technical reforms to or within consumer-­‐capitalist society and that there must be radical social transition to some kind of ‘Simpler Way.’ This vision includes developing mostly small and highly self-­‐sufficient local economies, abandoning the growth economy, severely controlling market forces, shifting from representative to participatory democracy, and accepting frugal and cooperative lifestyles. Chapter 4 of Trainer [115] presents numerical support for the claim that footprint and energy costs in the realm of 10% of those in present rich countries could be achieved, based on renewable energy sources. Although at this point in time the prospects for making such a transition would seem to be highly unlikely, the need to consider it will probably become more evident as greenhouse and energy problems intensify. It is not likely to be considered if the present dominant assumption that high energy societies can run on renewable energy remains relatively unchallenged.

Tech fails – renewable transition can’t possibly happen fast enough to solve warming.

Martenson 9 – Dr. Chris Martenson is an independent economist and author of a popular website, ChrisMartenson.com. Chris earned a PhD in neurotoxicology from Duke University, and an MBA from Cornell University. A fellow of the Post Carbon Institute, Chris's work has appeared on PBS and been cited by the Washington Post. He is a contributor to SeekingAlpha.com and FinancialSense.com, and former VP of Pfizer and SAIC “Copenhagen & Economic Growth - You Can't Have Both,” Dec 24 http://www.energybulletin.net/node/51229

Nobody has yet articulated how it is that we will reconcile both economic growth and reduced use of hydrocarbon energy. And so the proposed actions coming out of Copenhagen are not grounded in reality, and they are set dead against trillions of dollars of spending. There is only one thing that we know about which has curbed, and even reversed, the flow of carbon into the atmosphere, and that is the recent economic contraction. This is hard proof of the connection between the economy and energy. It should serve as proof that any desire to grow the economy is also an explicit call to increase the amount of carbon being expelled into the atmosphere. The idea of salvation via the electric plug-in car or other renewable energy is a fantasy. The reality is that any new technology takes decades to reach full market penetration, and we haven't even really begun to introduce any yet. Time, scale, and cost must be weighed when considering any new technology's potential to have a significant impact on our energy-use patterns. For example, a recent study concluded that another 20 years would be required for electric vehicles to have a significant impact on US gasoline consumption. Meaningful Numbers of Plug-In Hybrids Are Decades Away The mass-introduction of the plug-in hybrid electric car is still a few decades away, according to new analysis by the National Research Council. The study, released on Monday, also found that the next generation of plug-in hybrids could require hundreds of billions of dollars in government subsidies to take off. Even then, plug-in hybrids would not have a significant impact on the nation’s oil consumption or carbon emissions before 2030. Savings in oil imports would also be modest, according to the report, which was financed with the help of the Energy Department. Twenty to thirty years is the normal length of time for any new technology to scale up and fully penetrate a large market. But this study, as good as it was in calculating the time, scale, and cost parameters of technology innovation and penetration, still left out the issue of resource scarcity. Is there enough lithium in the world to build all these cars? Neodymium? This is a fourth issue that deserves careful consideration, given the scale of the overall issue. But even if we did manage to build hundreds of millions of plug-in vehicles, where would the electricity come from? Many people mistakenly think that we are well on our way to substantially providing our electricity needs using renewable sources such as wind and solar. We are not. Renewable timetable is a long shot Al Gore's well-intentioned challenge that we produce "100 percent of our electricity from renewable energy and truly clean carbon-free sources within 10 years" represents a widely held delusion that we can't afford to harbor. The delusion is shared by the Minnesota Legislature, which is requiring the state's largest utility, Xcel Energy, to get at least 24 percent of its energy from wind by 2020. One of the most frequently ignored energy issues is the time required to bring forth a major new fuel to the world's energy supply. Until the mid-19th century, burning wood powered the world. Then coal gradually surpassed wood into the first part of the 20th century. Oil was discovered in the 1860s, but it was a century before it surpassed coal as our largest energy fuel. Trillions of dollars are now invested in the world's infrastructure to mine, process and deliver coal, oil and natural gas. As distinguished professor Vaclav Smil of the University of Manitoba recently put it, "It is delusional to think that the United States can install in a decade wind and solar generating capacity equivalent to that of thermal power plants that took nearly 60 years to construct." Texas has three times the name plate wind capacity of any other state — 8,000-plus megawatts. The Electric Reliability Council of Texas manages the Texas electric grids. ERCOT reports that its unpredictable wind farms actually supply just a little more than 700 MW during summer power demand, and provide just 1 percent of Texas' power needs of about 72,000 MW. ERCOT's 2015 forecast still has wind at just more than 1 percent despite plans for many more turbines. For the United States, the Energy Information Administration is forecasting wind and solar together will supply less than 3 percent of our electric energy in 2020. Again it turns out that supplanting even a fraction of our current electricity production with renewables will also take us decades. And even that presumes that we have a functioning economy in which to mine, construct, transport and erect these fancy new technologies. Time, scale, and cost all factor in as challenges to significant penetration of new energy technologies as well. So where will all the new energy for economic growth come from? The answer, unsurprisingly, is from the already-installed carbon-chomping coal, oil, and natural gas infrastructure. That is the implicit assumption that lies behind the calls for renewed economic growth. It's The Money, Stupid As noted here routinely in my writings and in the Crash Course, we have an exponential monetary system. One mandatory feature of our current exponential monetary system is the need for perpetual growth. Not just any kind of growth; exponential growth. That's the price for paying interest on money loaned into existence. Without that growth, our monetary system shudders to a halt and shifts into reverse, operating especially poorly and threatening to melt down the entire economic edifice. This is so well understood, explicitly or implicitly, throughout all the layers of society and in our various institutions, that you will only ever hear politicians and bankers talking about the "need" for growth. In fact, they are correct; our system does need growth. All debt-based money systems require growth. That is the resulting feature of loaning one's money into existence. That's the long and the short of the entire story. The growth may seem modest, perhaps a few percent per year ('That's all, honest!'), but therein lies the rub. Any continuous percentage growth is still exponential growth. Exponential growth means not just a little bit more each year, but a constantly growing amount each year. It is a story of more. Every year needs slightly more than the prior year - that's the requirement. The Gap Nobody has yet reconciled the vast intellectual and practical gap that exists between our addiction to exponential growth and the carbon reduction rhetoric coming out of Copenhagen. I've yet to see any credible plan that illustrates how we can grow our economy without using more energy. Is it somehow possible to grow an economy without using more energy? Let's explore that concept for a bit. What does it mean to "grow an economy?" Essentially, it means more jobs for more people producing and consuming more things. That's it. An economy, as we measure it, consists of delivering the needs and wants of people in ever-larger quantities. It's those last three words - ever-larger quantities - that defines the whole problem. For example, suppose our economy consisted only of building houses. If the same number of houses were produced each year, we'd say that the economy was not growing. It wouldn't matter whether the number was four hundred thousand or four million; if the same number of new homes were produced each year, year after year, this would be considered a very bad thing, because it would mean our economy was not growing. The same is true for cars, hair brushes, big-screen TVs, grape juice, and everything else you can think of that makes up our current economy. Each year, more needs to be sold than the year before, or the magic economic-stimulus wands will come out to ward off the Evil Spirits of No Growth. If our economy were to grow at the same rate as the population, it would grow by around 1% per year. This is still exponential growth, but it is far short of the 3%-4% that policymakers consider both desirable and necessary. Why the gap? Why do we work so hard to ensure that 1% more people consume 3% more stuff each year? Out of Service . It's not that 3% is the right number for the land or the people who live upon it. The target of 3% is driven by our monetary system, which needs a certain rate of exponential growth each year in order to cover the interest expense due each year on the already outstanding loans. The needs of our monetary system are driving our economic decisions, not the needs of the people, let alone the needs of the planet. We are in service to our money system, not the other way around. Today we have a burning need for an economic model that can operate tolerably well without growth. But ours can't, and so we actually find ourselves in the uncomfortable position of pitting human needs against the money system and observing that the money system is winning the battle. The Federal Reserve exists solely to assure that the monetary system has what it needs to function. That is their focus, their role, and their primary concern. I assume that they assume that by taking care of the monetary system, everything else will take care of itself. I think their assumption is archaic and wrong. Regardless, our primary institutions and governing systems are in service to a monetary system that is dysfunctional. It was my having this outlook, this lens, more than any other, that allowed me to foresee what so many economists missed. Only by examining the system from a new, and very wide, angle can the enormous flaws in the system be seen. Economy & Energy Now let's get back to our main problem of economic growth and energy use (a.k.a. carbon production). There is simply no way to build houses, produce televisions, grow and transport grape juice, and market hair brushes without consuming energy in the process. That's just a cold, hard reality. We need liquid fuel to extract, transform, and transport products to market. More people living in more houses means we need more electricity. Sure, we can be more efficient in our use of energy, but unless our efficiency gains are exceeding the rate of economic growth, more energy will be used, not less. In the long run, if we were being 3% more efficient in our use of fuel and growing our economy at 3%, this would mean burning the same amount of fuel each year. Unfortunately, fuel-efficiency gains are well known to run slower than economic growth. For example, the average fuel efficiency of the US car fleet (as measured by the CAFE standards) has increased by 18% over the past 25 years, while the economy has grown by 331%. Naturally, our fuel consumption has grown, not fallen, over that time, despite the efficiency gains. So the bottom line is this: There is no possible way to both have economic growth (as we've known it in the past) and cut carbon emissions. At least not without doing things very differently.

### AT-Tech Solves

Economic collapse solves – tech doesn’t

Cohen 9 – columnist for the Association for the Study of Peak Oil and Gas, Dave, Economic Growth And Climate Change — No Way Out?, Peak Watch, 2-2, http://peakwatch.typepad.com/peak\_watch/2010/02/economy-and-climate-no-way-out.html

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. In a "peak oil" scenario, CO2 emissions from conventional oil will remain flat or decrease sometime in the next decade and beyond. In so far as historical experience suggests that anthropogenic emission must be growing if the economy is, this implies a shrinking global economy. Specifically, the lack of a consistent (high & rising) oil price signal, combined with our inability to quickly & seamlessly switch to non-conventional liquids (from coal, the oil sands, etc.) to meet growing future demand, implies that economic growth will be negative or unstable in such a scenario. Thus, business-as-usual (BAU)—the standard growth story assumed by economists, climate researchers and others—will be disrupted for an extended period of time in a "peak oil" scenario. If the global economy will be in recession or prone to recession as conventional oil supplies decrease, emissions will very likely be further reduced during the transition to other liquid fuels sources. Ken Caldeira's counter-intuitive view that "peak oil" is not a climate savior, at least over the next few decades, does not survive close scrutiny. A new UK report from the The New Economics Foundation goes even further in the wrong direction, arguing that "peak oil" makes BAU scenarios worse. Just as Caldeira does, the NEF assumes, but does not closely examine, a painless transition to non-conventional liquids fuels from fossil sources. In his response to Dangerous Assumptions, the University of Manitoba's Vaclav Smil emphasized that Long-range energy forecasts are no more than fairy tales. Why argue about plausible rates of future energy-efficiency improvements? We have known for nearly 150 years that, in the long run, efficiency gains translate into higher energy use and hence (unless there is a massive shift to non-carbon energies) into higher CO2 emissions. The speed of transition from a predominantly fossil-fueled world to conversions of renewable flows is being grossly overestimated: all energy transitions are multi-generational affairs with their complex infrastructural and learning needs. Their progress cannot substantially be accelerated either by wishful thinking or by government ministers’ fiats... China, the world’s largest emitter of CO2, has no intention of reducing its energy use: from 2000 to 2006 its coal consumption rose by nearly 1.1 billion tonnes and its oil consumption increased by 55%. Consequently, the rise of atmospheric CO2 above 450 parts per million can be prevented only by an unprecedented (in both severity and duration) depression of the global economy, or by voluntarily adopted and strictly observed limits on absolute energy use. The first is highly probable; the second would be a sapient action, but apparently not for this species. Although I agree in the main with Smil's conclusions, I have argued that his Either-Or proposition yields similar outcomes. If humankind were to voluntarily adopt and strictly observe limits on absolute energy use, the global economy would shrink according to the limits imposed, as implied in Tim Garrett's work. Moreover, Smil's reference to Jevon's Paradox (1st paragraph) also coincides with Tim Garrett's conclusion that greater energy efficiency merely stimulates greater energy consumption supporting more economic growth and higher CO2 emissions (unless accompanied by a massive, but at present unrealistic, decarbonization of the energy supply). For now, and in the "foreseeable" future, putting the breaks on economic growth appears to be the only practical way out of the climate dilemma. Unfortunately, this solution is politically impossible, a circumstance which is reinforced by economists' incontestable, unshakable belief that economic growth will continue in all future emissions (energy) scenarios. This conclusion rests upon the equally incontestable, unshakable Assumption of Technological Progress. I will end by quoting climate activist George Monbiot. This passage is taken from the introduction to his book Heat. The introduction is called The Failure of Good Intentions. Two things prompted me to write this book. The first was something that happened in May, 2005, in a lecture hall in London. I had given a talk about climate change, during which I argued that there was little chance of preventing runaway global warming unless greenhouse gases were cut by 80 per cent. The third question stumped me. "When you get your 80 per cent cut, what will this country look like?" I hadn't thought about it. Nor could I think of a good reason why I hadn't thought about it. But a few rows from the front sat one of the environmentalists I admire and fear the most, a man called Mayer Hillman. I admire him because he says what he believes to be true and doesn't care about the consequences. I fear him because his life is a mirror in which the rest of us see our hypocrisy. "That's such an easy question, I'll ask Mayer to answer it." He stood up. He is 75 but he looks about 50, perhaps because he goes everywhere by bicycle. He is small and thin and fit-looking, and he throws his chest out and holds his arms to his sides when he speaks, as if standing to attention. He was smiling. I could see he was going to say something outrageous. "A very poor third-world country." The inescapable conclusion in 2010 is that continued economic growth at near 20th century rates in the 21st century is incompatible with taking positive, effective steps to mitigate anthropogenic climate change. Moreover, such assumptions are not compatible with a near-term peak in the conventional oil supply. Our species faces unprecedented challenges in this new century. Our response to those challenges will define Homo sapiens in ways we never had to come to grips with during the Holocene (roughly the last 10,000 years) or before that in the Pleistocene. The problems we face in this century are unique, even on geological time-scales extending far into the past beyond the 200,000-year-old Human experience on Earth. Both our limitations and our abilities, such as they are, will be displayed in the bright, harsh light of the energy & climate outcomes in the 21st century. Regardless of who we pretend to be, our response to these challenges will tell us who we really are.

### AT-We Solve Efficiency

Their turns do not apply---electric energy is less energy efficient and sustainable than the squo.

Trainer 12 (Ted, Dr. Ted Trainer is a Conjoint Lecturer in the School of Social Sciences, University of New South Wales, and a contributing author at the Simplicity Institute. This Report is an improved version of a paper published in Energy Policy (2010), made possible by the recent publication of better cost and output data., “CAN RENEWABLE ENERGY SUSTAIN CONSUMER SOCIETIES? A NEGATIVE CASE”, Simplicity Institute Report 12e, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/CanRenewableEnergySustainConsumerSocietiesTrainer.pdf)

It will be assumed that around 60% of the 233 EJ/y business-­‐as-­‐usual 2050 transport energy demand assumed here could be shifted from fossil fuels to electricity by use of battery powered cars (if long distance car travel can be included.) Sea transport, heavy road vehicles and aircraft are not likely to be powered by electricity. Rail can be electrified but it accounts for a small proportion of transport energy. The energy efficiency of electric cars is commonly claimed to be in the region of 4 to 5 times as great as for petrol driven cars. However such figures typically apply to “battery to wheels” and do not include losses due to distribution, transforming from 240 volt to 12 volt, battery charging and discharging, discharge from idle batteries, the embodied energy costs of batteries and cars (claimed by Matej [66] to be high), battery lifetime and replacement multiple per car life, and global supply of the relatively scarce element Lithium. If vehicle batteries are intended to store energy for later supply to the grid, equipment for reconversion from 12 volt to mains voltage would impose additional costs and losses. Especially problematic are the dollar and energy costs of Lithium-­‐ion batteries, estimated by Smil [67] to cost $35,000 and to last around three years. (Jacobson and Delucci [68] believe future battery cost will be half this sum, and that batteries will last the life of a car.) In view of these uncertainties it will be assumed that the present energy efficiency of cars can be trebled. (For a supporting analysis see Trainer, [69].) Bossell [70] argues that it can only be doubled.) Consequently it will be assumed that the 60% of the “business as usual” 233 EJ/y transport energy budget, i.e., 140 EJ/y, will require 46 EJ/y. Another 40%, i.e., 93 EJ/y, will be required for transport in non-­‐electrical form.

### AT- Renewables

Technological innovations in the form of renewables do not solve. Tech fixes have remained static since the 1960s and be skeptical of their data because it is from companies incentivized to hide inefficiencies.

Trainer 12 (Ted, Dr. Ted Trainer is a Conjoint Lecturer in the School of Social Sciences, University of New South Wales and a contributing author at the Simplicity Institute. He has taught and written about sustainability and justice issues for many years. He is also developing Pigface Point, an alternative lifestyle educational site near Sydney, and a website for use by critical global educators: <http://socialsciences.arts.unsw.edu.au/tsw/>, “BUT CAN’T TECHNOLOGICAL ADVANCE SOLVE THE PROBLEMS?”, Simplicity Institute Report 12g, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/LimitsOfTechnologyTrainer.pdf)

Probably the strongest assumption underling tech-­‐fix faith is the widespread belief that renewable energy resources such as the sun and the wind can replace fossil fuels, enabling access to abundant energy while solving the greenhouse problem. Many renewable energy technologists make this claim. However there is a strong case that it is mistaken. Trainer (2012a) sets out a numerical case that to supply 2050 world energy demand via renewables would require investment totals that are at least 10 times the present proportion of GDP that goes into energy. (For a short summary of the limits to renewables see Trainer, 2012b.) This is not an argument against renewable energy sources; we must move to full dependence on them as soon as possible. But it is an argument that we cannot run an energy-­‐intensive affluent society on them, let alone one that insists on limitless growth. It should not be assumed that in general rapid, large or continuous technical gains are being routinely made, especially in crucial areas such as energy efficiency. Mackay (2008) argues that little gain can be expected for air transport, and Ayres notes that for many decades there have been plateaus for the efficiency of production of electricity and fuels, electric motors, ammonia and iron and steel production. The efficiency of electrical devices in general has actually changed little in a century (Ayres, 2009, Figs. 4.1 and 4.19, p. 127). ‘…the energy efficiency of transportation probably peaked around 1960 (p. 126).’ Ayres’ Fig. 4.21a shows no increase in the overall energy efficiency of the US economy since 1960 (p. 128). He notes that reports tend to publicize particular spectacular technical advances and this can be misleading regarding long term average trends across whole industries or economies. We tend not to hear about areas where technology is not solving problems, or appears to have been completely defeated. Not long ago everyone looked forward to super-­‐sonic mass passenger flight, but with the demise of Concorde this goal has been abandoned. It’s just too difficult and costly, even without an energy crunch coming up. Sydney’s transport problems cannot be solved by more public transport; more rail and bus would improve things, but not much because the city has been build for the car on 50 years of cheap oil. Yes you could solve all its problems with buses and trains, but only at an infinite cost. The Murray-­‐Darling river can only be saved by drastic reduction in the amount of water being taken out of it. The biodiversity holocaust taking place could only be avoided if humans stopped taking more and more of nature, and returned large areas of farmland and pasture to natural habitat. Most indices of efficiency and technical progress do not show big leaps. Typically there is long term tapering towards a ceiling. ‘But what about Moore’s law, where by computer chip power has followed a steep upward curve?’ Yes in some realms this happens, for a time, but it is highly atypical. (By the way, the advent of computers has not made much difference at all to the productivity of the economy; indeed in recent decades productivity growth indices have fallen. This is identified as ‘The Productivity Paradox.’) So ask the tech-­‐fix optimist, ‘If technology is going to solve our problems, when is it going to start? They all seem to be getting worse at present.’ Most decisive would seem to be the predictions by the Australian Bureau of Agricultural Economics that the energy efficiency of energy-­‐intensive industries is likely to improve by only .5% p.a. in future, and of non-­‐energy-­‐intensive industries by .2% p.a. (ABARE, 2008.) In other words we can expect it to take 140 years for the energy efficiency of the intensive industries to double the amount of value they derive from a unit of energy. Perhaps the most meaningful indication would come from comparing the rate of GDP growth with the rate of growth of material inputs into the economy. In a normal/good year GDP increases 3% p.a. (For the last decade or so the Australian average has been closer go 2.2% p.a.) However Australian energy use is increasing at about 2.1% p.a. In other words if national income is not increasing much faster than the rate of increase in use of energy then the productivity of energy is not increasing much. Finally it has long been understood that gains in the energy intensity of the economy have been significantly due to ‘fuel switching,’ i.e., moving to sources which are of “higher quality” and enable more work per unit of energy. (Stern and Cleveland, 2004, p. 33, Cleveland et al., 1984, Kaufmann, 2004, Office of Technology Assessments, 1990, Berndt, 1990, Schurr and Netschurt, 1960.) For instance a unit of energy in the form of gas enables more value to be created than a unit in the form of coal, because gas is more easily transported, switched on and off, or converted from one function to another, etc. These are some of the reasons for not being overly impressed by apparently declining figures for energy intensity per unit of GDP. They certainly cannot be taken as showing that energy will not be a major negative factor determining future productivity trends, if only because the price of energy is likely to rise significantly in the near future.

### Jevons Paradox

Turn---technological innovations do not solve the environment and “Jevons Paradox” proves it increases more consumptive practices.

Burch 12 (Mark A., Mark A. Burch is an author, educator, and group facilitator who offers presentations, workshops, and courses on voluntary simplicity. He has published four books on voluntary simplicity and is currently completing two further books, including a sourcebook for educators in simple living., “TWENTY QUESTIONS: TECHNOLOGY AND SIMPLE LIVING”, Simplicity Institute Report 12f, 2012, http://simplicityinstitute.org/wp-content/uploads/2011/04/TechnologyandSimpleLivingSimplicityInstitute.pdf)

Next, we can see a curious paradox connected with the use of almost any “green” or conserving technology. This is the “Jevons’ Paradox” named for the 19th century British economist William Stanley Jevons (Alcott, 2005: 9-­‐12). Jevons observed that technological advances that increased the efficiency with which a particular resource was used (in his case, coal) resulted in increased consumption of the resource. It is probably a slight variant of this same paradox which can find even dedicated sustainability advocates making heroic efforts to reduce their consumption of certain resources like energy, only to take the savings they enjoy and spend them on more consumption. The tenacity of this paradox is evidence of how deeply rooted consumerist values can be in that when we want to reward ourselves for conserving choices, the first thing that comes to mind is something consumptive. An example of this is an acquaintance of mine whose concern for the environment is beyond doubt and who was thrilled to hear from me various measures she could take to reduce consumption of resources in her household. She then said, “Well, if I do all those things, I could probably save enough in a year to go visit my family in Britain!”—a trip which would have required air travel which would pretty much offset all the gains she achieved by her other household efficiencies. Thus it appears to be the case that as long as a consumerist worldview remains in place, developing and implementing more sustainable technologies may only shift consumption activities onto other classes of goods and services, perhaps with even higher environmental impacts than before.

## \*\*\*Asia\*\*\*

### 1nc-China War Shell

Growth causes Chinese aggression and war.

Boehmer, 2010 (Charles R., Associate Professor of Political Science at the University of Texas El Paso, “Economic Growth and violent international conflict: 1875-1999,” Defence and Peace Economics, Volume 21, Issue 3, June)

Are states with growing economies potential threats to international peace? Theories among scholars and opinions in policy circles suggest this is so, although the academic theories in this area of study are quite contradictory and we lack sufficient systematic empirical evidence to provide an answer. The systematic study of this question has been uneven with many tests not applying a sample of states reflective of the interstate system. Further research on this topic is required given that it continues to be of importance. For example, does Chinese economic and military growth pose a danger to peace and stability? Is this a fair or relevant question and, if so, what other states could pose a risk to peace? This manuscript offers some theoretical expectations and empirical tests of this economic growth and conflict proposition. To use the Chinese case as an illustration, some in policy circles fear that Chinese GDP growth and military expenditures pose a danger to the security of Asian states, the United States, and its allies. This could be true, but other factors may mitigate such a danger. What evidence exists to support such concerns? There is some historical precedent. China and Vietnam fought wars against each other in 1979 and 1987. China’s GDP growth had been averaging around 6% in the five years prior to the first Sino-Vietnamese War and almost 9% prior to the second Sino-Vietnamese War. Vietnam’s growth rate had also been averaging over 6% a year in the five years prior to the second Sino-Vietnamese War. Figure 1 shows that Chinese military expenditure levels have been high since 1990 and Figure 2 shows that China’s GDP growth rates exceeded 6% a year since 1980. 1 Is this representative of a particular strategy or plan that is inherently bellicose? Are such patterns similar to past instances of growing states becoming involved in war? Such trends alarm those in policy circles because China has clashed militarily with many of its neighbors in the past century (South Korea, Japan, Vietnam, USSR, and India). United States Secretary of Defense, Donald Rumsfeld, publicly warned in February, June, and October of 2005 that China’s arms build-up poses a threat to the region and, in December of that year, the Pentagon stated that the United States might reverse its trend in ship reductions and increase the size of its navy (Cloud, 2005; Schmitt, 2005; Shanker, 2005). FIGURE 2 Five-year moving average of Chinese GDP growth. FIGURE 1 Chinese military expenditures: 1980–1999. Scholars have studied the question of economic growth, militarization, and war from several theoretical perspectives. Some theories predict that economic growth increases military expenditures. States may use these ‘war chests’ to expand their interests, resulting in new militarized conflicts or continuing ongoing conflicts. Economic growth may also have sociological effects, leading to moods of foreign policy adventurism, increasing the risk of war when it becomes less taboo or feared, followed then by more isolationists moods. In contrast, Marxist theories and diversionary theories argue that lower rates of growth lead to domestic crises that spur on international conflicts, either as states compete over markets and resources in the former theories, or to the externalization of domestic conflict in the latter theories. The problem with all of these theories is that it is unclear if such foreign policy behaviors, purportedly relating to economic growth to war, can be generalized to all states in the international system or are idiosyncratic to certain states. Diversionary conflict studies, for example, have focused mostly on the United States, with the exception of a few cases – such as the Malvinas/Falklands war (Levy and Vakili, 1992; Morgan and Anderson, 1999). The foreign policy moods literature similarly focuses on the case of the United States, whereas the ‘war chest’ proposition appears most rooted in European history. Thus, we do not know, based on systematic evidence, whether economic growth affects the general occurrence of violent international conflicts. In this study, I provide a theory of economic growth and interstate conflict arguing that economic growth particularly increases the chance of interstate violence but not necessarily the onset or initiation of militarized conflicts. I test my theory with a broad sample of states from all regions of the world from 1875 until 1999. The results show that economic growth rates, not growth of military expenditures, increase the risk of violent interstate conflicts.

Nuke War

Walton 7 – C. Dale Walton, Lecturer in International Relations and Strategic Studies at the University of Reading, Geopolitics and the Great Powers in the 21st Century, p. 49

Obviously. it is of vital importance to the United States that the PRC does not become the hegemon of Eastern Eurasia. As noted above, however, regardless of what Washington does. ('hina’s success in such an endeavor is not as easily attainable as pessimists might assume. The PRC appears to be on track to be a very great power indeed, but geopolitical conditions are not favorable for any Chinese effort to establish sole hegemony; a robust multipolar system should suffice to keep China in check. even with only minimal American intervention in local squabbles. The more worrisome danger is that Beijing will cooperate with a great power partner, establishing a very muscular axis. Such an entity would present a critical danger to the balance of power. thus both necessitating very active American intervention in Eastern Eurasia and creating the under- lying conditions for a massive, and probably nuclear, great power war. Absent such a “super-threat." however. the demands on American leaders will be far more subtle: creating the conditions for Washington’s gentle decline from playing the role of unipolar quasi-hegcmon to being “merely” the greatest of the world’s powers, while aiding in the creation of a healthy multipolar system that is not marked by close great power alliances.

### Ext. Growth 🡪 China War

Growth makes China war highly probable – it creates hubris which overwhelms their defense.

Boehmer, 2010 (Charles R., Associate Professor of Political Science at the University of Texas El Paso, “Economic Growth and violent international conflict: 1875-1999,” Defence and Peace Economics, Volume 21, Issue 3, June)

Economic growth is an indicator to leaders that their state may be strong and may win international conflicts, although this may be more perception than fact. Iraq’s GDP growth averaged 16% between 1974 and 1979 before Saddam Hussein’s regime initiated the Iraq–Iran War in 1980, although the war became an eight-year struggle of attrition nonetheless. Turning back to the Chinese example, policy-makers may view Chinese growth through different lenses. Those that are Realists, pessimistic, or generally fearful of Chinese power may see such growth in GDP and military expenditures as a threat, whereas others that are Liberal may see the creation of an economy of scale and increasing economic interaction with the West that has resulted in a booming economy. Predictions of future bellicose Chinese foreign policy must be evaluated against a background of opportunity. As China develops, it may face fewer severe conflicts, which threaten war with its main trading partners, and also with its bordering states with whom there may be competing territorial claims, although as a major power it faces a higher potential for conflict compared with a state such as Slovakia or Costa Rica. In addition, its proximity to numerous other states means there are more potential rivals or enemies compared with what New Zealand, for example, faces in its neighborhood. The point here is to make it clear that war need not be a result of economic growth but that when growth does contribute to interstate violence it does so by serving as a catalyst of willingness against a backdrop of opportunities. Chinese leaders may be less likely to back away from violent interstate conflict if a crisis occurs during a period of economic growth than they would before economic growth, and this risk is higher for China because its major power status and region provide more opportunities relative to most other states. Based on the rationale above, I do not predict that economic growth makes it more likely that states will initiate militarized conflicts with other states, or that it increases their overall conflict propensity. Economic growth appears dangerous in those situations where states are already involved in a conflict by making it more likely that a state will reciprocate or escalate conflicts. Considering that war is a suboptimal outcome (Gartzke, 1999), states would not risk escalating conflicts to violence or war if they have reason to believe that they may lose. Hubris may lead states into conflicts that turn deadly by providing an increased willingness to fight or even distorting and inflating leaders’ perception of state strength. States often march off to war thinking that the war will be short and that their side will prevail (Blainey, 1988); I suspect economic growth increases this resolve to stand against challenges from other states and to escalate crises

### Asia Regionalism Scenario

Economic collapse fosters Asian regionalism – forces dialogue and cooperation between countries

Branginin, 9 (William, a writer and editor on the national staff of The Washington Post, served as the newspaper’s Southeast Asia bureau chief for 10 years, reporting from more than a dozen countries in the region, April, Can a United Asia Overcome a Global Crisis?, Development Asia, http://development.asia/issue03/cover-01.asp

An Asian Monetary Fund A danger now is that Asian countries, their reserves diminished by the current crisis, could again attempt to export their way to surpluses—and manipulate their currencies as a way to gain an edge. “This gives other countries incentive to try to subsidize their exports or hold down their currency,” said the University of Chicago’s Rajan. “It’s a version of a beggar-thy-neighbor policy.” This situation “could be averted if, as a region, they agree it’s not in their collective interest and put pressure on each other that other countries cannot put,” he said. In this increasingly difficult context, the idea of setting up an “Asian Monetary Fund” as a regional version of the IMF has been gaining traction, although it still faces hurdles and skepticism about its effectiveness. Japan first proposed creating an Asian Monetary Fund more than a decade ago in response to the 1997–1998 crisis, but the US and the IMF opposed it on the grounds of moral hazard, and the PRC—perhaps concerned about Japanese domination of such a fund—showed little enthusiasm. Now the US is poorly placed to block it, even if inclined to do so. The US Treasury Department, preoccupied with domestic financial recovery and G-20 matters, has not taken a position. And in any case, the key player now is the PRC, which holds the political and economic leverage, as well as the international currency reserves— estimated at about $2 trillion—to decide the fund’s fate. A leading promoter of an Asian Monetary Fund this time is Masahiro Kawai, dean of the Asian Development Bank Institute and a former University of Tokyo professor and Japanese finance deputy vice-minister for international affairs. He told reporters in February that such an organization could serve to manage the funding pool of the Chiang Mai Initiative (CMI) and help Asian economies protect their currencies from speculative attacks, enabling them to avoid the strict conditions associated with borrowing from the IMF. Other expressions of support have come from the finance ministries of Malaysia and Thailand. Financial analysts say an Asian Monetary Fund could promote exchange rate stability, gather other programs such as the Asian Bond Markets Initiative under one roof, and project an “Asian voice” on financial matters. But it would also represent a regional approach to a global crisis, which some critics see as an inherent weakness. “The discussions will start again, but the issue will once again come to whether an Asian Monetary Fund will have enough resources to protect the region from crisis,” said Prasad. “The problem is, if you have the entire region going into a near crisis, then it’s unlikely an Asian Monetary Fund will have enough resources.” In Rajan’s view, the IMF should be “reformed in such a way that it’s palatable to the Asian economies, rather than create another regional entity.” Institutions such as an Asian Monetary Fund “could reduce the effectiveness and draw away from the need to reform the international entity,” he said. “I would rather see an IMF that’s strong, but also legitimate and welcomed by countries around the world.” The Impetus for Integration Regardless of whether an Asian Monetary Fund comes to pass, the region still needs structures to promote stability and help deal with crises, advocates of regionalism say. In its Emerging Asian Regionalism study, ADB advocates opening a high-level Asian Financial Stability Dialogue to bring together finance ministry officials, central bank authorities, and market regulators and supervisors to “address financial market vulnerabilities” and establish an effective dialogue with the private sector. It would help harmonize financial regulations and banking supervision, strengthen regional surveillance, and expand the Asian Bond Markets Initiative and the Asian Bond Funds. The report also proposed creating an Asian Secretariat for Economic Cooperation, a body envisaged as a “new regional entity”—a sort of Asia Commission to monitor and potentially coordinate macroeconomic and exchange rate policies, among other things. The ADB study said ASEAN+3 is a “logical venue” for the secretariat since it would incorporate ASEAN, which already has its own small bureaucracy, plus three of the region’s largest economies. But that would mean including tiny economies such as those of the Lao People’s Democratic Republic and Myanmar, while leaving out Taipei,China which has the sixth highest GDP in Asia and the world’s fourth-largest foreign exchange reserves (nearly $300 billion at the end of 2008). It would also exclude India, the world’s fourth-largest economy and holder of the fifth-highest foreign exchange reserves (about $250 billion). Because of Beijing’s sensitivities, nothing much can be done about including Taipei,China, regional experts say. But a potential vehicle for broader Asian regionalism could be the East Asia Summit, a forum that encompasses ASEAN+3, as well as Australia, India, and New Zealand. As a result of the crisis, “the impetus for regional integration is going to increase enormously, but the inadequacy of regional integration will also become apparent,” Prasad said. “Almost certainly there will be more regional integration— with the recognition that it isn’t enough…While regional integration can be helpful, I don’t think it can be a substitute for broader mechanisms for insuring emerging markets.” According to Rajan, “regionalism, while good, should not subtract from internationalism, which I think is the real need.” “I wouldn’t hold my breath for an Asiawide entity any time soon,” he said. “But what I would hope is that as the economic ties build up, the countries feel the need to have a regional dialogue, so they create meeting places where all the important countries can get together to ensure they don’t stand in the way of economic growth.”

Regionalism solves China-Taiwan conflict

Zhang, 3 (Wei-Wei, Visiting Professor @ Fudan University, Shanghai, Research Fellow @ Modern Asia Research Centre, Geneva, “East Asian Regionalism: Implications for Cross-Strait Relations,” Taiwan and China in the Global Communities, A Multi-level Conference co-organized by EIAS, IIAS and SOAS, London (17 October 2003) and Leiden (21 October 2003) pg. chinatwzhang.pdf)

Given the prolonged political hostility between Beijing and Taipei, it is understandable that Taipei has its concerns over the rise of China, as Taiwan still perceives Beijing as its principal adversary bent on strangling its “international space” and taking it by force if need be. However, despite political animosity between the two sides, many Taiwanese, especially businessmen, view the rise of China more as an opportunity. Taiwanese businesses have poured as much as US$ 100 billion into the mainland over the last decade; more than 300,000 Taiwanese living and working in the Shanghai region alone, and recent years see over 3 million visits annually from Taiwan to the mainland, and since 2002, China has become Taiwan’s largest export market. This cross-Strait “informal integration” is in fact the most dynamic and significant part of the aforementioned Chinese Economic Area. In contrast, the current DPP government in Taiwan advocates the ideology of “Taiwan taking its own road” as a guideline for Taiwan to stay as far away as possible, economically, culturally and politically, from the Chinese mainland. It even openly embrace the idea of Taiwan’s independence through constitutional revisions. Yet, to what extent this proindependence ideology and its associated policies will succeed is doubtful, given the deeprooted cultural links, the rapid rise of China’s overall national strength, the growing de facto integration of the two economies, as well as the rising trend of East Asian regionalism. With globalization and international division of labour and logistics, Taiwan and China, favoured by historical and cultural ties, ought to seize every opportunity to enhance their mutually beneficial cooperation. Their common interest does not lie in political and 7 military confrontation, but in pragmatic and mutually beneficial cooperation in as many areas as possible. Taipei’s prolonged policy of “no hurry, less haste” already cost Taiwan business community dearly in terms of losing its market share in China. The continuation of a similar policy, as is the case now, could further compromise Taiwan’s regional and international competitiveness. Furthermore, Taipei’s pro-independence posture is unlikely to alter the growing trend of East Asian regionalism centring around China, with ever more foreign countries busy tapping China’s market, nor will it stop capital and technology flow from Taiwan to the mainland. In fact, along with China’s entry into WTO, and East Asian drive for regional cooperation, Taiwanese businesses are rushing to the mainland for investment and trade opportunities. Some new trends are worth mentioning: (a) as China’s high-tech industry approaches a critical mass, Taiwan’s high-tech companies are expanding their investment in the mainland; (b) Taiwan’s investment has shifted from Fujian and Guangdong provinces near Taiwan to China’s economic centre: Shanghai and its sorrounding Yangtze River Delta: (c) Taiwan’s investment is shifting from labour-intensive to both labour intensive and knowledge-capital-intensive industries; (d) ever more Taiwanese big companies are coming to invest in the mainland, and (e) Taiwan businessmen are exerting unprecedented pressure on Taipei to abandon its policy of restricting China-bound investment and lift its ban on the “three direct links.” 11 Taiwan and the Chinese mainland share enormous common interests and reconciliation is the only way-out for the two sides. If Taiwan cannot make best use of the rise of China as part of its global strategy for greater competitiveness, Taiwan may risk being further marginalized against the trend of the China-centred regionalism in East Asia, a fear shared by many in Taiwan.

Extinction

ST, 2k (Straits Times, June 25, Regional Fallout: No One Gains in War Over Taiwan)

THE high-intensity scenario postulates a cross-strait war escalating into a full-scale war between the US and China. If Washington were to conclude that splitting China would better serve its national interests, then a full-scale war becomes unavoidable. Conflict on such a scale would embroil other countries far and near and -- horror of horrors -- raise the possibility of a nuclear war. Beijing has already told the US and Japan privately that it considers any country providing bases and logistics support to any US forces attacking China as belligerent parties open to its retaliation. In the region, this means South Korea, Japan, the Philippines and, to a lesser extent, Singapore. If China were to retaliate, east Asia will be set on fire. And the conflagration may not end there as opportunistic powers elsewhere may try to overturn the existing world order. With the US distracted, Russia may seek to redefine Europe's political landscape. The balance of power in the Middle East may be similarly upset by the likes of Iraq. In south Asia, hostilities between India and Pakistan, each armed with its own nuclear arsenal, could enter a new and dangerous phase. Will a full-scale Sino-US war lead to a nuclear war? According to General Matthew Ridgeway, commander of the US Eighth Army which fought against the Chinese in the Korean War, the US had at the time thought of using nuclear weapons against China to save the US from military defeat. In his book The Korean War, a personal account of the military and political aspects of the conflict and its implications on future US foreign policy, Gen Ridgeway said that US was confronted with two choices in Korea -- truce or a broadened war, which could have led to the use of nuclear weapons. If the US had to resort to nuclear weaponry to defeat China long before the latter acquired a similar capability, there is little hope of winning a war against China 50 years later, short of using nuclear weapons. The US estimates that China possesses about 20 nuclear warheads that can destroy major American cities. Beijing also seems prepared to go for the nuclear option. A Chinese military officer disclosed recently that Beijing was considering a review of its "non first use" principle regarding nuclear weapons. Major-General Pan Zhangqiang, president of the military-funded Institute for Strategic Studies, told a gathering at the Woodrow Wilson International Centre for Scholars in Washington that although the government still abided by that principle, there were strong pressures from the military to drop it. He said military leaders considered the use of nuclear weapons mandatory if the country risked dismemberment as a result of foreign intervention. Gen Ridgeway said that should that come to pass, we would see the destruction of civilization. There would be no victors in such a war. While the prospect of a nuclear Armaggedon over Taiwan might seem inconceivable, it cannot be ruled out entirely, for China puts sovereignty above everything else. Gen Ridgeway recalled that the biggest mistake the US made during the Korean War was to assess Chinese actions according to the American way of thinking. "Just when everyone believed that no sensible commander would march south of the Yalu, the Chinese troops suddenly appeared," he recalled. (The Yalu is the river which borders China and North Korea, and the crossing of the river marked China's entry into the war against the Americans).

## \*\*\*Disease\*\*\*

### 1nc-Disease Shell

Development causes extinction through diseases.

Frank Ryan, M.D., 1997, virus X, p. 366

How might the human race appear to such an aggressively emerging virus? That teeming, globally intrusive species, with its transcontinental air travel, massively congested cities, sexual promiscuity, and in the less affluent regions — where the virus is most likely to first emerge — a vulnerable lack of hygiene with regard to food and water supplies and hospitality to biting insects' The virus is best seen, in John Hollands excellent analogy, as a swarm of competing mutations, with each individual strain subjected to furious forces of natural selection for the strain, or strains, most likely to amplify and evolve in the new ecological habitat.3 With such a promising new opportunity in the invaded species, natural selection must eventually come to dominate viral behavior. In time the dynamics of infection will select for a more resistant human population. Such a coevolution takes rather longer in "human" time — too long, given the ease of spread within the global village. A rapidly lethal and quickly spreading virus simply would not have time to switch from aggression to coevolution. And there lies the danger. Joshua Lederbergs prediction can now be seen to be an altogether logical one. Pandemics are inevitable. Our incredibly rapid human evolution, our overwhelming global needs, the advances of our complex industrial society, all have moved the natural goalposts. The advance of society, the very science of change, has greatly augmented the potential for the emergence of a pandemic strain. It is hardly surprising that Avrion Mitchison, scientific director of Deutsches Rheuma Forschungszentrum in Berlin, asks the question: "Will we survive!” We have invaded every biome on earth and we continue to destroy other species so very rapidly that one eminent scientist foresees the day when no life exists on earth apart from the human monoculture and the small volume of species useful to it. An increasing multitude of disturbed viral-host symbiotic cycles are provoked into self-protective counterattacks. This is a dangerous situation. And we have seen in the previous chapter how ill-prepared the world is to cope with it. It begs the most frightening question of all: could such a pandemic virus cause the extinction of the human species?

### Growth 🡪 Disease-Laundry List

Current levels of growth makes spread of disease inevitable – the black plague, 1918 flu pandemic and AIDS prove

Charles Everett Koop, pg. last updated 2012 (Originally posted ‘Second Quarter 2001,’ Charles Everett Koop, MD is an American pediatric surgeon and public health administrator. He was a vice admiral in the Public Health Service Commissioned Corps, and served as thirteenth Surgeon General of the United States under President Ronald Reagan from 1982 to 1989. “The Globalization of Disease,” [http://www.cpjustice.org/stories/storyReader$543](http://www.cpjustice.org/stories/storyReader%24543) >:)

Late last year, at a United Nations summit on globalization, C. Everett Koop, former U.S. surgeon general and now senior scholar at the Koop Institute at Dartmouth College, presented a paper on globalization and health. "I still believe," he told the Public Justice Report, "regardless of any economic pundit's point of view, that it is impossible to achieve the globalization of economics unless there is a globalization of health as well." The following remarks have been excerpted from Dr. Koop's UN talk.—Ed. Despite the existence of truly global markets today, we have still not witnessed real political and economic globalization. National pride, particularism, protectionism, and special interests are alive and well and are able to frustrate even economic globalization. However, there is one area where globalization exists. We have achieved the globalization of disease. And now that we have globalization of disease, we have no other choice but to match it with the globalization of our efforts in health. It is true, of course, that disease has always disregarded frontiers. The plague or black death of the 14th century may have been one of the first examples of globalization. The tens of millions of American Indians who died from European-borne disease in the 16th century was a horrible side effect of European exploration and colonization of America. The influenza pandemic of 1918-19 is a more recent example. And AIDS seems to have traveled to North America on an airplane, with an aisle seat. Some of the participants in this forum will have brought to New York viruses from their homeland that, in an earlier age, could not have made the trans-oceanic voyage. When I speak about the globalization of disease, I refer[s] to two phenomena. First there is the pervasive role of sickness in human society. Globalization efforts in the areas of politics and economics and even culture will founder if the societies targeted by globalization efforts are preoccupied with illness. This basic human problem was first made clear to me years ago, at a time when most efforts to improve the lot of the world's splintered tribes and small ethnic groups was taken on by medical missionaries. Back in the 1950s, I assisted missionaries working in southwestern Mexico. According to anthropologists, the Tarascan Indians had not changed their way of life in 400 years. My Mexican physician friends told me I would find them lazy, unable to do a day's work, and lacking any ambition to improve themselves. Indeed, that's what they looked like. But they all had multiple intestinal parasites. They were all anemic and many had unhealed external lesions like ulcers. Their diet was tortillas and beans—and not much of those—supplemented once a week by a cup of fish broth made by boiling a fish head in water for a family of four. Those who lived around a lake had malaria; those at higher altitudes had syphilis. Those Indians weren't lazy or lacking in ambition. They were sick! The second meaning of globalization of disease refers not to the pervasiveness of illness in the world, especially in the developing countries, but to the ways in which a particular disease spreads so rapidly around the globe, as AIDS has done. This summer, right here in New York, health officials moved to combat the West Nile virus. That disease, named for a river in Egypt, makes my point all too well. There is no disease anywhere that is someone else's problem. So, if disease has become globalized, health care must also lift up its eyes to gain a global outlook.

### Growth 🡪 Disease-Globalization

Globalization leads to the spread of diseases – no solutions have been developed

HM Burns, April 18th, 2012 (HM Burns is a writer of ‘World Politics SO2,’ “Globalization and Disease,” <http://mblog.lib.umich.edu/WPB2012/archives/2012/04/globalization_a.html> >:)

Hillary's presentation on the effect of globalization on the spread of disease was particularly concerning to me, so I've looked into the issue a bit on my own. Over the past few decades, there have been more and more instances where increased global trade has facilitated the spread of disease at unprecedented rates. Health officials have attributed the fast spread of dengue fever in El Salvador to easy international travel. A recent dengue fever epidemic probably originated in Vietnam and travelled via Cuban workers, quickly infecting people in South America, Central America, and the Caribbean. In the 80s, the CDC discovered that a killer mosquito from Asia was traveling to Texas on shipments of used tires - a common breeding location for mosquitoes. The West Nile virus spread to America so quickly that evidence explaining its travel route is lacking, but scientists have attributed the disease's travel to jets, birds, used tires, and infected frogs. Despite growing concerns for how quickly diseases can spread because of globalization, no one seems to have [has] any solutions. To prevent the spread of disease, the CDC vaguely advises us to stay at home when we're sick, wash our hands, and to get vaccinations. But if these measures didn't work even in a more fragmented world, how will they work now? Will people stay at home when they're sick [if] when they're too poor to skip a day of work? What if people who carry a disease travel before they know they're infected? What about the billions of people that can't access clean water and soap, let alone expensive vaccinations? The spread of disease is a negative effect of globalization - but how can we stop it?!

### AT-Growth Solves Disease

Growth wipes out public health infrastructure and ensures vaccine resistant strains.

Fidler 96 (David p, J.D. @ Indiana U, Writer for CDC, Emerging Infectious Diseases Volume 2 – Number 2 “Globalization, International Law, and Emerging Infectious Disease”)

Second, the development of the global market has intensified economic competition and increased pressure on governments to reduce expenditures, including the funding of public health programs, leaving states increasingly unprepared to deal with emerging disease problems. Industrialized as well as developing countries confront deteriorating public health infrastructures (12). Referring to the United States, one author described this deterioration as the “thirdworldization” of the American health care system (13). Third, public health programs have also “gone global” through WHO and health-related nongovernmental organizations. Medical advances have spread across the planet, improving health worldwide. The worldwide eradication of smallpox in 1977 is a famous example. The global reach of health care advances has, however, a darker side. The globalization of disease control has contributed to the population crisis because people are living longer. Overpopulation creates fertile conditions for the spread of disease: overcrowding, lack of adequate sanitation, and overstretched public health infrastructures (2). Further, the widespread use and misuse of antibiotic treatments has contributed to the development of drug-resistant pathogens (1, 2). Finally, the success of control efforts in previous decades caused interest in infectious diseases to wane in the international medical and scientific communities and is now hampering emerging infectious disease control efforts (14).

### AT- Burn out

Burn out won’t solve

Posner 5 – Prof Law and Econ @ U Chicago, Richard, Catastrophe, Skeptic, 11.3, Jan

This example shows how a laboratory accident may produce an unusually dangerous strain of a natural disease agent that, should it escape from the lab, could start an uncontrollable pandemic.(FN109) But it is the implications of such accidents for bioweaponry that I want to explore. The Australian scientists published an article describing the enhanced mousepox virus(FN110) and in a part of the article captioned "materials and methods" provided in effect a blueprint for any bioterrorist able to obtain a virus that causes disease in human beings and might be enhanced by the method employed by those scientists.(FN111) The smallpox virus is stable in aerosol form and has an infectious incubation period of seven to seventeen days.(FN112) Even when symptoms do appear, at the end of that period, they frequently are mistaken for those of other diseases, such as flu or even chickenpox.(FN113) The aerosols of smallpox virus in the exhalations of an infected person carry for several meters so that,(FN114) without an effective vaccine, hospital workers and family members would be quickly infected by the first wave of infected persons, especially if the disease hadn't been identified. The average reproduction rate of smallpox--that is, the number of persons likely to be infected by contagion from one infected person, a number that varies not only with the contagiousness of the disease and the length of time before the infected person dies and so ceases to be contagious but also with the density of population and frequency of interactions among people and of course the extent and efficacy of vaccination--is 5.5.(FN115) Suppose a terrorist infected 1,000 people at widely separated locations; each of the victims infected on average 5.5 others within three days, who in turn infected on average 5.5 others in the same period, and this continued for three weeks, that is, for seven rounds. By then more than 150 million people would have become infected (1,000 × 5.57). Border controls and other methods of preventing terrorists from achieving physical proximity to their victims, which are the methods recommended for preventing suicide terrorism,(FN116) would not work against this type of attack. An innocent person flying from Athens airport to the United States who had been infected with smallpox at the Athens airport could become the port of entry for smallpox in the United States. With smallpox spreading as the result of an attack such as I have described and the vaccine ineffective--for I am assuming a "juiced-up" smallpox virus similar to the juiced-up mousepox virus created by the Australian scientists--and no cure, only isolation (of everyone known to be infected or thought to have been exposed to the disease) or quarantining (isolating everyone who might have been exposed to it) could limit the further spread of the disease. Quarantining is the more costly measure, both to those administering it and to the population at large, because more people are subject to it,(FN117) but it is hard to see how it could be avoided in the case of a large-scale outbreak of smallpox. Yet it might well be ineffectual. The relatively long infectious incubation period of smallpox would allow the disease to spread to a great distance before a quarantine could be imposed.(FN118) Many health workers would be infected, and those who were not, lacking vaccine protection, would be reluctant to approach infected persons, and if they did, their ranks would be rapidly thinned as they caught the disease. If the terrorist avoided detection, he could continue spreading the disease even after known victims had been quarantined, until he himself became disabled by it. Isolated human populations might escape infection but might not be viable in a world from which most of the human race, perhaps including all the urban populations and all health workers, had vanished. The occasional outbreaks of smallpox in modern times before its eradication were quickly contained.(FN119) But these were isolated outbreaks rather than implementations of a plan of widespread destruction. And many potential victims, plus hospital and other public health workers, had been vaccinated.

## \*\*\*Terrorism\*\*\*

### 1nc-Terrorism Shell

Growth causes terrorism.

Cronin, 3 (Audrey Kurth, Senior Associate at the Oxford Leverhulme Programme on the Changing Character of War “Behind the Curve: Globalization and International Terrorism”, Project MUSE)

The objectives of international terrorism have also changed as a result of globalization. Foreign intrusions and growing awareness of shrinking global space have created incentives to use the ideal asymmetrical weapon, terrorism, for more ambitious purposes. The political incentives to attack major targets such as the United States with powerful weapons have greatly increased. The perceived corruption of indigenous customs, religions, languages, economies, and so on are blamed on an international system often unconsciously molded by American behavior. The accompanying distortions in local communities as a result of exposure to the global marketplace of goods and ideas are increasingly blamed on U.S.- sponsored modernization and those who support it. The advancement of technology, however, is not the driving force behind the terrorist threat to the United States and its allies, despite what some have assumed. Instead, at the heart of this threat are frustrated populations and international movements that are increasingly inclined to lash out against U.S.-led globalization. As Christopher Coker observes, globalization is reducing tendencies toward instrumental violence (i.e., violence between states and even between communities), but it is enhancing incentives for expressive violence (or violence that is ritualistic, symbolic, and communicative). The new international terrorism is [End Page 51] increasingly engendered by a need to assert identity or meaning against forces of homogeneity, especially on the part of cultures that are threatened by, or left behind by, the secular future that Western-led globalization brings. According to a report recently published by the United Nations Development Programme, the region of greatest deficit in measures of human development—the Arab world—is also the heart of the most threatening religiously inspired terrorism. Much more work needs to be done on the significance of this correlation, but increasingly sources of political discontent are arising from disenfranchised areas in the Arab world that feel left behind by the promise of globalization and its assurances of broader freedom, prosperity, and access to knowledge. The results are dashed expectations, heightened resentment of the perceived U.S.-led hegemonic system, and a shift of focus away from more proximate targets within the region. Of course, the motivations behind this threat should not be oversimplified: Anti-American terrorism is spurred in part by a desire to change U.S. policy in the Middle East and Persian Gulf regions as well as by growing antipathy in the developing world vis-à-vis the forces of globalization. It is also crucial to distinguish between the motivations of leaders such as Osama bin Laden and their followers. The former seem to be more driven by calculated strategic decisions to shift the locus of attack away from repressive indigenous governments to the more attractive and media-rich target of the United States. The latter appear to be more driven by religious concepts cleverly distorted to arouse anger and passion in societies full of pent-up frustration. To some degree, terrorism is directed against the United States because of its engagement and policies in various regions. Anti-Americanism is closely related to antiglobalization, because (intentionally or not) the primary driver of the powerful forces resulting in globalization is the United States. Analyzing terrorism as something separate from globalization is misleading and potentially dangerous. Indeed globalization and terrorism are intricately intertwined forces characterizing international security in the twenty-first century. The main question is whether terrorism will succeed in disrupting the [End Page 52] promise of improved livelihoods for millions of people on Earth. Globalization is not an inevitable, linear development, and it can be disrupted by such unconventional means as international terrorism. Conversely, modern international terrorism is especially dangerous because of the power that it potentially derives from globalization—whether through access to CBNR weapons, global media outreach, or a diverse network of financial and information resources.

### Growth 🡪 Terrorism

Economic growth kills human rights and motivates terrorism – oppressive regimes that support the free market

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

The crucial role of oppression within the empire is made clear in the following  quotes.  To maintain its levels of production and consumption … the US must  be assured of getting increasing amounts of the resources of poor  countries. … This in turn requires strong support of unpopular and  dictatorial regimes which maintain political and police oppression  while serving American interests, to the detriment of their own poor  majorities. If on the other hand Third World people controlled their  own political economies … they could then use more of their resources  themselves … much of the land now used to grow export cash crops …  would be used to feed their own hungry people for example.58  It is in the economic interests of the American corporations who  have investments in these countries to maintain this social structure  (whereby poor masses are oppressed and exploited by local elites). It is  to keep these elites in power that the United States has … provide d  them with the necessary military equipment, the finance and training .59  The impoverished and long abused masses of Latin America … will  not stay quietly on the farms or in the slums unless they are terribly  afraid … the rich get richer only because they have the guns. The rich  include a great many US companies and individuals, which is why the  United States has provided the guns …60  With the explosion of neoliberalism onto the global scene since the 1970s, the  need for physical force to maintain the empire has been greatly reduced. Now the  new rules of the global economy do the job very effectively. As has been  explained, the Structural Adjustment Packages and the laws being introduced to  govern trade, investment and provision of services force all countries to facilitate  uncontested access for rich world corporations to almost all resources, regions  and markets. Gunboats are no longer so necessary and less often do nations need  to be conquered or ruled via a client regime. If a few men in suits soon finally  establish the neoliberal agenda as the only set of rules governing the world  economy no nation will be able to resist and if that exclusive agenda continues to  be taught to economics students no one will want to.  To summarise, the global economy is grotesquely unjust. A few have high  material living standards primarily because of the economic arrangements that  deliver most of the world’s wealth to them and seriously deprive billions of  people. If access to the world’s resources was allocated more justly people in rich  countries could not have anywhere near the affluent lifestyles they do have. We  could not be so rich if we did not operate an empire and maintaining our empire  involves a great deal of grabbing, repression and terror.  It should not need to be said that none of this is to justify the actions of  11 September. It is about understanding why things like that happen. In my view  ‘terrorist ’ actions by oppressed people are neither morally nor strategically  desirable; they are in general not even likely to contribute to desirable outcomes  for those people. Although in certain situations violence may be the only means  to eliminate oppression, I do not see it as having a central role in the liberation of  the Third World from rich world domination. The transition strategy I advocate is necessarily non-violent (i.e. it cannot succeed if it involves violence), and indeed  is subject to attack from the Left for its deliberate avoidance of confrontation .61  The broader context; peace vs affluence  There is little evidence on the precise motivation behind the 11 September attacks  on the World Trade Center. It is not possible to say whether they derived  primarily from fundamentalist religious concerns or from awareness of global  economic injustice and the long history of appalling treatment of Islamic people s  by the West. There is at least some indication that the former elements are central  in bin Laden’s thinking. However even if those attacks were not responses to the  imperial situation the point of the foregoing discussion is that they are the sorts of  acts which must be expected given the existence, nature and functioning of the  empire.  If we are determined to maintain, let alone increase the rich world’s high  material ‘living standards ’ and its commitment to ever-increasing levels of  economic turnover then we must maintain the empire. We cannot have these  living standards unless we get much more than our fair share of the world’s  resource wealth. Therefore these living standards are incompatible with global  economic justice or with enabling all Third World people to use their own  resources to meet their own needs. It is a zero growth game; if all that land  growing our export crops was diverted to growing basic foods for Third World  people we would get far less coffee and pork. If more of their labour was to go  into producing things they need we would get fewer cheap shirts and TV sets.  There are no where near enough resources for all people to rise to our affluence  so if we are going to maintain our levels of material consumption they will have  to go on getting a miniscule share and go on seeing most of their resources flow  to us.

### Growth 🡪 Terrorism

Growth gives terrorist the incentive to strike major economic centers

[MALHOTRA](http://inspiredeconomist.com/author/reenymal/) 8, “Does Terrorism Have An Economic Motive?” NOVEMBER 30, 2008 BY REENITA MALHOTRA, Our sites are organized by niche title within the bounds of our take on Maslow’s hierarchy of needs, and rely on a growing community of freelance editorial contributors who share our vision. Our goal is to provide an opportunity for sustainability experts, journalists (both citizen- and professional freelancers), industry leaders, and as many other information-sharers as we can to reach the largest possible audience, in a way that positively informs the humanity-wide discussion of important topics. As it expands from the founding 10 blogs, Important Media will strive to take the best lessons from some of the most admirable and successful online media models around, and build on them to create an amplifying chorus of engaging, important content and discussion. (<http://inspiredeconomist.com/2008/11/30/does-terrorism-have-an-economic-motive/>)

In the world Islamic fundamentalism, most of us believe that [terrorism](http://inspiredeconomist.com/2008/05/13/new-research-programme-for-sustainable-decision-making/) is brought about by religious bias. But the terrorist might in fact have an economic motive. It is abundantly clear that he who risks and often sacrifices his own life in the very act of creating terror does not have a personal economic motive however it is likely that he is motivated to destroy economies. Wealth, abundance and prosperity after all symbolize the ‘evil’ that the Islamist sees as an adversary. Terrorist attacks occur almost daily in larger and smaller numbers impacting civilians all over the world ([*Terrorism Research Center*](http://terrorism.com/modules.php?op=modload&name=Attacks&file=index)) however it is the large scale attacks in major global financial centers that leave the world reeling in shock. An attack on a town in Afghanistan, Gujarat or Dagestanis quickly forgotten as people resume their daily lives the next day. But an attack on New York or London destabilizes the country’s entire economic machine for several days, leaving its citizens and those elsewhere in the world fearful and helpless. When the major financial center is [Mumbai](http://inspiredeconomist.com/2008/11/26/newsflash-mumbai-under-fire/), the nerve center of an economy that is growing at 9% per annum, the terrorist’s motive is greater. Perhaps because economic growth in a country with which a terrorist can ethnically identify, is a telling sign that the threads of ‘evil’ have become deeply ingrained within his own people. [BBC](http://bbc.co.uk/) released a documentary in 2005 entitled “[The Power of Nightmares](http://en.wikipedia.org/wiki/The_Power_of_Nightmares).” It outlines the history of the Neo-Conservative movement in America and interestingly enough it shows how Al-Qaeda and the Neo-Conservativeswere rooted in the same ideology: that the economic prosperity of the West represented a decline of social values. For the Neo-Cons this spurred a desire to create state terror in the guise of war. For Al-Qaeda it spurred a desire to declare war in the guise of terror. I put the question out to to several people this week after the terror attacks onMumbai. Mona M. from Hong Kong’s answer summarized most people’s responses: “Terrorism is perpetrated by those who have no hope for a better life in the future hence it is in my view largely caused by economics. As much of a capitalist that I am, the openly widening gulf between the rich and poor causes jealously especially for the majority of the poor who have no access to free and good health care and schooling. This jealousy in extreme cases leads to violence and terrorism is just one form. I suppose this gap has always existed but it has been private while now with mass media it is open for all to see. Unless we see a bigger trickle down effect I think terrorism will continue to spread.” [social\_buttons] “9/11: A Clear Case for Economic Terrorism” The 9/11 attacks on the World Trade Center are probably the most lucid example of the Islamic terrorist’s mindset against economic prosperity. The World Trade Center in New York symbolized the economic prosperity of the West at its peak. New York City is home to the stock exchange and the Twin Towers were home to the top investment banks and financial companies of America. The very machine of the U.S. economy that infiltrated the homes and livliehood of people across the nation. A report to Congress estimated that 130,000 people lost jobs due to the 9/11 terror attacks on the World Trade Center. Several industries faced very strong negative effects after 9/11, especially in the airline, hotel and insurance industries. Approximately 18,000 businesses were affected by the 9/11 attacks and because of New York City’s huge losses, the city was provided aid of $11.2 billion for debris removal, $5 billion for economic development incentives, and $5.5 billion for infrastructure projects. “Disaffected Societies In India Engender Home Grown and Imported Terrorism” Recently, India has been the focus of the global media: its economic leaps and bounds, the emergence of its consumerist middle class, and its status as one of the last frontiers for luxury conglomerates looking to consolidate their recent gains. However, in a land of glaring paradoxes, the rich get richer in spite of and often at the cost of a disaffected underclass. In India, this [disaffected underclass](http://www.newsweek.com/id/171201) includes an often neglected Muslim community :[economically disenfranchised](http://inspiredeconomist.com/2008/02/05/branchless-banking-innovations-create-opportunity-to-serve-the-poor/) and increasingly radicalized. The roots of terror are not always clearly defined. However even if they come from the outside, incidents are often successful due to internal abetting, most often by marginalized communities. Mumbai represents lucre and transaction as [Suketu Mehta](http://www.nytimes.com/2008/11/29/opinion/29mehta.html?ex=1385701200&en=51f7ed4932f50f37&ei=5124&partner=facebook&exprod=facebook) said in his [New York Times](http://www.nytimes.com/glogin?URI=http://www.nytimes.com/2008/11/30/weekinreview/30giridharadas.html&OQ=_rQ3D2&OP=ef05048Q2FQ7D6Q23Q7BQ7DGXrzyXXYsQ7DsQ5BQ5BSQ7DiiQ7DqQ5BQ7D6Q23Q23Q3BcdyQ23TcQ236Q7DqQ5B0cycGabybGbz9aYLI) Op-Ed yesterday. Hotels such as the terror-struck [Taj](http://www.cnn.com/2008/WORLD/asiapcf/11/29/india.hotel/index.html) and [Oberoi-Trident](http://cnnwire.blogs.cnn.com/2008/11/28/25-freed-from-oberoi-hotel-friday-morning/) are the extended living rooms of Mumbai’s upper classes. This is where India’s top industrialists strike deals and where foreign businesses set up shop as they plan to invest millions in the promise of India. The J.W. Marriott which escaped a terror mission to be razed to rubble, is home to the Bollywood community.The ongoing terrorist assault on Mumbai indicates that sustaining economic growth cannot be accomplished without bringing all of its citizens on board, including, most importantly, its disaffected Muslim underclass. The fact that India has had a history of war followed by [ongoing tension with poor neighbor](http://www.cnn.com/2008/WORLD/asiapcf/11/30/india.attacks/index.html) [Pakistan](http://www.newsweek.com/related.aspx?subject=Pakistan) (a key player in America’s war on terror as well) does not help either. Although the differences between India and Pakistan originally stemmed from religious ideology, today they are perhaps more about socio-economics. The terrorists responsible for last week’s Mumbai attacks are believed to have hailed from Pakistan. Yet rather than having an anti-Hindu agenda, they clearly targeted Mumbai’s elite, its [Economic landmarks](http://online.wsj.com/article/SB122809281744967855.html) and its American and British tourists. You might might argue that the Jewish targets were driven by religious fanaticism but consider the fact that the terrorists had targeted them based upon their research that they would be there for a diamond trading conference. For the terrorists, the Jewish community represents economic success perhaps as much as religious differences.

### Growth 🡪 Terrorism

Terrorist are now attacking centers of economic growth, Hezbollah is targeting NYC now

Stakelbeck 12, “Will Iran Strike New York City on 9/11 Scale?” by Eric Stakelbeck Wednesday, May 16, 2012. Erick Stakelbeck is a sought after authority on terrorism and national security issues with extensive experience in television, radio, and print media. Stakelbeck is a correspondent and terrorism analyst for CBN News. He covers the global war on terror, U.S. national security, the Middle East and the growth of radical Islam at home and abroad for the network’s Washington, D.C. bureau. (<http://www.cbn.com/cbnnews/us/2012/May/Iran-Plotting-Next-911-Intel-Says-Yes/>)

New York City: It's the center of the U.S. financial system and for many people, the capital of the world. That's why the Big Apple remains a top terror target. From the 1993 World Trade Center bombing to 9/11, and more recently, the Times Square bomber, terrorists have repeatedly targeted Manhattan. Now Iran, the world's largest state sponsor of terror, is reportedly taking aim. A recent warning about the threat posed by Iran and its terror proxy, Hezbollah, came from lawmakers on Capitol Hill. "We know Hezbollah operatives are here," Rep. Peter King, R-N.Y., told a House committee on homeland security in March. "The question is whether these Hezbollah operatives have the capacity to carry out attacks on the U.S. homeland and how quickly they can become fully operational," he said. King said hundreds of operatives are here and that some Iranian diplomats stationed at the United Nations are much more than they appear. "Several of their comrades in the U.N. mission in New York were sent back to Iran after the NYPD caught them photographing the city's rail systems in the years since 9/11," he said. According to one NYPD official, there have been at least five other instances of what he called "hostile reconnaissance" against New York City by Iranian agents. "They see that attacking New York or threatening the facilities in New York will destabilize the financial markets and automatically harm the U.S. economy," former CIA double agent Reza Kahlili told CBN News. Kahlili was once a member of Iran's Revolutionary Guards Corps. His book, [A Time to Betray](http://shop.cbn.com/product.asp?sku=9781439189030), lays out [Iran's potential plots against America](http://www.cbn.com/cbnnews/us/2011/November/Intel-Shows-Iran-Nuke-Attack-on-US-Easy-as-EMP/). "Many cells are present here. And they have their eyes set on our power plants, water supply, food distribution, bridges, tunnels -- anything that could create fear and also disrupt the daily life of Americans," he warned. One Iranian naval commander said recently that Iran's forces can move within three miles of New York City if they so choose. Kahlili said an attack against Iran's nuclear facilities could be the trigger. "They believe that an attack on Syria or Iran would be sufficient to trigger a response, which would be terrorist attacks on the world stage against U.S. and Israeli interests, an attack on Israel and attacks on U.S. soil," Kahlili said. Iran shocked many analysts with last year's plot to attack foreign diplomats in Washington, D.C. A nuclear-armed Iranian regime would likely become even bolder. "You can tell that Iran gets more aggressive the closer they get toward a nuclear weapon," Ryan Mauro, a national security analyst for[RadicalIslam.org](http://www.radicalislam.org/), told CBN News. "Rather than international pressure making them restrain themselves, it's actually making them act more and more aggressively," he said. Iran and Hezbollah already have an extensive network in Latin America, which they could use to strike at the United States. And according to Kahlili, Iranian agents also have a presence in some American mosques.

## \*\*\*Russia War

### Growth 🡪 Russian Adventurism

Economic decline prevents Russian adventurism --- solves nuclear war

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But we need not wait until 2020 for evidence of Russian weakness. Economic uncertainty and falling energy prices have combined to deflate Russia's pretensions of being a great power again. The stock market is down 70 percent from May, with one-time billionaire oligarchs scurrying to the Kremlin begging for relief. The ruble has lost two year's worth of appreciation as anxious citizens, so recently celebrating their new prosperity, change their savings into dollars and euros. Heretofore abundant foreign-exchange reserves have dissipated as oil prices have fallen by more than half and the government has attempted to prop up the ruble. Investment-rating services are threatening to downgrade Russian debt. As its economy weakens, Russia is less able to threaten its neighbors and the West-by cutting off energy shipments, for instance-should its demands not be met. Moreover, declining revenues will crimp the Kremlin's plans to sharply enhance its military. Not only will there be less money available overall, but more funds will have to be plowed into business investment and social programs. Economic growth has been the foundation of Vladimir Putin's popularity. He will be loath to risk popular displeasure by allowing the economy to continue sinking. Indeed, Russia's present financial difficulties are likely to force Moscow to accelerate economic integration with the West, which will force the Kremlin to moderate its foreign policy. Last year, then-President Putin issued an updated economic development strategy for 2020, which envisioned Russia as sporting one of the globe's five-largest economies and acting as an international financial center and technological leader. Those are challenging goals under any circumstances, but almost certainly will be impossible to achieve without abundant Western investment, trade and cooperation The image of a new Russian colossus threatening neighbors, Western Europe and the United States never reflected reality. Moscow's ambitions always were much more limited-ensuring border security and international respect, not reestablishing the Soviet empire. So, too, were its abilities limited, even before the ongoing economic crunch. The incoming U.S. administration should use the present economic uncertainty as an opportunity to refashion relations with Russia. Neither country can afford to finance a further arms buildup or has anything at stake in countries like Georgia and Ukraine that warrants a potential nuclear confrontation, and both nations would benefit greatly from expanded economic and security cooperation in the future. A modus vivendi should be possible-as long as Washington recognizes that diplomacy requires giving as well as taking, especially when the other party has a nuclear arsenal to back up its positions.

## \*\*\*Random\*\*\*

### Growth 🡪 Genocide and Chaos

Growth not only increases the likelihood of resource wars as resources get more scarce, but it legitimizes things like genocide, dictatorships, brutal regimes, warfare, and exploitation of the Third World countries just so that the people in First World countries can maintain their extravagant lifestyles.

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The inescapable conclusion: While all parties remain dedicated to greater and greater affluence regardless of how rich they already are, and there are nowhere near enough resources to enable all to be as affluent as the rich are now, there can be no outcome other than increasing competition and conflict between nations for resources and markets. In other words, global peace is not possible unless there is movement towards a society in which we can all live well on far lower per capita resource use rates than at present. Global peace is not possible without global justice The global economy is extremely unjust. The few, maybe 15%, of the world’s people who live in rich countries are taking about 80% of the resources produced in the world each year. It is not just that they get most of the resources on sale ( …which they do simply by being able to pay most for them in the global market economy). The economy also enables much of the productive capacity of the Third World, especially its land and labour, to be put into producing things to export to rich world supermarkets. This is why conventional development can be seen as a process of legitimised plunder. It mostly develops industries and structures which deliver resources and wealth to the rich while ignoring the needs of billions of people and taking from them the capacity to produce for themselves to meet their own basic needs. (For detailed critical discussion of development see http://socialwork.arts.unsw.edu.au/tsw/08b-Third-World-Lng.html Note that global justice is not a matter of us giving the Third World more of our resources. Many of the resources we get are taken from the Third World in the first place, through the market system at little benefit to its people. It is remarkable that the Third World has expressed so little outrage at this situation. This is partly because Third World countries are ruled by elites who have a strong interest in perpetuating a system they benefit from too. (What benefit does the average Nigerian get from the export of oil to the rich countries?) The first way in which the global economic situation generates armed conflict and violence is evident in the effort Third World elites make to preserve their privileges by keeping their people down. In some cases this has resulted in tens of thousands of deaths. These brutal and greedy regimes are eager to sell their national forests etc. to the corporations from rich countries. Often rich countries are propping up these governments, i.e., supporting them in a war against their own people. Rich countries go to a great deal of effort to keep in place in the Third World the governments and policies that benefit the rich countries, including use of aid, military equipment and actual invasion. Brutal Third World regimes are often supported or installed by the rich countries because they are willing to give the rich countries the access they want to Third World resources and markets. The rich countries use skulduggery and violence on a large scale to support such regimes. (On the existence and functioning of our empire, see http://socialwork.arts.unsw.edu.au/tsw/10-Our-Empire.html) Often rebels, war lords and rival factions fight ruthlessly to get control of the supply of diamonds, timber, oil etc., often funded and armed by rich world governments and corporations in an effort to come out aligned with the winning side, or just to have their mines protected. This is common in Africa. The local people not only get none of the wealth produced, they suffer brutal harassment, while the resources are of course sold eventually to rich countries. The Structural Adjustment Packages inflicted on indebted poor countries by the World Bank have contributed to many serious conflicts by destroying the Third World government’s meagre capacity to provide assistance to its poorest and thereby provoking huge social problems. This was an important cause of the Rwanda genocide and of the break up of Yugoslavia. (See Chussodovsky’s The Globalisation of Poverty, 1997.) Those SAPs force countries to give corporations greater freedom to access the country’s resources, markets, again fuelling problems leading to violence while increasing resource flows to the rich. Rich world military force is deployed in the world’s “trouble spots” to be used against or to deter “rebel/communist/subversive/insurgent/terrorist” groups who might disrupt “order”, and to deal with those “…threatening our vital interests.” For example how long do you think we could go on getting most of the world’s oil if we did not have huge military forces patrolling the seas, in bases in the Middle East, supporting ruling elites who are hated by many of their people, e.g., the Saudi royal family? It is in our “vital interests” that most of the world’s oil continues to flow to us and not to benefit the ordinary people of Nigeria, Iraq, etc. Any one calling for radical redistribution of these wealth flows so that poor people get more/some of it, is of course an insurgent, communist, terrorist…etc. Then there are the outright massive invasions rich countries carry out, usually justified in noble-sounding terms such as “humanitarian aid”, “preventing genocide”, “resisting communist advance”, “getting rid of a dictator”, and “opposing terrorism.” Sometimes there is some validity in these claims but always the action achieves important economic or political goals for the rich countries. There are many cases where they totally ignore the need for humanitarian intervention (notably Rwanda, East Timor), and where they not only ignore but support dictators or take no action against genocide, or support regimes that murder their own people…because it is in their interests not to act. Where they do launch military action you can be sure they will end up with resources, markets, military bases, control they didn’t have before. For instance Yugoslavia and Iraq were socialist states, with no private ownership of major industries and resources and no place for foreign corporations … but now these economies and firms are in the hands of western corporations operating in a market economy. Before the invasion Iraq oil was controlled by the state, but early in 2007 the industry was massively restructured and most of the oil revenue will now go to western corporations. Would the 1991 war waged by the West to expel Iraq from Kuwait have broken out if Kuwait had only been a major exporter of carrots instead of oil? Why was there no war to expel Israel from its invasion of South Lebanon, or Indonesia when it invaded East Timor? In other words, arms and violence are needed to maintain our empire, to guarantee our access to more than our fair share of the world’s resources. If we insist on having a way of life that is far more extravagant than all can share and that is only possible for the few of us, and if we take far more than our fair share of the world's resources, much of it from Third World regions, then we will need lots of military force and the readiness to use it. We also have to supply arms to the Third World regimes that will keep their societies to the economic policies that suit us. Speaking to American soldiers at Camp Stanley, Korea, President Johnson said, "Don't forget, there are two hundred million of us in a world of three billion. They want what we've got -- and we are not going to give it to them!" If that is our attitude, and it seems to be, then we had better remain heavily armed! To put it another way, · We cannot have global peace without global justice. · We cannot have global justice unless the rich countries cease grabbing so much of the world's wealth. Think about security. We all want to be secure from armed conflict. The conventional solution has always been to try to build up the armed might to defend against attack…while doing nothing to change the factors that ultimately cause armed conflict. There can be no security in a world where no one questions the drive to get richer when it is totally impossible for all to be rich, or where the push for greater wealth must lead to conflict over resources and markets. The best way to be secure is not by increasing military force but by changing to ways that enable all to live without taking more than their fair share. However a peaceful world order cannot be achieved unless we shift to The Simpler Way, which would enable all to live well without taking more than their fair share or exploiting other regions. The (unwitting) hypocrisy of much of the Peace Movement. In general the Peace Movement fails to attend to the focal theme being stressed here. It has been largely made up of middle class people in rich countries who are pleading for an end to armed conflict while they go on living affluently… which they do not recognise as the main cause of conflict in the world. The movement does not say, “We can’t have peace in the world unless we the over-consuming few shift to much simpler living standards and ways”. Similarly people who criticise President Bush for invading Iraq and planning to invade Iran, and all the previous American Presidents who presided over numerous invasions, assassinations and coups, fail to realise that unless things like this are done they cannot go on enjoying their high “living standards”. And most ordinary people have no idea that unless these things are done their supermarkets will not be well stocked. Just as mindless are pleas and admonitions designed to get us to “love one another” and to “make peace, not war”, as if the cause of war is a choice individuals make to dislike and harm each other. It never seems to occur to most people that the basic causes are to do with international relations, foreign policy and imperial plunder, or the ceaseless quest by corporations and shoppers for more and more throughput.

### Growth 🡪 Exploitation and Poverty

The affluent order of growth naturalizes the worst forms of violence and poverty against the poor and legitimizes their deaths as long as profit is made.

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The supreme, taken for granted, never questioned value in our society is to do with being rich and being able to consume a lot. There is some although not much questioning of competition and individualism, but there is almost never any public or private recognition that there could be anything problematic about affluence. Indeed buying, having and displaying many things, and many relatively expensive things, is seen as not just legitimate and morally unquestionable, but as deserved…if one can afford a nice or luxurious car then there can be nothing in any way wrong about buying it. There is no sense of unease or guilt associated with buying and having and using up things. In addition the supreme national goal is economic growth, ie., increasing wealth. Nothing is as important as keeping the GDP rising. The "standard of living" is defined as GDP per capita, and "prosperity" and indeed "progress’ are identified with increasing the capacity to produce and consume things. There are two levels here. The first is the obvious one of the luxurious and opulent living of the very rich. Few can have this, but just about all would like it. They buy the Home Beautiful magazines to envy and aspire. Great wealth is not resented. It is admired. It sets the benchmark of high quality and it tells us we live in a society where all have the opportunity to attain it. The second level is that of the middle and working classes, from the professionals and upper managerial people at one end down through the teachers, tradespeople and small business people to low income receivers. They want "nice" things like new cars and nice modern houses and they see as normal and respectable being able to drive hundreds of kilometres for holidays, having a wine rack, remodelling the kitchen, dining out, giving lots of xmas presents, having elaborate electronic toys like computers and music players, having nice furniture and many nice clothes. Shopping is a major leisure activity. The middle classes are also into investing now; they have property and shares and mortgages on their too-big houses . "Polite, modest, respectable" wealth is a large part of the identity of the middle class. It is essential for feeling and displaying success, competence, status, respect, and good standards. Consider especially the concept of "nice". What qualifies as a "nice" car, or house or wardrobe is of course an expensive one. Old, patched, cheap, recycled things are rejected, indeed repulsive. Value is put upon the new, slick, in-style, high tech…and expensive. There is no concept of "good enough"; if you can afford a bigger or more luxurious one that’s what you get. When I was going to school you would see many people on the train dressed in old clothes, including paint stained overalls and dusty bags carrying tools. Now everyone on the train seems to be on the way to participate in a fashion parade. There are no old patched or stained clothes. Every item is so new it could have come straight off a rack at the boutique. The middle class is especially neurotic about dirt. Unilever the soap tycoon, recognised that his fortune was due to this. The middle class will scrub and vacuum and mow and trim and paint an order of magnitude beyond what is necessary for hygiene, tidiness and convenience (more accurately, they will pay someone to do it for them.) So the killowatts go over the carpets yet again. So what is the problem with affluence? Why pick on it…and on all the ordinary, decent, law-abiding and hard working people who want it? The core facts that everyone should be glaringly aware of and deeply disturbed about are very simple. If in this world someone is affluent then many are poor. It is not possible for all people to have anything like the "living standards’" that are the average for the 1 billion people who live in rich countries such as Australia. If all 6 billion people in the world today were to have the Australian per capita rate of petroleum consumption, then world petroleum production would have to be 6 times as much as it is. But it is very likely that world petroleum production is close to its maximum and that by 2030 it could be down to half the present amount. That would mean that by about 2025-30 when population has increased, the amount of petroleum available per person would be only 1/15 of the amount per capita we use today in Australia. There is in other worlds no possibility of all people ever having anything like our present rich world per capita levels of resource consumption, or "living standards". The distribution of resource use in the world is extremely uneven and unjust. The people who live in rich countries are taking most of the petroleum and other resources produced in the world. In general our per capita consumption of things like petroleum, aluminium, coal etc is about 17 times the average for the poorest half of the world’s people. We could not have our affluent living standards if we were not taking far more than our fair share of the world’s resource wealth. Because we take so much most of the world’s people are severely deprived of necessities. At least 2 billion and possibly 4 billion are very poor. About 1.2 billion are so deprived and impoverished that they are hungry or malnourished. More than this number do not have safe clean water. About the same number do not have access to any medical care. Because they do not have enough food and clean water about 30,000 Third World children die every day. Do you realise that our high living standards cause these effects? They are not the only causal factors; many other factors like the incompetence and corruption of governments are involved, but the main reason why billions of people live in terrible conditions is because they have very little access to energy and resources … and the reason for that is because a few rich people are taking most of the resources available. How do we take most of the resources? We take them simply by paying more. Because the global economy is a market system valuable things like petroleum go to those who can pay the highest price. In this economy what is most profitable is what is done, not what is most needed. Those who need goods most but can’t pay much don’t get them. The worst thing about the way the global economy works is that much of the Third World’s productive capacity has been drawn into producing for the rich few. Large areas of Third World land, which poor people should be using to grow food for themselves, now produce luxury crops such as coffee and sugar to export to rich countries. Most of the "development" that has taken place in the Third World is of this kind. Foreign investors never invest in what Third World people need; they always only invest in what will maximise their profits, which means producing things for export to richer people and for sale to Third World elites. We in rich countries could not have our affluence, our high living standards, if the global economy was not so grossly unjust. How much would your coffee cost if most of the land now growing it in the Third World was put into growing food for Third World people? How much driving would you do if Third World people got a fair share of world petroleum production. For these reasons increasing numbers of people recognise that conventional development theory and practice are in fact a form of plunder. The theory urges Third World countries to allow the few with capital, mostly the corporations from rich countries, to develop what will maximise their profits, but this almost entirely results in the application of Third Wo0rld land and labour to the production of goods to export to rich world supermarkets. Obviously Third World workers would be much better off if they could spend most of their time working in small local farms and firms to produce for themselves the basic things they need, rather than earning 15c an hour producing goods to export. By far the most important reasons for condemning the quest for affluence come from the "limits to growth" analysis of the global predicament. There is no chance of keeping up the levels of production, consumption, GDP and affluence evident in rich countries today, let alone of spreading them to all the world’s people. Our levels are grossly unsustainable. Yet our supreme goal is to increase these levels, as fast as possible, and without any limit. Because we have exceeded the limits to growth we are now heading rapidly into a number of huge catastrophes, most obviously with respect to the environment…yet there is almost no recognition that the cause is the determination to have expensive lifestyles, and to become more affluent all the time. Do you realise that affluence is the basic cause of the destruction of the environment, and that the ecosystems of the planet cannot be saved unless there is a dramatic reduction in the volume of producing and consuming going on? The environmental problem is mainly due to the vast quantity of things we take from nature, such as timber and fish, and all the habitat our cities and farms take, and all the wastes and pollution we then dump back into nature. If Australians were to use as much productive land per capita as is available in the world today, about 1.2 ha, we would have to cut our present use by at least 85%. Do you realise there cannot be peace in the world while a few insist on "living standards" that are impossible for all to have, which they can only have if they grab far more than others can have, and condemn large numbers to extremely bad conditions? Much of the conflict in the world is due to the actions of corporations and governments struggling to get hold of valuable resources and markets. The history of war, domination and misery on this planet can be mostly explained simply in terms of some, mostly states, struggling to grab more than their fair share of the available wealth. There can be no hope of peace until this imbecilic behaviour stops, and this cannot be while people insist on living affluently. If you want to go on enjoying high living standards then you better retain the military capacity to prevent other countries from getting as much of the world’s wealth as you get now. Who is to blame? It should not need to be said that those most responsible for the situation are the big corporations and banks. They are the ones who go after more and resources to buy and sell, and they get most of the benefit when things like coffee are produced and sold. But they could not do this and they would have little wealth and power if people in rich countries were not such eager and voracious consumers. Most of the trouble and suffering that humans have experienced over thousands of years has been due to greed; i.e., to the fact that some individual or group or nation has decided to take more than their fair share. The British fought 72 wars to secure, i.e., steal and then dominate, their "empire" How many proud Britons ever grasped that it is wrong to be a thug or to take other people’s property. It is not possible for rich countries today to have high "living standards" without dominating the global economy, taking most of the resources and not only forcing most people to accept far less, but forcing them to work in factories and plantations producing things for us and getting very little for it. If people were content to live with what is sufficient for a satisfactory quality of life, i.e., to live simply and frugally, no one would have to grab and to condemn others to poverty. Hence the great hypocrisy regarding war. Most people claim they want peace, but it never occurs to them that there can’t be peace while they insist on their high "living standards". There can’t be peace in a world where a few can be wealthy only if they take most of the wealth and force the majority to live on too little. Our affluence causes deprivation, and therefore struggles and conflict and war. Most military capacity is deployed by the rich countries in defence of their empire, to keep "order" (i.e., the order that suits us), to support friendly governments ( which will let our corporations invest on bonanza terms), to put down dissent and trouble, and to tip out rulers who threaten our investment and trade interests. The (insurmountable) ideological problem. Ordinary people in rich countries never think about these connections. They want more goods, luxuries and wealth and they are not interested in the fact that consuming more than one needs is an intense moral problem, or that it is destroying the environment or depriving people. They are not interested in the fact that when they use petrol to travel they are helping to starve and kill people — by taking more than their fair share of a precious resources which could enable more production of food and clean water for very impoverished people. If people in general acknowledged that the global economy which delivers their "living standards" is outrageously unjust, and their affluence is extremely morally problematic, the situation would be quickly changed. But people in general simply refuse to attend to these issues. The ultimate culprit is of course the economic system we have. It condemns everyone to producing and consuming as much as possible, and more and more every year. Corporations which do not maximise profits are taken over. Individuals who do not constantly work hard are dumped into unemployment and poverty. But the system's fundamental faults do not exonerate people in general. Yes there are powerful forces that distract attention, including the vast effort by corporations and the media via advertising, to encourage more consumption, but to anyone who chooses to attend to the extensive information available on the global situation the realities are easily seen. The problem is that almost everyone flatly refuses to even think about these issues or to question affluence. The global situation cannot improve until (among other things) there is widespread recognition that affluent "living standards" are profoundly disturbing, and until there is a strong willingness to "live more simply so that others may simply live." The problem is, in other words, simply greed. But people would be shocked to be told they are greedy. The problem is a largely unrecognised greed. People think they are just for "normal" respectable standards. They do not attend to the fact that they are hogging and depriving people. If they were told their living standards are morally problematic, they would indignantly reject the proposition. If you told them they should be content with what are sufficient standards as distinct from their affluent standards, they would be irritated and indignant at your impertinence, and claim that they have worked hard for and therefore deserve their privileges. There is, in other words, a massive, total and fierce refusal to even think about this problem of affluence. In this society most people have been willingly stupefied by sport and the trivia of TV and popular culture into being perfectly docile consumers. A very few think about social issues. These typically middle class people show some concern for social justice and the environment etc. Some of them show considerable discontent with things like globalisation. But even these people totally refuse to contemplate the possibility that the social problems they are concerned about have anything to do with their own greed, their own never-questioned demand for expensive living standards. As soon as this possibility is introduced they lose all interest. Thus the agencies they support, such as the Australian Conservation Foundation, the aid organisations, the social justice organisations and indeed the ABC, never discuss let alone focus on the fact that the basic cause of these many problems is the commitment to affluence, to lifestyles that involve far more consumption than could be sustained for long or that all could ever rise to. What is the answer? If affluence is the problem, does this mean we have to accept poverty, deprivation and hardship to save the planet? Emphatically not. We could very easily have a very high quality of life based on principles of simplicity and frugality and sufficiency and an extremely low per capita consumption of non-renewable resources. We could for instance have perfectly adequate convenient, durable, and beautiful houses, built from earth at a tiny fraction of the resource and dollar cost of the average house today. We could have perfectly comfortable, functional, neat, clean and nice clothes that are old patched, tough and mostly hand made. We could have perfect dinners produced from food growth within 100 metres of our homes without any energy or chemical cost, let alone without any importation from the Third World. We could have a marvellous leisure and cultural experience in neighbourhoods that are diverse and leisure rich communities with little dependence on travel or expensive media. We could have very durable, functional and simple and beautiful furniture made to last from local timber by local people. If we reorganised our neighbourhoods and towns we could ensure security, full employment and non-material sources of satisfaction for all, from very low levels of production and consumption measured in resource and dollar terms. In fact material simplicity, frugality and self-sufficiency are the keys to a high quality of life. Being able to buy and consume and throw away more and more will not lead to life satisfaction. Our biggest task is not getting people to understand that the pursuit of affluence and growth is leading to catastrophic breakdown, it is to help people in general to realise that The Simpler Way involves far richer sources of life satisfaction than the affluent consumer way.

# Affirmative Answers

## \*\*\*Economic Collapse 🡪 War\*\*\*

### Collapse Causes War-Laundry List

Economic collapse destabilizes the entire international system, causes multiple scenarios for nuclear war.

Burrows and Harris 9 - Mathew J. Burrows is a counselor in the National Intelligence Council (NIC), the principal drafter of Global Trends 2025: A Transformed World, Jennifer Harris is a member of the NIC’s Long Range Analysis Unit, “Revisiting the Future: Geopolitical Effects of the Financial Crisis”, The Washington Quarterly, April, http://www.ciaonet.org/journals/twq/v32i2/f\_0016178\_13952.pdf

Increased Potential for Global Conflict Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groupsinheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacksand newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn. The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises. Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world. What Kind of World will 2025 Be? Perhaps more than lessons, history loves patterns. Despite widespread changes in the world today, there is little to suggest that the future will not resemble the past in several respects. The report asserts that, under most scenarios, the trend toward greater diffusion of authority and power that has been ongoing for a couple of decades is likely to accelerate because of the emergence of new global players, the worsening institutional deficit, potential growth in regional blocs, and enhanced strength of non-state actors and networks. The multiplicity of actors on the international scene could either strengthen the international system, by filling gaps left by aging post-World War II institutions, or could further fragment it and incapacitate international cooperation. The diversity in both type and kind of actor raises the likelihood of fragmentation occurring over the next two decades, particularly given the wide array of transnational challenges facing the international community. Because of their growing geopolitical and economic clout, the rising powers will enjoy a high degree of freedom to customize their political and economic policies rather than fully adopting Western norms. They are also likely to cherish their policy freedom to maneuver, allowing others to carry the primary burden for dealing with terrorism, climate change, proliferation, energy security, and other system maintenance issues. Existing multilateral institutions, designed for a different geopolitical order, appear too rigid and cumbersome to undertake new missions, accommodate changing memberships, and augment their resources. Nongovernmental organizations and philanthropic foundations, concentrating on specific issues, increasingly will populate the landscape but are unlikely to affect change in the absence of concerted efforts by multilateral institutions or governments. Efforts at greater inclusiveness, to reflect the emergence of the newer powers, may make it harder for international organizations to tackle transnational challenges. Respect for the dissenting views of member nations will continue to shape the agenda of organizations and limit the kinds of solutions that can be attempted. An ongoing financial crisis and prolonged recession would tilt the scales even further in the direction of a fragmented and dysfunctional international system with a heightened risk of conflict. The report concluded that the rising BRIC powers (Brazil, Russia, India, and China) seem averse to challenging the international system, as Germany and Japan did in the nineteenth and twentieth centuries, but this of course could change if their widespread hopes for greater prosperity become frustrated and the current benefits they derive from a globalizing world turn negative.

### Collapse Turns Every Impact

Economic downturn causes great power war, turns every impact.

Green and Schrage 9 – Michael, Senior Advisor and Japan Chair at CSIS and Associate Professor at Georgetown, Steven, CSIS Scholl Chair in International Business and a former senior official with the US Trade Representative's Office, State Department and Ways & Means Committee, “It's not just the economy”, Asia Times, 3/26, http://www.atimes.com/atimes/Asian\_Economy/KC26Dk01.html

Facing the worst economic crisis since the Great Depression, analysts at the World Bank and the US Central Intelligence Agency are just beginning to contemplate the ramifications for international stability if there is not a recovery in the next year. For the most part, the focus has been on fragile states such as some in Eastern Europe. However, the Great Depression taught us that a downward global economic spiral can even have jarring impacts on great powers. It is no mere coincidence that the last great global economic downturn was followed by the most destructive war in human history. In the 1930s, economic desperation helped fuel autocratic regimes and protectionism in a downward economic-security death spiral that engulfed the world in conflict. This spiral was aided by the preoccupation of the United States and other leading nations with economic troubles at home and insufficient attention to working with other powers to maintain stability abroad. Today's challenges are different, yet 1933's London Economic Conference, which failed to stop the drift toward deeper depression and world war, should be a cautionary tale for leaders heading to next month's London Group of 20 (G-20) meeting. There is no question the US must urgently act to address banking issues and to restart its economy. But the lessons of the past suggest that we will also have to keep an eye on those fragile threads in the international system that could begin to unravel if the financial crisis is not reversed early in the Barack Obama administration and realize that economics and security are intertwined in most of the critical challenges we face. A disillusioned rising power? Four areas in Asia merit particular attention, although so far the current financial crisis has not changed Asia's fundamental strategic picture. China is not replacing the US as regional hegemon, since the leadership in Beijing is too nervous about the political implications of the financial crisis at home to actually play a leading role in solving it internationally. Predictions that the US will be brought to its knees because China is the leading holder of US debt often miss key points. China's currency controls and full employment/export-oriented growth strategy give Beijing few choices other than buying US Treasury bills or harming its own economy. Rather than creating new rules or institutions in international finance, or reorienting the Chinese economy to generate greater long-term consumer demand at home, Chinese leaders are desperately clinging to the status quo (though Beijing deserves credit for short-term efforts to stimulate economic growth). The greater danger with China is not an eclipsing of US leadership, but instead the kind of shift in strategic orientation that happened to Japan after the Great Depression. Japan was arguably not a revisionist power before 1932 and sought instead to converge with the global economy through open trade and adoption of the gold standard. The worldwide depression and protectionism of the 1930s devastated the newly exposed Japanese economy and contributed directly to militaristic and autarkic policies in Asia as the Japanese people reacted against what counted for globalization at the time. China today is similarly converging with the global economy, and many experts believe China needs at least 8% annual growth to sustain social stability. Realistic growth predictions for 2009 are closer to 5%. Veteran China hands were watching closely when millions of migrant workers returned to work after the Lunar New Year holiday last month to find factories closed and jobs gone. There were pockets of protests, but nationwide unrest seems unlikely this year, and Chinese leaders are working around the clock to ensure that it does not happen next year either. However, the economic slowdown has only just begun and nobody is certain how it will impact the social contract in China between the ruling communist party and the 1.3 billion Chinese who have come to see President Hu Jintao's call for "harmonious society" as inextricably linked to his promise of "peaceful development". If the Japanese example is any precedent, a sustained economic slowdown has the potential to open a dangerous path from economic nationalism to strategic revisionism in China too. Dangerous states It is noteworthy that North Korea, Myanmar and Iran have all intensified their defiance in the wake of the financial crisis, which has distracted the world's leading nations, limited their moral authority and sown potential discord. With Beijing worried about the potential impact of North Korean belligerence or instability on Chinese internal stability, and leaders in Japan and South Korea under siege in parliament because of the collapse of their stock markets, leaders in the North Korean capital of Pyongyang have grown increasingly boisterous about their country's claims to great power status as a nuclear weapons state. The junta in Myanmar has chosen this moment to arrest hundreds of political dissidents and thumb its nose at fellow members of the 10-country Association of Southeast Asian Nations. Iran continues its nuclear program while exploiting differences between the US, UK and France (or the P-3 group) and China and Russia - differences that could become more pronounced if economic friction with Beijing or Russia crowds out cooperation or if Western European governments grow nervous about sanctions as a tool of policy. It is possible that the economic downturn will make these dangerous states more pliable because of falling fuel prices (Iran) and greater need for foreign aid (North Korea and Myanmar), but that may depend on the extent that authoritarian leaders care about the well-being of their people or face internal political pressures linked to the economy. So far, there is little evidence to suggest either and much evidence to suggest these dangerous states see an opportunity to advance their asymmetrical advantages against the international system. Challenges to the democratic model The trend in East Asia has been for developing economies to steadily embrace democracy and the rule of law in order to sustain their national success. But to thrive, new democracies also have to deliver basic economic growth. The economic crisis has hit democracies hard, with Japanese Prime Minister Aso Taro's approval collapsing to single digits in the polls and South Korea's Lee Myung-bak and Taiwan's Ma Ying Jeou doing only a little better (and the collapse in Taiwan's exports - particularly to China - is sure to undermine Ma's argument that a more accommodating stance toward Beijing will bring economic benefits to Taiwan). Thailand's new coalition government has an uncertain future after two years of post-coup drift and now economic crisis. The string of old and new democracies in East Asia has helped to anchor US relations with China and to maintain what former secretary of state Condoleezza Rice once called a "balance of power that favors freedom". A reversal of the democratic expansion of the past two decades would not only impact the global balance of power but also increase the potential number of failed states, with all the attendant risk they bring from harboring terrorists to incubating pandemic diseases and trafficking in persons. It would also undermine the demonstration effect of liberal norms we are urging China to embrace at home. Protectionism The collapse of financial markets in 1929 was compounded by protectionist measures such as the Smoot-Hawley tariff act in 1932. Suddenly, the economic collapse became a zero-sum race for autarkic trading blocs that became a key cause of war. Today, the globalization of finance, services and manufacturing networks and the World Trade Organization (WTO) make such a rapid move to trading blocs unlikely. However, protectionism could still unravel the international system through other guises. Already, new spending packages around the world are providing support for certain industries that might be perceived by foreign competitors as unfair trade measures, potentially creating a "Smoot-Hawley 2.0" stimulus effect as governments race to prop up industries. "Buy American" conditionality in the US economic stimulus package earlier this year was watered down somewhat by the Obama administration, but it set a tempting precedent for other countries to put up barriers to close markets. Nations pushing the bounds of their trade commitments could overload the circuits of a system that can take two years to determine violations - more than enough time for a global meltdown. Climate change legislation is also likely to become a stalking horse for protectionism as legislatures enthusiastically embrace punitive tariffs against Chinese or Indian goods that are produced outside of the framework for reducing greenhouse gas emissions. Finally, competitive devaluation - already being pursued by China in the view of some economists - could intensify international protectionism and friction. Global trade has already contracted for the first time in over two decades and governments have only just begun exploring unilateral measures that could cause further barriers. Meanwhile, trade liberalization has stalled in the Doha Round of the WTO and the Obama administration has come into office expressing strong reservations about major bilateral free trade agreements already negotiated with allies like South Korea and Columbia. Even if the clarion call of protectionism does not lead to the kind of autarkic blocs that contributed to war in the 1930s, it could still distract governments from collaboration on common threats and slow the prospects for more rapid recovery.

### Diversionary Theory- True

Diversionary war theory is true—their studies don’t account for diversion to territorial conflicts.

Tir 10 – Prof International Affairs @ U of Georgia, Jaroslav, Territorial Diversion: Diversionary Theory of War and Territorial Conflict, \* The Journal of Politics (2010), 72: 413-425

According to the diversionary theory of war, the cause of some militarized conflicts is not a clash of salient interests between countries, but rather problematic domestic circumstances. Under conditions such as economic adversity or political unrest, the country’s leader may attempt to generate a foreign policy crisis in order both to divert domestic discontent and bolster their political fortunes through a rally around the flag effect (Russett 1990). Yet, despite the wide-ranging popularity of this idea and some evidence of U.S. diversionary behavior (e.g., DeRouen 1995, 2000; Fordham 1998a, 1998b; Hess and Orphanides 1995; James and Hristolouas 1994; James and Oneal 1991; Ostrom and Job 1986), after five decades of research broader empirical support for the theory remains elusive (e.g., Gelpi 1997; Gowa; 1998; Leeds and Davis 1997; Levy 1998; Lian and Oneal 1993; Meernik and Waterman 1996). This has prompted one scholar to conclude that “seldom has so much common sense in theory found so little support in practice” (James 1987, 22), a view reflected in the more recent research (e.g., Chiozza and Goemans 2003, 2004; Meernick 2004; Moore and Lanoue 2003; Oneal and Tir 2006). I argue that this puzzling lack of support could be addressed by considering the possibility that the embattled leader may anticipate1 achieving their diversionary aims specifically through the initiation of territorial conflict2—a phenomenon I call territorial diversion. The use of military force is seen in the diversionary literature as attracting the public’s attention, which, in the face of a perceived threat and via the ingroup, outgroup mechanism (Coser 1956), is in turn expected to translate into a feeling of loyalty to the state and its leader. While I agree with the logic of the attention-grabbing nature of the use of force, I also argue that territorial conflicts have a better capacity to elicit feelings of threat and unity than other issues (e.g., trade, humanitarian intervention), in part because territory speaks more directly and convincingly to the people’s instincts and their conceptions of national identity. That territorial conflicts elicit greater emotional investment, mobilization, and societal bonding provides the unscrupulous leader with some important advantages—which may make the territorial diversion logic work better. The question addressed is therefore whether problematic domestic conditions can be linked to territorial conflicts.3 Importantly, reliance on territorial conflicts theoretically opens up the diversionary option to the leaders of just about all countries. This is in contrast to the original version of the theory that relies on the power-projection capability possessed by only the most powerful states; accordingly, few works examine behavior of countries other than the United States.4 This study joins a small but growing number of recent works evaluating the merits of the diversionary theory cross-nationally, such as Leeds and Davis (1997), Russett and Oneal (2001), Chiozza and Goemans (2003; 2004), Pickering and Kisangani (2005), and Oneal and Tir (2006). None of these works has, however, found strong support for the diversionary theory, highlighting the importance of the current study. Furthermore, finding evidence in favor of my argument would suggest that some international conflicts are driven by the leader’s selfishness—and not by national interest. Potential examples of (perceived) territorial diversions are not difficult to find. The quintessential diversionary case, the Falklands Islands War, is a territorial conflict. More recent stories found in the media include Evo Morales’ use of Bolivia’s loss of its coastline to Chile in the 1879 War of the Pacific as a way of obtaining support for his rule in the face of continuing protests (Romero 2006); the Thai-Cambodian border dispute over Hindu temples has reportedly been used by both governments to shore up support in face of the former’s continuing unpopularity and the latter’s upcoming reelection bid (Mydans 2008a, 2008b); Croatia has found the timing of Slovenia’s escalation of their border dispute in the run-up to the 2005 and 2008 Slovenian elections suspect (Bernstein 2006; HRT 2008); and after initial conciliatory gestures, South Korea’s Roh Moo-hyun has become increasingly intransigent in his dealings with Japan over the Dokto Islands dispute. Faced with low approval ratings and an upcoming election, he clearly attempted to cast the dispute over the remote and uninhabited rock outcroppings as a matter of national pride for the Korean people (Christian Science Monitor 2006). Whether these allegations are consistent with broader patterns is a topic of this work.

### Diversionary Theory-Studies

Their studies don’t account for using an existing dispute for diversion.

McLaughlin and Tyne 10 – Sara McLaughlin Mitchell University of Iowa Department of Political Science, Clayton L. Thyne University of Kentucky Department of Political Science, Contentious Issues as Opportunities for Diversionary Behavior, Forthcoming in Conflict Management and Peace Science, http://www.uky.edu/~clthyn2/mitchell\_thyne\_CMPS2010.pdf

Abstract: Scholars have long been fascinated by the potential for leaders to engage in diversionary behavior, where leaders use militarized force abroad to distract their publics from various forms of domestic economic and political turmoil. While there is some evidence that diversionary behavior depends on contextual factors such as regime type, opportunities to use force, and interstate rivalry, we do not know whether and how diversionary strategies are used by states to resolve contentious issues. In fact, most diversionary studies compare the initiation of militarized disputes or crises to non-initiation cases, without considering the slew of interstate interactions in between these extremes, where states have an ongoing contested issue that gets managed with both peaceful and militarized conflict management tools. In this paper, we extend theories of diversionary behavior to the context of issue claims, including competing claims to territory, maritime areas, and cross-border rivers as coded by the Issue Correlates of War (ICOW) project. Thinking about an ongoing issue claim as a potential diversionary opportunity, we examine the empirical effect of domestic turmoil on the militarization of issue claims. We consider whether issue diversionary behavior is conditioned by the salience level of the issue, previous wars over the issue in question, and whether the disputing states are involved in a broader rivalry. In a broad sample of directed dyad-years, we find that states are more likely to initiate militarized disputes if they are involved in contentious issues claims. Using ICOW data, we also find that states involved in issue claims are more likely to initiate a militarized dispute if they have high levels of inflation and if they are contesting over highly salient and previously militarized issues. This empirical application provides a new testing ground for diversionary behavior and shows how domestic turmoil influences the timing of coercive strategies for managing contentious interstate issues.

### Diversionary Theory-Great Powers

Diversionary theory particularly true of great powers.

McLaughlin and Tyne 10 – Sara McLaughlin Mitchell University of Iowa Department of Political Science, Clayton L. Thyne University of Kentucky Department of Political Science, Contentious Issues as Opportunities for Diversionary Behavior, Forthcoming in Conflict Management and Peace Science, http://www.uky.edu/~clthyn2/mitchell\_thyne\_CMPS2010.pdf

Scholars and pundits have long been fascinated by the potential for leaders to engage in diversionary behavior, where leaders use militarized force abroad to distract their publics from various forms of domestic economic and political turmoil (Levy 1989). One can point to several historical examples of diversion, such as Britain’s conflict with Argentina over the Falklands/Malvinas Islands in 1982 in the midst of an Argentine economic crisis (Levy and Vakili 1992). Large-N quantitative evidence for diversionary behavior by major powers, such as the United States and Great Britain, is quite robust as well, with uses of force being more likely as inflation and unemployment rates rise (Ostrom and Job 1986; Morgan and Bickers 1992; DeRouen 1995; Fordham 1998, 2002; Morgan and Anderson 1999). However, tests of diversionary hypotheses in broader cross-sectional time series produce more mixed results (Leeds and Davis 1997; Miller 1999; Enterline and Gleditsch 2000; Trumbore 2003; Mitchell and Prins 2004; Gleditsch, Salehyan, and Schultz 2008; Tir and Jasinski 2008). One way to reconcile this puzzle is to recognize that not all states have equal opportunities for diversionary behavior. Variance in states’ opportunities for the diversionary use of force depends on strategic interests or situations (Meernik 1994, 2000; Meernik and Waterman 1996), regime type (Smith 1996; Leeds and Davis 1997; Miller 1999), rivalries (Mitchell and Moore 2002; Mitchell and Prins 2004), and capabilities (Foster 2006). This contextual approach meshes well with the tendency in conflict studies to identify pairs of states for analysis that have opportunities to use force, such as politically relevant dyads, rivalries, and major powers.

### Diversionary Theory-Authoritarian

Diversionary theory is true of authoritarians.

McLaughlin and Tyne 10 – Sara McLaughlin Mitchell University of Iowa Department of Political Science, Clayton L. Thyne University of Kentucky Department of Political Science, Contentious Issues as Opportunities for Diversionary Behavior, Forthcoming in Conflict Management and Peace Science, http://www.uky.edu/~clthyn2/mitchell\_thyne\_CMPS2010.pdf

Finally, diversionary scholars have also pointed to important differences in diversionary behavior based on variance in domestic institutions. Democratic leaders may have strong incentives to employ diversionary force, especially if the public will rally around the leader in times of crises (Mueller 1973). On the other hand, if other states are paying attention to domestic conditions inside democratic states, they may be less willing to make strong demands or escalate issues when facing democratic adversaries. This is the logic of strategic conflict avoidance, whereby democracies might have the strongest motives for diversion, but the fewest opportunities (Morgan and Schwebach 1992; Smith 1996; Leeds and Davis 1997; Miller 1999; Heldt 1999; Mitchell and Prins 2004; Pickering and Kisangani 2005; Fordham 2005; DeRouen and Sprecher 2006; Gent 2009). In a cross-sectional time series analysis of democratic states, Leeds and David (1997) find empirical support for this claim, showing that democracies are less likely to be targets of MID initiation in bad economic times. Mitchell and Prins (2004) similarly find that economic conditions have the weakest effect on initiations of force by democratic states; autocracies, on the other hand, are much more likely to initiate force against their rivals when inflation is high.5 In short, it is important to think about domestic institutional characteristics when thinking about opportunities for states to engage in interstate violence.

### Diversionary Theory-Rival Escalation

Rivalry escalation is more likely than termination.

McLaughlin and Tyne 10 – Sara McLaughlin Mitchell University of Iowa Department of Political Science, Clayton L. Thyne University of Kentucky Department of Political Science, Contentious Issues as Opportunities for Diversionary Behavior, Forthcoming in Conflict Management and Peace Science, http://www.uky.edu/~clthyn2/mitchell\_thyne\_CMPS2010.pdf

We have a similar expectation regarding past conflict experience in the context of issue claims. Hensel et al. (2008) find that militarized conflict is much more likely in an issue claim dyad year if states have a history of recent militarized disputes. What we add here is a diversionary twist to this argument, whereby past conflict and domestic turmoil create joint conditions for diversionary uses of force. In other words, states should be more likely to pursue militarized options to contest a given issue if they are experiencing domestic turmoil (e.g. high inflation) and if they have experienced a recent conflict over the issue at hand. Prior wars might be particularly dangerous, especially if one side loses or the war ends in stalemate (Leng 1983).

### Diversionary Theory-Non Rivals

They’ll divert with non-rivals.

McLaughlin and Tyne 10 – Sara McLaughlin Mitchell University of Iowa Department of Political Science, Clayton L. Thyne University of Kentucky Department of Political Science, Contentious Issues as Opportunities for Diversionary Behavior, Forthcoming in Conflict Management and Peace Science, http://www.uky.edu/~clthyn2/mitchell\_thyne\_CMPS2010.pdf

The other half of the definition of political relevance emphasizes states’ military, economic, and demographic capabilities. Major powers have more opportunities for conflict because their enhanced capabilities extend their military reach, and because their strategic interests are global in nature. In a split population hazard model that is designed to capture states’ opportunity for conflict, Clark and Regan (2003) show that stronger states are much more likely to be in the conflict-rich opportunity group. In the context of diversionary behavior, major powers have been shown to have greater opportunities for uses of force. The strongest diversionary evidence stems from analyses of force initiation by the United States and Great Britain, both global powers (Ostrom and Job 1986; Morgan and Bickers 1992; DeRouen 1995; Fordham 1998, 2002; Morgan and Anderson 1999). Furthermore, while rivalries create more opportunities for diversion in general (Mitchell and Prins 2004), major powers are able to target rival and non-rival states in bad economic times (Foster 2006).

### AT-Growth🡪 Military buildup

Military buildup doesn’t cause war.

Boehmer, 2010 (Charles R., Associate Professor of Political Science at the University of Texas El Paso, “Economic Growth and violent international conflict: 1875-1999,” Defence and Peace Economics, Volume 21, Issue 3, June)

Unlike many past scholars, such as Blainey, I am not arguing the classic 'war-chest' proposition that economic growth leads directly to military expenditures and then to conflict. My theory highlights the role of positive economic growth on violent interstate conflicts. The reason I do not argue that military expenditures play a similar role is because states may increase military expenditures for reasons besides initiating or becoming involved in foreign military entanglements. Some states may increase military expenditures to combat domestic insurgents, other states increase military spending to benefit industrial or other domestic groups, and some have higher levels of military expenditures to fund mandatory military service. It may be the case that, occasionally, economic growth does lead directly into growth of military expenditures and that war occurs, although the relationships between economic growth and military expenditure growth are neither necessary nor sufficient conditions for leaders to have higher resolve once in crises that could turn into wars. We should expect though that states that intend to initiate militarized conflicts may have already increased military expenditures in preparation; although war - or other lesser violent conflicts between states - is so rare, that military expenditures may not be directly related to war preparation in most cases. I hypothesize that states that increase their military expenditures will be more likely to initiate militarized conflicts. Although I have already mentioned that there are several reasons why military expenditure growth may not be related directly to war, I do however test for this alternative proposition. I test these two alternative hypotheses for my dependent variables.3

### AT-K Waves

Wars more likely in downswings.

Cashman 2k (Greg, poli-sci @ Salisbury state U, What causes war?: an introduction to theories of international conflict , pg. 68) ET

What does this have to do with Modelski’s long-cycle theory? Goldstein argues that the hegemonic cycle and economic long-wave cycle, though they are not in phase with each other, operate in conjunction with each other. Thus, hegemonic decline does not by itself lead to war; it is only dangerous when it coincides with an expansionary phase of the economic cycle. Economic expansion by itself is not dangerous either; it must be accompanied by hegemonic stagnation. For example, the economic expansion of the 1960s was not associated with major wars because of the strong hegemonic position of the United States. Goldstein predicts new economic upswings to coincide with the continuation of American hegemonic decline between 2000 and 2030 Jack levy reexamines the issue, matching Goldstein’s data on economic production cycles against the ten general wars of the last 5 centuries. He is interested not in peaks of war severity, but in war initiation. When the production cycle alone is considered (after all, Goldstein’s theory is based on the rise and fall of production, rather than on prices or other variables), Levy discovers a picture at odds with Goldstein’s theory. Four of the ten wars were begun during the middle or end of a production downswing phase, and two occurred at the beginning of an upswing- rather than near the end of the upswing, as Goldstein’s theory suggests. Many of the wars broke out near the transition from downswing to upswing, so that the causalities associated with them belonged in the upswing phase even though the wars might have begun in the downswing- explaining why Goldsttein found an association between K-waves and severity of war, but not between k- waves and war initiation.

### AT-K Waves

No K waves.

North 9 - Gary, economist and publisher and PhD in history from the University of California, Riverside, The Myth of the Kondratieff Wave, 6-27, http://www.lewrockwell.com/north/north725.html

The K-Wave supposedly should have bottomed in 1933, risen for 27 years (1960), declined in economic contraction until 1987, and boomed thereafter. The peak should therefore be in 2014. There is a problem here: the cyclical decline from 1960 to 1987. It never materialized. Prices kept rising, escalating with a vengeance after 1968, then slowing somewhat — just in time for the longest stock market boom in American history: 1982—2000. OK, say the K-Wavers: let's extend the cycle to 60 years. Fine. Let's do just that. Boom, 1932—62; bust, 1963—93; boom, 1994—2024. Does this correspond to anything that happened in American economic history since 1932? No. KONDRATIEFF RESURRECTED Who was Nikolai Kondratieff? He was an economist under Lenin, who had some influence in promoting Lenin's New Economic Policy (NEP), which re-introduced limited private ownership locally. He wrote articles on capitalist cycles, published in 1925 and 1926. He was arrested in 1930, after Stalin came into power. Stalin sent a letter to Molotov asking for Kondratieff's execution. He was arrested and sent to Siberia for eight years. Stalin had him executed in the Great Purge of 1938. The court gave him 10 years in prison. He was executed the same day. For reasons unknown, the mid-1970's saw a revival of interest in the Kondratieff wave. Hard-money newsletters kept telling their subscribers that the economic peak had passed, that a 30-year period of secular economic decline was about to begin. Julian Snyder was the most visible of these newsletter editors. His International Moneyline ($282/year — $560 in today's money) began predicting this cyclical decline sometime around 1976. He even went so far as to pay for a translation of Kondratieff's Russian language articles, which he published as The Long Wave (1984). In 1989, Richard Russell took over the unexpired subscriptions for International Moneyline. Mr. Snyder promptly disappeared . . . one hopes not as Kondratieff did. In 1985, John Shuttleworth, the founder of Mother Earth News, came back to write a guest column. He summarized the "state of the Kondratieff union." Many of you will remember that as far back as issue 44 (March/April 1977)], this column has explored and quoted from the 1920s work of Russian economist Nikolai D. Kondratieff. Particularly as interpreted by Julian M. Snyder, editor and publisher of International Moneyline ($282 a year from 25 Broad St., New York, NY 10004). . . . Julian Snyder is a good friend of Massachusetts Institute of Technology Professor Jay W. Forrester — another Kondratieff student — and, in recent months, has quoted the good professor extensively. According to both Forrester and Snyder, the last expansion phase of Western society ran from 1945 to a peak in 1974 . . . before plunging into the sharp 1974—1975 recession. During the plateau period that followed, business — as we all know — was fundamentally tired, credit became increasingly overextended, and economic activity in general was sluggish. At the same time, however (especially during 1984), the forces of inflation wound down . . . and we've all enjoyed rising purchasing power without the pain of higher prices. Forrester's MIT studies indicate that the 1981—1982 recession (the worst downturn since the Great Depression of the '30s) was the first leg of the approaching downswing. "What lies ahead," says Julian Snyder, "is another Great Depression that will color your life until the end of the century. However, it will not likely be a reprise of the thirties." Some of you may remember Prof. Forrester. He assembled the computerized data that led to the publication of a best-selling book, The Limits to Growth (1972), which in retrospect became notorious for being the Siamese twin of Prof. Paul Ehrlich's legendary book, The Population Bomb (1968). Together, they remain the two landmarks of the "running out of resources" school of economics. They were, in short, dead wrong. Commodity prices began to fall in 1981 and continued to fall until the turn of the century. No 20-year period in man's recorded history has matched this decline in commodity prices, making the world richer. Wages did not fall. There was a chart that supposedly proved that the crash was near. If you search Google for "Kondratieff wave" and "chart," you will find it all over the web. This chart was, as they say, "idealized." This means "faked," but nobody used that term. It was a chart of wholesale prices, which have nothing to do with cycles. Here it is, in all its glory. There is always a market for bearish stock market scenarios. It doesn't matter what theory is offered. There are believers who love the conclusion but who don't have the ability to explain the particular chart, theory, or logic behind the forecast. Here is an oddity. In 35 years, I have never seen a bullish stock market forecast based on the Kondratieff wave. Yet half of the time a cycle is in the upswing. Why isn't there someone out there who made his subscribers a lot of money by using the Kondratieff wave to forecast the peak (sell short) and the trough (go long)? Why is it that the cycle's peak is always immediately behind us? Why is it that we are never in the trough? KONDRATIEFF'S ADMISSION Kondratieff admitted that there was no theoretical basis for his cycle. He also admitted that some of the price data revealed no traces in his cycle. He selected two groups of "elements of economic reality," as he called them. This is from The Long Wave Cycle (Richardson & Snyder, 1984). The elements of the first group were characterized by the fact that, along with the fluctuating processes, their dynamic did not manifest any general growth or decline (secular trend), or else that trend was scarcely noticeable — at any rate, for the period under observation (p. 33). What was he talking about? For one thing, commodity prices. He admitted: "In processing the statistics on the dynamics of the series of this group, I used simple analytical methods to bring out the long cycles" (p. 33). In short, he manipulated the evidence until he obtained a pattern. He said he found patterns in other statistics. But was there an underlying economic reality, "some real trends in economic development? This is a very big question, and I cannot now elucidate it." Yet this is the heart of his supposed cycle. "We do not have a method for determining how accurately a theoretical curve reflects real evolutionary-economic trends" (p. 35). All that he could find in the pig iron and lead statistics was one and a half or maybe two cycles (p. 52). . . . we did not succeed at all if finding long cycles in the dynamics of cotton consumption in France, and wool and sugar production in the United States, or in the dynamics of certain other series (p. 58). As has already been noted, in my own investigation I discovered series in whose dynamics there were no long cycles (p. 62). As for the pattern of the long cycle, First, I emphasize its empirical character: as such, it is lacking in precision and certainly allows of exceptions. Second, in presenting it I am absolutely disinclined to believe that it offers any explanation of the causes of the long cycles (pp. 68—69). He was frank about the extreme limitations on his data and his findings. His disciples are not. ROTHBARD ON KONDRATIEFF It is superfluous for me to wax eloquent on the theoretical and statistical deficiencies of the Kondratieff cycle, when Murray Rothbard did it so well in 1984: "The Kondratieff Cycle: Real or Fabricated?" Let us begin here: Business cycles began a mere two centuries ago. Despite the fevered hopes of some enthusiasts who claim to have observed business cycles going back to Methuselah, before the late eighteenth century there was no such phenomenon. Kondratieff admitted as much. He had no price data for most of Europe that preceded 1850. He had some from around 1800 from England and the United States. But I can tell you as a man trained in economic history, the records are incomplete. When the Nazis bombed London in 1940, a bomb took out part of the British Museum. My teacher, Herbert Heaton, found that much of the information he needed in his work was destroyed. In one case, he had to go to centuries-old breweries on the Thames River for records of grain prices after 1780. That's what he told us in the late 1960's. Rothbard continues: One of the worst things about the "business cycle" is its name. For somehow the name "cycle" caught on, with its implication that the wave-like movement of business is strictly periodic, like the cycles of astronomy or biology. An enormous amount of error would have been avoided if economists had simply used the term "business fluctuations." For man is all too prone to leap to the belief that economic fluctuations are strictly periodic and can therefore be predicted with pinpoint accuracy. The fact is, however, that these waves are in no sense periodic; they last for few years, and the "'few" can stretch or contract from one wave to the next. The periodic notion was unfortunately fed by the fact that the early panics seemed to be ten years apart: 1837, 1847, 1857, but pretty soon that periodicity broke down. Then he gets to Kondratieff's cycles. Kondratieff postulated a "long wave" of business that began somewhere in the late 1780s — it is all very murky since there are almost no statistical data for that period — and continues periodically roughly every 54 years. Well, what about the trough points? No question that the late 1930s — a "Kondratieff trough" — was a pretty miserable period. But what about the other three trough periods? What was wrong about the 1780s, for example? No particular depression there. And if we want to be generous and dismiss that "first trough" for lack of data or as only starting the whole thing, what about the alleged second trough? Fifty-four years from 1789 brings us to the "expected" trough year of 1843, a year in which everything was smooth sailing. Let us be generous and bend over backward for the Kondratieffites, and give them their admitted 1849 as the trough year. Even so, 1849 was a perfectly fine economic year, and in no sense whatever comparable to the late 1930s! In 1849, we were in the middle of continuing prosperity. . . . Let us then look more closely at the long contraction, or "long depression," phases of the Kondratieff cycle. To make any sense, they should in some way look and feel like depressions, like grim periods of decline in business activity. The first Kondratieff long depression was supposed to be the period 1814—1849. But these thirty-five years were by and large a period of great expansion, prosperity and economic growth for the United States, England and France, the three countries Kondratieff used for his statistical analysis. And what of the second Kondratieff depression, the period 1866—96? Was that in any sense a depression? For the United States, and to a large extent for Western Europe as well, this was the period of the most dazzling spurt of production and economic growth in the history of the world. Production and living standards skyrocketed. How in the world could three such glorious decades be called a period of secular decline? Rothbard goes on for pages, peak by peak, trough by trough. He shows that Kondratieff's alleged dates for the peaks and troughs do not correspond to the general economy in the United States. Then he delivered the final blow. This, remember, was in 1984, at the beginning of the longest boom in American history. But the Kondratieffites' problems have only begun. Their real difficulties come after the alleged Kondratieff trough of 1940 — the last trough so far. The entire boom-bust "long" cycle is approximately 54 years in length. Allow a few years here and there. But still: It has already been 44 years since the Kondratieff trough. A 44-year boom! So where's the peak? The peak is getting long overdue. Most of the Kondratieffites confidently predicted that the peak would arrive in 1974, just 54 years after the previous peak. Previous peak-to-peak stretches had been 52 (from 1814 to 1866), and 54 (1866 to 1920). So where indeed is the peak? It is now 1984 and counting. We are ten years past the confident prediction and we still have inflation. The Kondratieffites have been forecasting imminent deflation since the magic 1974 year, but still . . . nothing! Then Rothbard made a prediction. It has proven to be a bad prediction. It held up throughout the 1990s, but it is no longer accurate. No, the Kondratieff is dead, and now it is simply a question of how long it will take the Kondratieffites to lie down, to admit defeat and slip away into the night. How many years will it take before everyone sees that there has not been and will not be a "fourth peak"? And without such a peak, there can be no cycle. The old-timers died off. The newsletters that hyped the K-Wave ceased publication. The gold conferences faded into the mists of time. But a new generation of lemmings is headed toward the cliff. PUGSLEY'S CRITIQUE Two years before Rothbard published his critique, John Pugsley wrote a detailed critique of Kondratieff's cycle. He ran it in his newsletter, Common Sense Viewpoint (Nov. 1982). I remember it well, and I contacted him to see if he would FAX me a copy. He did. He began with the observation that all of the promoters of the theory were forecasting 30 years of recession and deflation. This was in 1982, the year the Dow Jones Industrial Average bottomed in mid-August, at 777. Kondratieff had at most two and a half cycles in his two papers. That number was available for only four data series. Of the 36 data series, he could find evidence of cycles in only 11 of them. The monetary series and the real series correlated in only 11 of 21 series, all short. Pugsley then cited extensively from an article by C. Van Ewijk of the University of Amsterdam (The Economist, Nov. 3, 1981). Van Ewijk noted that Kondratieff followed no consistent methodology in choosing the types of trend curves that he selected for different data sources. Kondratieff used various statistical techniques to smooth the curves to make them appear as long waves. "In case after case, no wave could be identified." He used price data, but these did not correlate with the actual economic output of the four economies that he studied. Then the waves that he presented were further "idealized" by whoever created the chart that has circulated ever since. Pugsley noted: "The upward movement of prices from 1933 to the present has already spanned fifty years, which is supposed to be the average length of a complete cycle." So far, price inflation has extended for about 75 years. Yet the deflationists are still predicting long-term, severe price deflation, and some of them invoke the Kondratieff wave to prove their assertion. Pugsley concluded: In not one case does the evidence corroborate the existence of the wave. Prices and output are not directly related — if anything they are inversely related. The forty-five to sixty-year period of the wave is only partially evident in the nineteenth century, and then only in the price series. Price moves in the twentieth century do not correspond to this periodicity, as claimed by long-wave proponents. There is absolutely no statistical correlation between series of real variables such as production and consumption, and monetary series such as prices and interest rates. Production and prices of the four countries studied do not statistically correlate; thus there is no wave operating coincidentally in the industrialized countries. In other words, Kondratieff's hypothesis is simply not supported by any evidence. The long wave exists only in the minds of a few misguided analysts, but not in the real world. It is pure hokum.

## \*\*\*Sustainability Debate\*\*\*

### AT-Complexity

Increased complexity is critical to creating sustainable societies – their authors conflate ‘complexity’ with ‘complicatedness’ and are affected by human bias –

Øyvind Holmstad, Michael MeHaffy and Nikolos Salingaros, March 30th, 2012 (Michael Mehaffy is an urbanist and critical thinker in complexity and the built environment. He is a practicing planner and builder, and is known for his many projects as well as his writings. He has been a close associate of the architect and software pioneer Christopher Alexander. Currently he is a Sir David Anderson Fellow at the University of Strathclyde in Glasgow, a Visiting Faculty Associate at Arizona State University; a Research Associate with the Center for Environmental Structure, Chris Alexander’s research center founded in 1967; and a strategic consultant on international projects, currently in Europe, North America and South America. Nikos A. Salingaros is a mathematician and polymath known for his work on urban theory, architectural theory, complexity theory, and design philosophy. He has been a close collaborator of the architect and computer software pioneer Christopher Alexander. Salingaros published substantive research on Algebras, Mathematical Physics, Electromagnetic Fields, and Thermonuclear Fusion before turning his attention to Architecture and Urbanism. He still is Professor of Mathematics at the University of Texas at San Antonio and is also on the Architecture faculties of universities in Italy, Mexico, and The Netherlands. Holmstad is a poster on Energy Bulletin who posted the hyperlink to this article lolz. “Science for Designers: The Meaning of Complexity,” <http://www.metropolismag.com/pov/20120330/science-for-designers-the-meaning-of-complexity> >:)

Complex societies cannot collapse, as any sustainable system is complex. What the author means is complicated societies, they must collapse, as every unsustainable system is complicated: <http://www.metropolismag.com/pov/20120330/science-for-designers-the-meaning-of-complexity> Today’s designers seem to love using new ideas coming from science. They embrace them as analogies, metaphors, and in a few cases, tools to generate startling new designs. (Computer algorithms and spline shapes are a good recent example of the latter.) But metaphors about the complexity of the city and its adaptive structures are not the same thing as the actual complexity of the city. The trouble is, this confusion can produce disastrous results. It can even contribute to the slow collapse of an entire civilization. We might think that the difference between metaphor and reality is so obvious that it’s hardly worth mentioning. And yet, such confusion pervades the design world today, and spreads from there into the general culture. It plays a key role in the delusional expectation that metaphors will create reality. Psychiatrists speak of this as an actual disorder known as “magical thinking”: if our symbols are good enough, then reality will follow. In the hands of designers, this is very dangerous stuff. We see it at work in the failed iconic buildings that were sure to create economic development, or urban vitality, or greater quality of life purely because of a futuristic image. We see it also in the many “tokenistic” sustainability features (wind turbines, etc.) of other iconic new buildings whose actual performance in post-evaluation studies is woefully poor. From the perspective of design methodology, this phenomenon is an interesting and important design problem in its own right. We recognize it as a fundamental weakness of human thought, and need to adjust our design methodologies accordingly. In this process, the methodologies and insights of a humane science, applied by literate designers, can be invaluable. Distinguishing physical from metaphorical complexity clarifies a presently confused and unsustainable situation, and can help us out of it (the ultimate aim of any science, and any philosophy). The topics of urbanism, architecture, product design, environmental design, sustainability, and complexity in science are all tightly interrelated. Humans “design” with much the same aim toward which nature “designs” — both aim to increase the complexity of a system so that it works “better”. “Better” in this sense means more stable, more diverse, and more capable of maintaining an organized state — like the health of an organism. We learn from the structures and processes by which nature designs, so that we can also create and sustain these more organized states. Some scientists shy away from the notion that nature “aims” for anything. But this begs the question: are we not part of nature, and do we not “aim” for something in our own designs, and in the other parts of our life (e.g. seeking our own health and wellbeing)? Then we must accept “aim” as a characteristic of at least some part of nature. Otherwise, we severely hobble the usefulness of the scientific tradition as a relevant tool for designers. (Indeed, we would set ourselves on a very dangerous philosophical path: in effect, rendering the very idea of intelligence — human or otherwise — as meaningless!) Traditional city fabric evolved over generations as an extension of our own biology, thus representing an application of a kind of “collective intelligence” due to the system, not of any individual. Traditional Islamic urbanism, by Mustapha Ben Hamouche. Let’s start instead from the premise that we are here, and need to make sense of our own situation and determine our aims. Then we can begin to ask, given this intentionality, what is the most intelligent approach we can take? How can we learn from the intelligence — the “intentionality” in that sense — of natural systems? This is now an urgent question because much of human production — especially since modern industrialization enabled us to do things with really big footprints — is intentional in the wrong sense. Instead of building up complex systems that work better within the natural systems that support them, they acquire a fragile, non-resilient complexity that works against nature. In this way, human systems of life, movement, production, and economies depend on ever more energy consumption just to keep running at the same pace, setting us up for an inevitable catastrophic scenario. At the same time, the design of our environment seems to be driven not so much by any intelligent intentionality as by images that are stubbornly, even religiously, adhered to, even as mounting evidence shows that those typologies are inappropriate for complex adaptive systems. How can we fix this extremely precarious situation? What’s required is a paradigm shift in the way we perceive and act upon the systems that make our world function. Those systems are complex and adaptive — that is, their elements are mutually co-adapting and co-evolving, thereby forming an exceedingly complex pattern. Even so, such a pattern can be understood scientifically, and exploited by designers, following a new understanding of the phenomenon of complexity. This effort is part of the burgeoning, but historically recent, discipline of “complexity science” — the set of astonishing findings into topics like fractals, strange attractors, emergence, and algorithmic patterns. What these fields of investigation all have in common is the curious property of systems when a lot of elements are interacting. Complex systems take on entirely new characteristics that are very different from those with only a few elements — and usually impossible to predict. They have properties that are remarkably similar to living systems (which is no coincidence). For environmental designers and planners, knowing this phenomenon of “emergence” is the key to getting things right. Cities, for example, are certainly complex adaptive systems, and so are most other kinds of human environments. If we are trying to solve the problems of cities, then we need to know the kind of problem we are dealing with. If we treat this as a search for simplicity, or perhaps, an artistic challenge of visual design, when it is really a problem of organized complexity obeying its own rules of evolutionary intelligence, then we are likely to make a mess of things. And yet, that is exactly what architects and planners have done in the past several decades. Complexity science was at its dawn when, in the middle 20th Century, the adaptive living fabric of our cities was gutted and replaced by a much more elementary, mechanical model of design. The result is a simplistic machine, intentionally far from natural complexity. This drastically reductive process was draped with more complex poetic analogies, which convinced society to implement crude models that substituted for a richly complex reality. Since then, the scientific discipline has advanced farther than anyone hoped, and has begun to tease out formerly inscrutable secrets of nature — the marvels of evolution, the behavior of Earth systems, even the workings of genetic processes. For geographers and planners, the phenomena of cities became more comprehensible too. Self-generated city — disrespected by those designers who wish to impose their own will on cities, and by governments who want total control — yet representing a natural phenomenon as basic as life itself. Dharavi, India, by YGLvoices. Many designers are still unaware of these developments. For them, design is essentially about conveying expressive meaning, symbolism, and metaphor. Others pretend to keep up with the times but don’t bother with generating adaptive structural complexity — they continue to use fashionable metaphors to build non-adaptive, dysfunctional architectural and urban forms. This is a distorted artistic heritage of design, not at all about understanding systems and their emergent properties, which has come to a frontal collision with its scientific heritage. Artists at some point became specialized cogs in the same commodified industrial machine. Their job was now to sprinkle “meaning” (metaphor, analogy, expressive character) onto top-down industrial structures, and give them an acceptable, or better yet marketably desirable, aesthetic character. Things really took off when this project came to be associated with the allure of fine art. You may want to protest here, and ask: isn’t it our job to symbolize the scientific spirit of our age, and the new cosmological view of nature? Yes, but not as a mere sugar coating, a razzle-dazzle product “theming” — the meaning should be embodied in the objectives we achieve with our designs, and the way they accommodate and improve human life. The best architecture does not confuse these two aspects of life and art in a mutually destructive manner, but uses them to serve one another. When we paste a metaphoric “theme” over the design, after a few years, it begins to look ridiculous. That’s because the thing on the outside has no inherent relation to the thing on the inside — it’s little more than a veneer. And it works rather poorly. So the once-futuristic cases for old personal computers, the expression of another age’s romance with technology, now look absurd. The futuristic skins of famous art museums and concert halls are already stale and dated, so that now the only remaining customers for such a style are third-world countries playing catch up with Western architectural fashions. If, instead, we let the expression of the object grow from its complex relationship to its environment, and to the job it has to do for human beings, something remarkable happens: it takes on a kind of “classic” quality. The design seems almost to have “grown” that way, or to be inevitable — and then we say: “it’s a classic”. It is timeless. It will be valued by future generations just as we value (or ought to value) the greatest design achievements of previous generations. Alas, most design firms today don’t work towards this goal at all. Instead, they seek to attract attention through novelty and “theming”. They may give lip service to the approaches we discuss here, but without understanding the deeper methodological change those require. Though they are experts at glossy marketing in competing for major new projects and the practice of smooth talking to impress clients, they continue to do business as usual. A good designer is responsible for both implementation and adaptation. Do not confuse “intentionality” in a system changing itself so as to adapt — a sign of intelligence — with the intentions of a designer who ignores adaptation. The latter is a sign of unintelligent action. We see this over and over in products based strictly upon visual images. Dysfunctional satellite cities and suburbs were built in this manner. Design “intentionality” increases complexity so as to make the system work in the best way possible, not only for its explicit function, but especially as it is embedded both within its context and its environment. The job weaves together many things — like a city does — thus the design has to embrace and encourage connectivity within diversity. The chore of design, in such a complex environment, is not to impose an overly simple order from above, but to help to orchestrate the diversity, using its own latent dynamics, into a more spontaneous kind of patterned order. When it succeeds, we recognize it as a beloved city that nourishes us in more ways than one. A model of organized complexity proposed by one of us in 1997 (and reprinted as Chapter 5 of our book A Theory of Architecture) finds a striking parallel in the “Integrated Information Model for Consciousness” later developed by neuroscientist Giulio Tononi. Its essence is that complex systems evolve an integrated connectivity among their components so their information output is high, yet coherent. This coherence is often mistaken for simplicity, and this is the source of much of the confusion we address in this essay. Human life on earth is creating signs of informational intelligence: an earth that is conscious because it is intimately interconnected. We can save civilization from self-destruction by understanding the underlying mechanisms. Egypt at night, by NASA. Note that “complexity” is very different from “complicatedness”. Some postmodernist urbanists seem eager to conflate these two very different ideas. You don’t get a system when you pile up disjointed fragments, because there is no integration. Instead, a complex system arises through a process working to organize different and often conflicting elements in some way, in spite of their differences. Intentionality in building complexity sheds all “complicatedness” that is irrelevant and unconnected, just like in natural systems. It does not “streamline” processes to a single aim, but simply evolves the system to include those multiple connected cycles, however large or small, that interact in some essential way. That process is often a subtle dynamic, such as a set of apparently simple adaptive rules that each element follows. Why do people walking through a park all move along one line and not others? Why does one store get lots of pedestrian customers and another, just as good, fail? We can discover and document the socio-geometric patterns that people are following, as they make the simple human calculations that we all do: head in the direction of your destination, avoid obstructions, stop only if you see something interesting, and so on. If we understand these patterns, we can place our pavement more effectively, or place our store in a more successful location. Other patterns of complex organization can be documented and put to work for us in our designs. The human inhabitants of even the most diverse city are, and remain, part of a complex emergent whole. Their complex behaviors and interactions must not be reduced for the city to work like some crude yet giant machine, for that would (and does) severely damage living systems. So, too, the elements of an ecosystem have a history, as do other natural systems. This is the nature of complexity — it has an inherent wholeness or whole-systems quality to it. The elements we are considering possess what the physicist David Bohm called an “implicate order” — they have a much deeper relationship within a whole system that predates our observation. We face a perceptual problem, however. The reason most people think of complexity as being more like “complicatedness” — a messy collection of unrelated parts — is that we are very good at seeing particular fragments of the world. This view has its evolutionary benefits — we can see just a snapshot of what happens at a certain point and at a particular time, and omit all the interactions that brought those parts together in the first place. While this ability gave early humans an advantage in quick decision-making, it handicaps us when confronting the complex systems that we are now capable of building. We tend to forget that this way of looking at the world and its complex interactions is merely an abstraction, helpful for some purposes, but not for design. This is because in design, we are working with complex, implicate-ordered systems. Earth and life systems manifest design intentionality (in the sense of organizing their complexity) and intrinsic intelligence. When we treat these systems as problems of simplicity, we fail to understand the actual complex systems that we are creating, disturbing, and often destroying — a neighborhood, a city, an ecology, a human economy, or a living planet. And so, today, we find ourselves in a great deal of trouble.

Complexity won’t cause collapse

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Assuming these are good models of societal collapse, what can we do to avoid it? (and forget the so-called Decline of the American Empire, let’s think about industrial society in general.) Obviously making our societies less resource-intensive is top on the list for both Tainter and Diamond. Creating more balanced relations with other societies is also clearly high on the list, which means having allies that are many and prosperous--a good argument for international development and non-exploitive relations with less-industrialized nations. Having well-governed societies is also important, and Diamond has hit on a keen insight about having a close connection between rulers/upper classes and decision consequences/common life. Tainters description of administrative/communication overhead as being the ultimate cause of collapse is one of the most useful insights, and one that we can increasingly deal with technologically, which has not been an option for past civilizations. Beyond this, what if collapse is inevitable? And what if it’s not really a bad thing after all? Tainter’s definition of a “complex” society is a centralized one with large administrative classes; one form of “collapse” is decentralization that dissolves social stratification and removes socio-economic overhead. This trend is already active in business and manufacturing, particularly in high-tech industries and streamlined production/distribution of commodity goods. The Internet and other technologies are starting to decentralize and streamline politics as well--the impact has been miniscule so far, but in another few decades it could be significant. Culture is much more anarchic and classless than it has ever been in Western history, with postmodernists coining terms like “no-brow” to refer to arts that cannot be described as “high-brow” or “low-brow”. Collapse also usually means population shrinkage, but as Europe is showing us now, that shrinkage can happen gently and by choice, rather than by plagues and wars. Voluntary-simplicity movements are another shadow of collapse, as they result in people reducing their resource use and complexity of life, but they do so by choice rather than by need as people in collapsing societies do.

Innovation makes civilization resilient.

Fin 8 – Al, The Demise of Civilisation: Inevitable? Eventually, Al Fin’s blog, 4-3, http://alfin2100.blogspot.com/2008/04/demise-of-civilisation-inevitable.html

Complexity of systems is a fairly young field of study. Most of the people quoted in the article do not actually know what they are talking about, not really. They are speaking in abstract terms about theoretical problems that may or may not occur. Academics and think tank scholars--like journalists and politicians--are of limited use in dealing with real world problems. If they were competent and effective in the real world, most of them would probably be doing something else. Still, a wise person looks for ideas in a wide array of places. It is fairly obvious that our complex electronic global financial systems are vulnerable to disruption. In fact, in the next large scale war, one of the first casualties of large nations will be their financial and communications networks. Satellites will be lost, landlines and seafloor cables will be cut, and computer centers will be sabotaged. Yes, there are backups and redundant systems and databases. But access will be a problem for large numbers. For monkey-brained humans, large scale panic sets in fairly easily. An abrupt cutoff of fuel for ground, rail, and air transportation could likewise lead to large scale hardship and civil disturbances. A loss of electrical power would leave tens or hundreds of millions in complete turmoil. Most cities have only a few days worth of food inside their borders. Rather than confronting these important vulnerabilities, most leaders tend to obscure them and steer public discussion away to other topics. It was fairly easy for two handfuls of young religious fanatics to shut down the North American air system for several days in September of 2001. It would be just as easy today. Modern laboratory tools for biology and chemistry provide many ways to turn an open, trusting society into a shut-down, quivering, fearful society. Soon nanotechnological tools will make even more devastatingly deadly--and invisible--weapons readily available. It is easy to send modern western media-centered societies into paralytic states of fear. We do not need to think about what Apophis may do in 2036 to understand that our societies are vulnerable. But our civilisation? Not so much. We may have to give up some of our openness in the public sphere for a while. We may have to put up with far more intrusive security measures, temporarily, than the worst schemes ever considered by Bush and Cheney. But the civilisation would survive. The greatest threat to our civilisation is also the greatest promise--the possibility that something better will be devised. That better civilisation will have its vulnerabilities, yes. But the participants in the next level should have some important upgrades to their monkey-brains which will allow them to consider more contingencies, and devise better ways to deal with them.

### AT-Sustainability

Growth’s inevitable – empirics

Walter Russell Mead, February 4th, 2009 (Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations, “Only Makes You Stronger,” The New Republic, p http://www.tnr.com/politics/story.html?id=571cbbb9-2887-4d81-8542-92e83915f5f8&p=1)

After all, capitalism has seen a steady procession of economic crises and panics, from the seventeenth-century Tulip Bubble in the Netherlands and the Stop of the Exchequer under Charles II in England through the Mississippi and South Sea bubbles of the early eighteenth century, on through the crises associated with the Napoleonic wars and the spectacular economic crashes that repeatedly wrought havoc and devastation to millions throughout the nineteenth century. The panics of 1837, 1857, 1873, 1893, and 1907 were especially severe, culminating in the Great Crash of 1929, which set off a depression that would not end until World War II. The series of crises continued after the war, and the last generation has seen the Penn Central bankruptcy in 1970, the first Arab oil crisis of 1973, the Third World debt crisis of 1982, the S&L crisis, the Asian crisis of 1997, the bursting of the dot-com bubble in 2001, and today's global financial meltdown. And yet, this relentless series of crises has not disrupted the rise of a global capitalist system, centered first on the power of the United Kingdom and then, since World War II, on the power of the United States. After more than 300 years, it seems reasonable to conclude that financial and economic crises do not, by themselves, threaten either the international capitalist system or the special role within it of leading capitalist powers like the United Kingdom and the United States. If anything, the opposite seems true--that financial crises in some way sustain Anglophone power and capitalist development. Indeed, many critics of both capitalism and the "Anglo-Saxons" who practice it so aggressively have pointed to what seems to be a perverse relationship between such crises and the consolidation of the "core" capitalist economies against the impoverished periphery. Marx noted that financial crises remorselessly crushed weaker companies, allowing the most successful and ruthless capitalists to cement their domination of the system.

Growth is sustainable and self-correcting.

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

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

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

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

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

Capitalism will adapt to shocks – makes it sustainable and self correcting

Mokyr, 2009 (Joel, Robert H. Strotz Professor of Arts and Sciences and professor of economics and history at Northwestern University, and Sackler Professor at the Eitan Berglas School of Economics in Tel Aviv University “The culture of modern capitalism,” Technology and culture, Volume 50, Number 2, April)

In the end, then, Reich’s concerns about the fragility of capitalist institutions are rightly shared by the other two books. If political markets cannot generate institutions that make supercapitalism acceptable to the majority of agents, capitalism may be in serious trouble. In recent years economists have rediscovered the importance of institutions as the main facilitators of markets, but also of mechanisms to encourage growth and to [End Page 448] divide up its products.[8](http://muse.jhu.edu/journals/technology_and_culture/v050/50.2.mokyr.html%22%20%5Cl%20%22f8) But economic institutions and laws are set by politics and history, and they are not designed to maximize economic efficiency, much less fairness and equity. Indeed, it could be argued that the institutions that created modern capitalism in the West were the results of historical contingencies in certain parts of eighteenth-century Europe not replicated anywhere else. Indeed, the limited-liability corporation, that symbol of Western capitalism, was not readily transplanted to other societies. [9](http://muse.jhu.edu/journals/technology_and_culture/v050/50.2.mokyr.html%22%20%5Cl%20%22f9) It might be concluded, therefore, that there is nothing inevitable about its long-term survival. But reports of its demise have proven premature before. While far from perfect, modern capitalism can be and will be tamed and constrained by politics. This process of taming is itself imperfect, and so what it produces is at most a second-best world. But while Western capitalism is neither fair nor stable, it has one capability that other economic regimes seem to lack: it has an ability to self-correct and adapt when things go wrong. In the past it has repeatedly reinvented itself when it had to, and what came out was an improved model. All three books here seem to be quite clear that they want the system to be saved and make quite detailed proposals on how this should be done. What we have today is “Capitalism 3.1,” which seems serviceable for awhile but will surely by replaced by Capitalism 4.0, which will work until the next crisis, when it will have to be updated again. As long as it can do that, the system will survive, and our prosperity and technological creativity with it.

Cap is sustainable – panics and recessions strengthen it

Friedman, 2010 (George, “The Global Crisis of Legitimacy,” STRATFOR, May 4, http://www.stratfor.com/weekly/20100503\_global\_crisis\_legitimacy?utm\_source=GWeekly&utm\_medium=email&utm\_campaign=100504&utm\_content=readmore&elq=9bc82c399a6d4ec6bdb0dd4b45b1c193)

Financial panics are an integral part of capitalism. So are [economic recessions](http://www.stratfor.com/theme/special_series_recession_revisted?fn=5716144235). The system generates them and it becomes stronger because of them. Like forest fires, they are painful when they occur, yet without them, the forest could not survive. They impose discipline, punishing the reckless, rewarding the cautious. They do so imperfectly, of course, as at times the reckless are rewarded and the cautious penalized. Political crises — as opposed to normal financial panics — emerge when the reckless appear to be the beneficiaries of the crisis they have caused, while the rest of society bears the burdens of their recklessness. At that point, the crisis ceases to be financial or economic. [It becomes political](http://www.stratfor.com/weekly/20080930_political_nature_economic_crisis?fn=2416144248). The financial and economic systems are subsystems of the broader political system. More precisely, think of nations as consisting of three basic systems: political, economic and military. Each of these systems has elites that manage it. The three systems are constantly interacting — and in a healthy polity, balancing each other, compensating for failures in one as well as taking advantage of success. Every nation has a different configuration within and between these systems. The relative weight of each system differs, as does the importance of its elites. But each nation contains these systems, and no system exists without the other two.

### AT-Diminishing Returns

No diminishing returns on innovation.

Orszag et al 6 – Jason E. Bordoff, Policy Director Michael Deich, Managing Director Peter R. Orszag, Director Rebecca Kahane, Research Assistant A Hamilton Project Strategy Paper, Promoting Opportunity and Growth through Science, Technology, and Innovation, Brookings Institute, Dec, <http://www.brookings.edu/papers/2006/12technology_bordoff.aspx>

Maintaining our nation's economic leadership in the world and promoting broad-based growth at home will require effective policies to support research, innovation, and access to advanced information and telecommunications technologies. Innovation has long fueled economic growth, often giving rise to new industries and new jobs. According to the National Academies, "Since the Industrial Revolution, the growth of economies throughout the world has been driven largely by the pursuit of scientific understanding, the application of engineering solutions, and continual technological innovation". Numerous academic studies confirm that technological progress has accounted for a significant share of U.S. economic growth; a recent study shows that the share of economic growth directly attributable to research and development (R&D) investment has increased over time. What makes knowledge, innovation, and technology such powerful drivers of economic growth is that, unlike capital and labor, they do not suffer from diminishing returns. Indeed, in many cases the creation of knowledge and technological innovation actually increase the return to further knowledge and innovation, thus creating a powerful growth mechanism.

## \*\*\*Transition Debate\*\*\*

### Transition Fails

Transition to localized economies is impossible and it’s not survivable─

David R. Barnhizer ‘6 (Emeritus Professor at Cleveland State University’s Cleveland-Marshall College of Law; “Waking from Sustainability's "Impossible Dream": The Decisionmaking Realities of Business and Government.” 2006 Georgetown International Environmental Law Review. 18 Geo. Int'l Envtl. L. Rev. 595 L/N)

We face a combination of ecological, social, and economic crises. These crises involve the ability to fund potentially conflicting obligations for the provision of social benefits, health care, education, pensions, and poverty alleviation. They also include the need for massive expenditures to "fix" what we have already broken. n59 Part of the challenge is that in the United States and Europe we have made fiscal promises that we cannot keep. We also have vast economic needs for [\*620] continuing wealth generation as a precondition for achieving social equity on national and global levels. Figuring out how to reduce some of those obligations, eliminate others, and rebuild the core and vitality of our system must become a part of any honest social discourse. Even Pollyanna would be overwhelmed by the choices we face. There will be significant pain and sacrifice in any action we take. But failing to take prompt and effective action will produce even more catastrophic consequences. The scale of social needs, including the need for expanded productive activity, has grown so large that it cannot be shut off at all, and certainly not abruptly. It cannot even be ratcheted down in any significant fashion without producing serious harms to human societies and hundreds of millions of people. Even if it were possible to shift back to systems of local self-sufficiency, the consequences of the transition process would be catastrophic for many people and even deadly to the point of continual conflict, resource wars, increased poverty, and strife. What are needed are concrete, workable, and pragmatic strategies that produce effective and intelligently designed economic activity in specific contexts and, while seeking efficiency and conservation, place economic and social justice high on a list of priorities. n60 The imperative of economic growth applies not only to the needs and expectations of people in economically developed societies but also to people living in nations that are currently economically underdeveloped. Opportunities must be created, jobs must be generated in huge numbers, and economic resources expanded to address the tragedies of poverty and inequality. Unfortunately, natural systems must be exploited to achieve this; we cannot return to Eden. The question is not how to achieve a static state but how to achieve what is needed to advance social justice while avoiding and mitigating the most destructive consequences of our behavior. Many developing country groups involved in efforts to protect the environment and resist the impacts of free trade on their communities have been concerned with the harmful effects of economic change. Part of the concern is the increased scale of economic activity. Some concerns relate to who benefits and who loses in the changing context imposed by globalization. These concerns are legitimate and understandable. So are the other deep currents running beneath their political positions, including those of resistance to change of any kind and a [\*621] rejection of the market approach to economic activities. In the system described inaccurately as free market capitalism, economic activity not only breaks down existing systems, it creates new systems and--as Joseph Sch umpeter observed--continually repeats the process through cycles of "creative destruction." n61 This pattern of creative destruction unfolds as necessarily and relentlessly as does the birth-maturation-death-rebirth cycle of the natural environment. This occurs even in a self-sufficient or autarkic market system capable of managing all variables within its closed dominion. But when the system breaks out of its closed environment, the ability of a single national actor to control the system's dynamics erodes and ultimately disappears in the face of differential conditions, needs, priorities, and agendas. Globalization's ability to produce wealth for a particular group simultaneously produces harms to different people and interests and generates unfair resource redistribution within existing cultures. This is an unavoidable consequence of globalization. n62 The problem is that globalization has altered the rules of operation of political, economic, and social activities, and in doing so multiplied greatly our ability to create benefit and harm. n63 While some understandably want the unsettling and often chaotic effects of globalization to go away, it can only be dealt with, not reversed. The system in which we live and work is no longer closed. There are few contexts not connected to the dynamics of some aspect of the extended economic and social systems resulting from globalization. This means the wide ranging and incompatible variables of a global economic, human rights, and social fairness system are resulting in conflicts and unanticipated interpenetrations that no one fully understands, anticipates, or controls. n64 Local [\*622] self-sufficiency is the loser in this process. It can remain a nostalgic dream but rarely a reality. Except for isolated cultures and niche activities, there is very little chance that anyone will be unaffected by this transformational process. Change is the constant, and it will take several generations before we return to a period of relative stasis. Even then it will only be a respite before the pattern once again intensifies.

### Transition Fails

No transition—economic crisis makes all their impacts worse.

Mead 9 – Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations, Walter, “Only Makes You Stronger: Why the recession bolstered America”, 2/4, The New Republic

Even before the Panic of 2008 sent financial markets into turmoil and launched what looks like the worst global recession in decades, talk of American decline was omnipresent. In the long term, the United States faces the rise of Asia and the looming fiscal problems posed by Medicare and other entitlement programs. In the short term, there is a sense that, after eight years of George W. Bush, the world, full of disdain for our way of life, seems to be spinning out of our--and perhaps anybody's--control. The financial panic simply brought all that simmering anxiety to a boil, and the consensus now seems to be that the United States isn't just in danger of decline, but in the full throes of it--the beginning of a "post-American" world. Perhaps--but the long history of capitalism suggests another possibility. After all, capitalism has seen a steady procession of economic crises and panics, from the seventeenth-century Tulip Bubble in the Netherlands and the Stop of the Exchequer under Charles II in England through the Mississippi and South Sea bubbles of the early eighteenth century, on through the crises associated with the Napoleonic wars and the spectacular economic crashes that repeatedly wrought havoc and devastation to millions throughout the nineteenth century. The panics of 1837, 1857, 1873, 1893, and 1907 were especially severe, culminating in the Great Crash of 1929, which set off a depression that would not end until World War II. The series of crises continued after the war, and the last generation has seen the Penn Central bankruptcy in 1970, the first Arab oil crisis of 1973, the Third World debt crisis of 1982, the S&L crisis, the Asian crisis of 1997, the bursting of the dot-com bubble in 2001, and today's global financial meltdown. And yet, this relentless series of crises has not disrupted the rise of a global capitalist system, centered first on the power of the United Kingdom and then, since World War II, on the power of the United States. After more than 300 years, it seems reasonable to conclude that financial and economic crises do not, by themselves, threaten either the international capitalist system or the special role within it of leading capitalist powers like the United Kingdom and the United States. If anything, the opposite seems true--that financial crises in some way sustain Anglophone power and capitalist development. Indeed, many critics of both capitalism and the "Anglo-Saxons" who practice it so aggressively have pointed to what seems to be a perverse relationship between such crises and the consolidation of the "core" capitalist economies against the impoverished periphery. Marx noted that financial crises remorselessly crushed weaker companies, allowing the most successful and ruthless capitalists to cement their domination of the system. For dependency theorists like Raul Prebisch, crises served a similar function in the international system, helping stronger countries marginalize and impoverish developing ones. Setting aside the flaws in both these overarching theories of capitalism, this analysis of economic crises is fundamentally sound--and especially relevant to the current meltdown. Cataloguing the early losses from the financial crisis, it's hard not to conclude that the central capitalist nations will weather the storm far better than those not so central. Emerging markets have been hit harder by the financial crisis than developed ones as investors around the world seek the safe haven provided by U.S. Treasury bills, and commodity-producing economies have suffered extraordinary shocks as commodity prices crashed from their record, boom-time highs. Countries like Russia, Venezuela, and Iran, which hoped to use oil revenue to mount a serious political challenge to American power and the existing world order, face serious new constraints. Vladimir Putin, Hugo Chavez, and Mahmoud Ahmadinejad must now spend less time planning big international moves and think a little bit harder about domestic stability. Far from being the last nail in America's coffin, the financial crisis may actually resuscitate U.S. power relative to its rivals.

### No Mindset Shift

Mindset shift only goes to the right—no political support for dedev.

Mead, 2010 (Sir Walter Russell, Henry A. Kissinger Senior Fellow in U.S. Foreign Policy at the Council on Foreign Relations, “The Top Ten lessons of the global economic meltdown,” May 24, The American Interest, http://blogs.the-american-interest.com/wrm/2010/05/24/the-top-ten-lessons-of-the-global-economic-meltdown/)

If half the world’s commentators and pundits spent the last 18 months announcing the collapse of American power, many of the rest spent their time hailing the death of the American capitalist model: Piratical ‘Anglo-Saxon’ capitalism was obviously less effective than the more civilized, more humanistic model of, say, Europe.  Wrong again.  The crisis did what crises usually do: it tested the world’s companies, governments and currencies to see what they were made of.  The preliminary results of that test are now in, and the United States again looks surprisingly healthy.  The dollar held up well during the crash; when the chips were down investors still thought America was the best place for their money.  America’s flexible labor markets meant that a lot of people lost their jobs, but also that the recovery would start more quickly here.  The overwhelming lesson of the crash for Europeans is that they need to accelerate Europe’s slow and painful shift toward a more liberal form of capitalism.  Europe’s socialist parties in Spain and Greece are introducing hated liberal reforms because, as Margaret Thatcher put it long ago, “there is no alternative.” 3.  The rogue states are parasites. It may seem unkind or gloating to say so, but the point needs to be made: the pathetic pretensions of regimes like the ones in Iran and Venezuela to some kind of world leadership have been cruelly exposed.  The governments of these countries are parasites on the global economy and far from representing alternatives to the global model, they are entirely dependent on capitalist success.  When the global capitalist system is booming, the price of oil goes up and Venezuela and Iran have the cash for subsidies at home and adventures abroad.  When the hated global system goes bust, Venezuela and Iran go broke.  The leadership of these countries are like adolescents criticizing the bourgeois habits of the parents they sponge off. Both Iran and Venezuela have immense potential to help shape world civilization and culture in the twenty first century, but to make that contribution they will have to use their oil wealth to join and help shape the world system, rather than using it to feed the egos and illusions of their leaders.  4.  The old left is dead. Not even a global economic crisis can breathe new life into the world of Marxian socialism.  Not only have most European countries moved to the right since the crash; the developing world has not seen any serious revival of ‘proletarian socialism’ in response to hard times.  The world’s surviving ‘communist’ regimes continue to hold power by claiming credit for the successful management of increasingly capitalist economies.  If you look hard, you can find a noisy fringe calling, say, for the nationalization of the banks or other old left responses to the crisis, and there are lots of places where people are [protesting government austerity programs](http://www.ft.com/cms/s/0/22b780e8-56df-11df-aa89-00144feab49a.html), but there is not a single free country in the world where serious political parties argue that socialist transformation will cure the economy’s ills.  Increasingly, the politics of resistance and protest come [from the right](http://en.wikipedia.org/wiki/Tea_Party_movement) (and that isn’t always a good thing).

No mindset shift—empirics.

Beckerman 95 Emeritus Fellow at Balilol College, Oxford, Wilfred, Small is Stupid, pg. 20

Most criticism of economic growth not only contain errors of logic or fact. They are also divorced from political reality. Even if it could be demonstrated that economic growth deos not lead to a rise in welfare, it would still not follow that we should try to bring growth to a halt. For, in the absence of some transformation in human attitudes, the like of which has never been seen in spite of constant admonitions by powerful religions for thousands of years, human nature has not yet abandoned the goal of increased prosperity. To some people this goal is a denial of holiness. But to others it is a testament of the infinite variety of the human spirit. And to some it is an opportunity to rid the world of poverty and drudgery. This means that if growth were to be abandoned as an objective of policy, democracy too would have to be abandoned. And, as the experience of the 1980s has demonstrated, even totalitarian regimes cannot, in the end, survive if they fail to deliver the increase in living standards to which their populations aspire.

### Elites Turn

Elites prevent the shift.

Heinberg 4 – Member of the Core Faculty @ New College of California and writer on energy and resource issues, Richard, Power Down, p. 178-9

But this news pleases no one. If the Movement were to truly embrace it, the elites would pounce, and it would be the easiest PR takedown in history. A few well-paid public relations firms would place some ads and op-ed pieces, and an “authoritative” study or two would be issued saying, in effect, “Nonsense! There is plenty for everyone; technology and the market will fix everything.” Broadcast commentators would pile on, polls would be taken, and the foolish notion that humans actually Face ecological constraints, just as all other organisms do, would be thoroughly discredited and banished from serious conversation. Imagine how the talk show hosts would rant: “Reduce our standard of living? Now ‘they’ are trying to take away your car!” — a ear that will cease to run anyway when oil becomes prohibitively expensive. “Reduce population? Why that sounds like genocide!” — which, ironically, is exactly what the elites themselves are preparing for through their investments in nuclear bombs and genetic bio-weapons. And so the critical message is muted and truncated. The movement tailors its utterances for maximum public-relations effectiveness, just as the elites do. Politics trumps truth.

Even if most people shift, the elites will still go down fighting.

Heinberg 4 – Member of the Core Faculty @ New College of California and writer on energy and resource issues, Richard, Power Down, p. 167-8

There is no need to belabor the point: the people of this world whose opinions count the most – the people with the power to command armies, economies, and governments – have already made up their minds. The cards are dealt and the bets are on the table. For them, the coming decades will constitute a fatal came of last one standing, a brutal contest for the world’s remaining resources. To the interested observer, this may seem patently insane. Even the nation that “wins” the game will be utterly devastated. In the end, oil, natural gas, and even coal will run out, and not even the wealthy will be able to maintain their current way of life. And in the meantime, hundreds of millions – perhaps billions – will have violently perished. Why would anyone choose this path? It is important to understand the reason for the current course of events only by looking at who is choosing it, and at the incentives and constraints to which they are subject. The elites – corporate owners and managers, government officials, and military commanders – are people who have been selected for certain qualities: loyal to the system, competitiveness, and hunger for power. Often, they are literally bred for their roles, like George W. Bush, they are people born to wealth and power, and raised to assume that privilege is their birthright. These are people who identify with the system and the status quo; they are constitutionally incapable of questioning its fundamental assumptions.

### Growth Inevitable

Growth inevitable—biology.

Allenby 7 (Brad, Professor of Civil and Environmental Engineering at Arizona State University, “The Benefits of Our Hardwired Need to Consume,” GreenBiz.com, March 7, 2007, http://www.greenbiz.com/blog/2007/03/08/the-benefits-our-hardwired-need-consume, AD: 7-6-9)

That humans are inclined to make choices that offer more pleasure than pain comes as no surprise, but a look at how marketing -- whether of consumer goods or environmental causes -- offers intriguing ideas on how to create change, Brad Allenby writes. The issue of consumption is perhaps one of the most vexed in the environmental and sustainability discourses, especially when contrasting the United States, which tends towards more of a free market, free consumer choice philosophy, with the European Union. Some interesting recent work indicates that it may also be much more complex than we generally realize. Take the recent work by George Lowenstein at Carnegie-Mellon University, Brian Knutson of Stanford, and Drazen Prelec of MIT. In order to better understand the brain chemistry underlying consumption, they presented product choices, then payment choices, to volunteers while scanning their brains with functional magnetic resonance imaging. They found that the nucleus accumbens, which is involved in processing reward stimuli (food, recreational drugs) was activated by presentation of desirable products such as chocolates, while the insular cortex, linked to expectations of pain, was activated by price information. After both product and price were presented, the prefrontal cortex, an area associated with rational calculation, engaged as well. This not only indicated that modern behavior ("rational" consumption choices) are piggybacking on neural circuits evolved for much different circumstances (not a surprise), but leads to some interesting if speculative possibilities. A fairly straightforward interpretation of these data is the suggestion that, at the neural level, consumption is affected, perhaps significantly, by a weighing of immediate pleasure versus immediate pain, rather than rational calculation, which only comes later. This may not sound revolutionary, especially to marketing gurus, but it nonetheless has some substantial implications. To begin with, it emphasizes the importance of marketing and presentation in consumption: if the benefits of a product can be made explicit and attractive from the beginning, the decision to purchase can be encouraged before the "rational weighing" process is even engaged. This might argue against the traditional environmental project of reducing consumption by generating large amounts of environmental information to be appended to particular products: if the V8 GT or large SUV is initially appealing, information on fuel consumption may be only marginally relevant because it enters the cognitive processes after the purchasing decision is essentially made. Conceptually, in other words, the environmental approach to reducing consumption through product specific information implicitly accepts "the rational consumer" model of human behavior: provide more information on social and environmental costs, and consumers, rationally balancing their options, will choose the more “rational” outcome -- that is, environmental preferability (remembering that consumers may not share the values prioritization of environmentalists). This appears to be an oversimplistic, if not incorrect, model of consumer cognition. However, while this research might discourage product-by-product information schemes, it might support general anti-consumption campaigns. After all, such campaigns when successful make the act of consumption itself more negative emotionally, and thus enhance the expectations of pain associated with any consumption (the downsides of consistently negative messages from environmentalists are well known, however, and might generate consumer backlash that outweighs such consumption reduction effects over time). Another, perhaps more difficult, implication is the possibility that use of credit, which on balance reduces the immediate “pain” of a purchase because nothing material is apparently given up in exchange, creates a context within which consumers are inherently weighted towards consumption (the researchers have not yet tested this hypothesis). The growth and differentiation of credit mechanisms, and the dematerialization of money, are long-term trends in developed economies, and a major mechanism supporting the continued growth in complexity of financial and economic structures. Thus, it becomes problematic for anti-consumption activists if the inherent dynamics and structure of economic systems as they evolve shifts the balance between consumption and pain towards consumption. That consumption has deep emotional dimensions, and that access to credit encourages economic growth, and along with it consumption, are not revolutionary findings. But that consumption decisions engage particular brain pathways in ways that affect the effectiveness of environmental campaigns and projects is both interesting and important, even if at this point it may be difficult to be sure quite how these new discoveries cut. At the least, however, the demonstration that even apparently straightforward decisions are, in fact, grounded in pre-rational cognitive information processing suggests that environmental and sustainability activists need to become more sophisticated in the way they think about, and seek to socially engineer, consumption decisions. For social engineering is a double-edged sword, and especially in areas like consumption, increasingly understood as involving complex and fundamental behaviors, such efforts can rebound against those who seek to impose such behavior change, regardless of their good intentions.

## \*\*\*Environment\*\*\*

### Tech Solves-Innovation

Growth makes population and resources sustainable.

Barker 00– electrical engineer, and manager of corporate communications for the Electric Power Research Institute and former industrial economist and staff author at SRI International and as a commercial research analyst at USX Corporation (Brent, “Technology and the Quest for Sustainability.” EPRI Journal, Summer, infotrac)

From a social standpoint, accelerating productivity is not an option but rather an imperative for the future. It is necessary in order to provide the wealth for environmental sustainability, to support an aging population in the industrialized world, and to provide an economic ladder for developing nations. The second area of opportunity for technology lies in its potential to help stabilize global population at 10-12 billion sometime in the twenty-first century, possibly as early as 2075. The key is economics. Global communications, from television to movies to the Internet, have brought an image of the comfortable life of the developed world into the homes of the poorest people, firing their own aspirations for a better quality of life, either through economic development in their own country or through emigration to other countries. If we in the developed world can make the basic tools of prosperity--infrastructure, health care, education, and law--more accessible and affordable, recent history suggests that the cultural drivers for producing large families will be tempered, relatively quickly and without coercion. But the task is enormous. The physical prerequisites for prosperity in the global economy are electricity and communications. Today, there are more than 2 billion people living without electricity, or commercial energy in any form, in the very countries where some 5 billion people will be added in the next 50 years. If for no other reason than our enlightened self-interest, we should strive for universal access to electricity, communications, and educational opportunity. We have little choice, because the fate of the developed world is inextricably bound up in the economic and demographic fate of the developing world. A third, related opportunity for technology is in decoupling population growth from land use and, more broadly, decoupling economic growth from natural resource consumption through recycling, end-use efficiency, and industrial ecology. Decoupling population from land use is well under way. According to Grubler, from 1700 to 1850 nearly 2 hectares of land (5 acres) were needed to support every child born in North America, while in the more crowded and cultivated regions of Europe and Asia only 0.5 hectare (1.2 acres) and 0.2 hectare (0.5 acre) were needed, respectively. During the past century, the amount of land needed per additional child has been dropping in all areas of the world, with Europe and North America experiencing the fastest decreases. Both crossed the "zero threshold" in the past few decades, meaning that no additional land is needed to support additional children and that land requirements will continue to decrease in the future. One can postulate that the pattern of returning land to nature will continue to spread throughout the world, eventually stemming and then reversing the current onslaught on the great rain forests. Time is critical if vast tracts are to be saved from being laid bare, and success will largely depend on how rapidly economic opportunities expand for those now trapped in subsistence and frontier farming. In concept, the potential for returning land to nature is enormous. Futurist and scholar Jesse Ausubel of the Rockefeller University calculates that if farmers could lift average grain yields around the world just to the level of today's average U.S. corn grower, one-half of current global cropland--an area the size of the Amazon basin--could be spared. If agriculture is a leading indicator, then the continuous drive to produce more from less will prevail in other parts of the economy Certainly with shrinking agricultural land requirements, water distribution and use around the world can be greatly altered, since nearly two-thirds of water now goes for irrigation. Overall, the technologies of the future will, in the words of Ausubel, be "cleaner, leaner, lighter, and drier"--that is, more efficient and less wasteful of materials and water. They will be much more tightly integrated through microprocessor-based control and will therefore use human and natural resources much more efficiently and productively.

### Tech Solves-Empirics

Empirics are on our side, tech is right and neo-malthusian hacks are wrong.

Goklany 9 – Indur M. Goklany is the Assistant Director for Science and Technology Policy, Office of Policy Analysis, US Department of the Interior, and co-editor of the Electronic Journal of Sustainable Development, Have increases in population, affluence and technology worsened human and environmental well-being?, The Electronic Journal of Sustainable Development (2009) 1(3)

Second, but for technological change, impacts would generally have been much higher, in many instances by an order of magnitude or more. For instance, per unit of GDP, technological change reduced the global environ- mental impact of agriculture by 84 percent from 1950 to 2005. In fact, it has stabilized the amount of habitat converted to cropland in the U.S. and almost stabilized it globally (Figures 10 and 11). During the 20th century, it reduced death rates from various water related diseases in the U.S. by 99.6–100 percent. It also reduced the cumu- lative global death rate from extreme weather events by 95 percent, while reducing U.S. death rates from hurri- canes, lightning, floods and tornados by 16–95 percent. Because of technology, U.S. indoor air pollution levels are currently 96 to 99 (+) percent lower than they oth- erwise would be. However, while technology reduced the rate of increase, CO2 emissions, nevertheless, grew substantially. Third, improvements are apparently more pro- nounced for indicators most directly related to human well-being. Specifically, for each pollutant, indoor air quality improved earlier and faster than outdoor emis- sions (which comprise the bulk of emissions), and mor- tality rates were reduced more than indicators whose relationship to public health is more indirect. With respect to global warming related indicators, mortality rates from total extreme weather events declined sub- stantially, although carbon dioxide emissions increased despite reductions in the carbon intensities of econo- mies. The latter is true even in India and China, where recent improvements in carbon intensities coincide with the initiation of economic liberalization, despite gener- ous fuel subsidies to consumers. For the environmental indicators used to characterize the impacts on land, air, and water – cropland, indoor air quality, traditional air pollutant emissions, and mortality from water-related diseases – technological change gen- erally more than compensated for any long term increase that might have occurred in impact due to increases in either population or affluence, but not always for the combined effect of the two (i.e., P x A). The exceptions to this are: (a) U.S. NOx emissions where technology compensated for population increase between 1900 and 2003, but not for affluence, (b) water withdrawals for the U.S. from 1950–2000, where technolog y compensated for population but not for affluence, and (c) global water withdrawals and consumption from 1900–1995, where technology failed to keep pace with either population or affluence. What the table does not show is that even where tech- nology was unable fully to compensate for the increase in aggregate output over the entire period – water with- drawals and national air emissions are cases in point – it moderated impacts so that, by the end of the period, in most cases impacts had peaked and were substantially lower than in previous decades (Goklany 2007a, p. 133). In general, long term environmental trends have not conformed to the notion that, sooner or later, technol- og y will necessarily increase environmental impacts. Moreover, if one goes sufficiently far back into the his- torical record, e.g., for habitat converted to cropland, air pollution emissions or water related diseases, the initial trends will show environmental deterioration, seemingly validating the Neo-Malthusian view. But over time this interpretation fails, as the environmental impact is more or less halted (e.g., cropland) or even reversed (air and water pollution) (Goklany 2007a). Such declines lend credence to the environmental transition hypothesis and indicate that, in effect, sooner or later technology no longer acts as a multiplier, but as a divisor for the envi- ronmental impact.

### Environment Improving

Environment improving now because of growth.

Goklany 9 – Indur M. Goklany is the Assistant Director for Science and Technology Policy, Office of Policy Analysis, US Department of the Interior, and co-editor of the Electronic Journal of Sustainable Development, Have increases in population, affluence and technology worsened human and environmental well-being?, The Electronic Journal of Sustainable Development (2009) 1(3)

In the 1990s, several economists undertook empirical analysis of the relationship between economic growth and environmental impact. Analysing a cross-section of countries, they found that the relationship between per capita GDP and environmental impact followed an inverted “U” shape similar to that identified by Simon Kuznets for income inequality. On the basis of this empirical relationship they posited the environmental Kuznets curve (EKC) hypothesis, which says that as countries grow, the environment first gets worse, then, as they achieve a certain level of development, the damage peaks and begins to improve again (Shafik 1994; Gross- man and Krueger 1995). In the “environmental transition” hypothesis, Goklany (1995, 1998, 2007a) has generalized the EKC hypothesis to attempt to account for both economic development and technological change. Under this hypothesis, ini- tially societies opt for economic and technological devel- opment over environmental quality because it allows them to escape from poverty and improve their quality of life by making both needs and wants (e.g. food, educa- tion, health, homes, comfort, leisure and material goods) more affordable. But once basic needs are met, over time members of society perceive that environmental deterioration compromises their quality of life and they start to address their environmental problems. Being wealthier and having access to greater human capital, they are now better able to afford and employ cleaner technologies. Consequently, environmental deteriora- tion can, first, be halted and, then, reversed. Under this hypothesis, technological change and economic growth may initially be the causes of environmental impacts, but eventually they work together to effect an “environmen- tal transition” – after which they become a necessary part of the solution to environmental problems. Such a transition, if it occurs at all, would be evident as a peak in a stylized curve of environmental impact versus time, assuming that both economic development and technol- ogy advance with time. This assumption, while true in general since Malthus’ time, hasn’t always been so, nor is there a guarantee that it will hold for all places at all times in the future. Figure 1 provides a stylized rendition of the environmental transition hypothesis. In the following, I examine whether long term empir- ical data support the Neo-Malthusian notion that as populations increase, become wealthier, and technol- ogy advances, we will run out of resources, leading to a deterioration of environmental quality, and human well-being. I inspect trends that typically span several decades, because short term trends can be mislead- ing. My examination, which is illustrative rather than exhaustive, focuses mainly on the U.S. because of the better availability and accessibility of long term data for that country and because it has traveled furthest on the path of economic development of any large economy. In addition, I use global data, where available, and also data from a selection of less developed countries, mainly India and China, in order to compare and contrast their expe- rience with that of the U.S.

### Growth Reverses Damage

Increasing growth reverses previous damage.

Stern ‘1 (David, Research Fellow at the Centre for Resource and Environmental Studies, 2001 [Australia National University, “The environmental Kyznets curve: a review,” The Economics of Nature and the Nature of Economics, p. 193-4)

The environmental Kuznets curve (EKC) hypothesis proposes that there is an inverted U-shape relation between various indicators of environmental degradation and income per capita. This has been taken to imply that economic growth will eventually redress the environmental impacts of the early stages of economic development and that growth will lead to further environmental improvements in the developed countries. Far from being a threat to the environment in the long term, as argued in The Limits to Growth and Beyond the Limits by Meadows et. al. (1972, 1992) among others, economic growth is seen as necessary in order for environmental quality to be maintained or improved. This is an essential part of the sustainable development argument as put forward in Our Common Future by WCED (1987). The EKC literature constitutes an evaluation of these arguments. The EKC is named after Simon Kuznets (1955, 1963) who hypothesized that the relationship between a measure of inequality in the distribution of income and the level of income is an inverted U-shape curve. Figure 8.1 illustrates the typical shape of the EKC. Proponents of the EKC hypothesis argue that at very low levels of economic activity environmental impacts are generally low, but as development proceeds the rates of land clearance, resource use and waste generation per capita increase rapidly. However, “at higher levels of development, structural change towards information-intensive industries and services, coupled with increase environmental awareness, enforcement of environmental regulations, better technology and higher environmental expenditures, result in leveling off and gradual decline of environmental degradation” (Panayoton, 1993). Thus there are both proximate causes of the EKC relationship – changes in economic structure or product mix, changes in technology and changes in input mix – as well as underlying causes such as environmental regulation, awareness and education. These effects act to counteract or exaggerate the gross impact of economic growth or the scale effect. The EKC theme was promoted by the World Bank’s World Development Report 1992 (IBRD, 1992). The authors noted that “The view that greater economic activity inevitably hurts the environment is based on static assumptions about technology, tastes, and environmental investments” (p. 38) and that “As incomes rise, the demand for improvements in environmental quality will increase, as will the resources available for investment” (p. 39). Some expanded this position even more forcefully: “there is clear evidence that, although economic growth usually leads to environmental degradation in the early stages of the process, in the end the best – and probably only – way to attain a decent environment in most countries is to become rich” (Beckerman, 1992).

### Growth Solves Population Rise

Growth key to population decreases

Goklany 9 – Indur M. Goklany is the Assistant Director for Science and Technology Policy, Office of Policy Analysis, US Department of the Interior, and co-editor of the Electronic Journal of Sustainable Development, Have increases in population, affluence and technology worsened human and environmental well-being?, The Electronic Journal of Sustainable Development (2009) 1(3)

The original Neo-Malthusian premise was that popula- tion would grow exponentially. Indeed until the latter decades of the 20th century, these concerns seemed well founded, as technological change increased the rate of population growth by reducing mortality rates. However, the rate of population increase has slowed in recent decades. In the five years from 1965 to 1970, the World’s population grew by 10.6 per cent. By contrast, the current rate of population growth has fallen to 6.0 per cent every five years and is expected to fall further (UNPD 2007). Accordingly, recent population projections show that population should peak during this century, perhaps at less than 9 billion. Lutz et al. (2007) claim that there is a 90 percent probability that global population will not exceed 11.5 billion in 2100. Nevertheless, while most experts currently discount the possibility of exponential population increase, the notion lingers on in the popular mind (see, e.g., Revkin 2008). This tends to color discussions on environmental matters. In any case, Neo-Malthusians insist that even current population levels may be catastrophic for humanity, with some suggesting that the earth’s sustainable limit may be anywhere between 0.5 to 2 billion (Dahl 2005). The onset of the decline in growth rate was more or less concurrent with mortality rate declines in general, and preceded the appearance of AIDS. The proximate cause is obviously a decline in total fertility rate (TFR), that is, the number of children borne by a woman, which seems to have occurred worldwide, but to a differing extent in each country and culture. What are the under- lying causes of the decline in TFR? Figure 2, based on cross country data from the World Bank (2005), shows that TFR is inversely related to the level of economic development (as measured by GDP per capita) and falls over time (a crude surrogate for tech- nological change).2, 3 Goklany (2007a, 2007b) argues that the underlying relationships are more complex, with the conditions supporting economic and technological development and, significantly, the desire for such devel- opment, also important drivers. First, since lower poverty – the not-so-surprising consequence of economic growth – means lower infant mortality rates and higher survival rates, it reduces pressures for more births. This is particularly important because children are among the few available forms of insurance in poorer countries, which is one reason why they have the highest TFRs. Richer societies tend to have social security programs which can reduce the pressure for more children. Second, higher incomes mean greater access to technology, which reduces the value of child labor. Third, richer societies offer greater educational and economic opportunities for women, which also increases the opportunity costs of their child bearing and child rearing years. Fourth, the time and cost of educa ing children to be competitive and productive in a richer and more technologically advanced society encourages small family sizes. Apart from economic and technological develop- ment, factors that contribute to economic growth and the desire for greater wealth can help create conditions that tend to lower TFR. In particular, literacy and the amount of education, especially of women, helps propa- gate good habits of diet, nutrition, sanitation and safe drinking water. This improves health and reduces mor- tality, in general, and infant and maternal mortality, in particular. As noted, this reduces pressures to maximize birth and enables couples to plan the size of their fami- lies. At the same time, improved health leads to greater wealth (or economic growth). Finally, many couples – arguably swayed by commercials and lifestyles depicted by a ubiquitous, globalized and globalizing visual mass media – defer child birth in favor of current consumption (Goklany 2007a). Together these factors explain why TFR has dropped progressively with both economic development and time. Thus, in the IPAT equation, P is not independent of A and T: sooner or later, as a nation grows richer, its population growth rate falls (e.g., World Bank 1984), which might lead to a cleaner environment (Goklany 1995, 1998, 2007b). Therefore, while economic development and techno- logical change might initially increase the rate of popula- tion growth by reducing mortality rates, in the long run, they moderate population growth by helping directly or indirectly create the conditions for many families to vol- untarily opt for fewer children (and lower TFR).

### AT-No Political Demand for Clean Eng

Investments in clean tech and policy changes make the transition feasible─

LEONHARDT 7-21-12. DAVID, Washington bureau chief of The New York Times .July 21, 2012 “There’s Still Hope for the Planet” [http://www.nytimes.com/2012/07/22/sunday-review/a-ray-of-hope-on-climate-change.html?partner=rssnyt&emc=rss]

Over the last several years, the governments of the United States, Europe and China have spent hundreds of billions of dollars on clean-energy research and deployment. And despite some high-profile flops, like ethanol and Solyndra, the investments seem to be succeeding more than they are failing. The price of solar and wind power have both fallen sharply in the last few years. This country’s largest wind farm, sprawling across eastern Oregon, is scheduled to open next month. Already, the world uses vastly more alternative energy than experts predicted only a decade ago. Even natural gas, a hotly debated topic among climate experts, helps make the point. Thanks in part to earlier government investments, energy companies have been able to extract much more natural gas than once seemed possible. The use of natural gas to generate electricity — far from perfectly clean but less carbon-intensive than coal use — has jumped 25 percent since 2008, while prices have fallen more than 80 percent. Natural gas now generates as much electricity as coal in the United States, which would have been unthinkable not long ago. The successes make it possible at least to fathom a transition to clean energy that does not involve putting a price on carbon — either through a carbon tax or a cap-and-trade program that requires licenses for emissions. It was exactly such a program, supported by both Barack Obama and John McCain in the 2008 campaign, that died in Congress in 2010 and is now opposed by almost all Congressional Republicans and some coal-state and oil-state Democrats.

### AT-Policy Makers Won’t Innovate

China solves energy innovation.

Kahn 9-13-10 – Economics Professor @ UCLA, “Will China dominate the green economy? And if they do, should we worry?”, Christian Science Monitor, http://www.csmonitor.com/Business/Green-Economics/2010/0913/Will-China-dominate-the-green-economy-And-if-they-do-should-we-worry

Today, the New York Times has published a long piece on the microeconomics of activist industrial policy in China. According to the NY Times, using subsidized loans and free land provided by government, chinese firms are "taking over" this exciting new growing industry. "Western clean energy companies complain of much higher financing costs — when they can raise money at all. Banks have been cautious about the sector, which leans heavily on venture capitalists and private equity firms that demand implicit interest rates of up to 9 percent right now in the United States, said Thomas Maslin, a senior solar analyst at IHS Emerging Energy Research. Evergreen Solar, the Massachusetts company, struggled for three years to raise money in the States, but had no trouble doing so in China. Chinese state banks were happy to lend most of the money for the factory on very attractive terms, like a five-year loan with no payments of interest or principal until the end of the loan, said Michael El-Hillow, the company’s chief financial officer." The NY Times hints that China's activist government's actions are "unfair" WTO violating that hurts the well being of the United States. Is this true? Are we a nation of producers or consumers? China's actions will benefit U.S consumers who will import low priced , higher quality products due to China's activist policies. These Chinese investments will help households all over the world to adapt to climate change (i.e access to air conditioning) without exacerbating global GHG levels. Why? Their "big push" will make renewable power generation more reliable, and cheaper and better able to compete with power generated by fossil fuel. The Sierra Club should thank China for this. Could U.S producers gain? Energy intensive businesses would have access to improved "green" energy source. That's not a bad thing. The NY Times hints that we are in direct competition with the Chinese over this future golden goose (the green economy). I don't know if this is correct. There are firms in the United States competing against Chinese firms but I don't believe that the geography of where green jobs production takes place is a national interest issue.

### AT-Policy Makers Won’t Innovate

Energy revolution happening now.

Mindy S. Lubber , Mindy Lubber is president of Ceres, a coalition of investors and environmental groups working with companies to address sustainability challenges such as global climate change. Ceres and Navigant Consulting recently issued a report, The 21st Century Electric Utility: Positioning for the Low-Carbon Future. 9-13-10, “The US Power Sector is Changing -- Even Without a Climate Bill,” http://www.reuters.com/article/idUS50377401020100913

Now that the climate bill is in hibernation, it would be easy to despair that the US power sector will resume its tradition of burning high-polluting coal to sell increasing amounts of electricity. The Washington Post opted for such a conclusion in an Aug. 23 article, "Proliferation of old-style coal plants increases despite public outcry." The article noted that "dozens" of old-style coal plants -- 32, to be exact -- have been built since 2008 or are under construction. But there was an important context missing: The article failed to note that wind power production was the largest source of new electricity in the US last year and that for every new coal plant built in the US in recent years, four proposed coal plants have been canceled or delayed. The reality is the US power sector is undergoing a dramatic transformation to decarbonize its energy offerings and sell less, not more, electricity. Examples of this shift were aplenty during the hot sweaty last days of August: Nuclear giant Exelon bought 735 megawatts of wind power in operation and another 230 megawatts under development, making it one of the nation's largest wind power providers. GE Energy broke ground on a new 183-megawatt wind power project in Idaho. Hawaii's utility regulators approved plans to sever the amount of profits the island's largest utility earns from the amount of electricity it sells, the 12th state to approve decoupling. The 468-megawatt Cape Wind project cleared a final judicial hurdle to build the nation's first offshore wind farm off the coast of Massachusetts. This shift has little to do with altruism and lots to do with long-term economics. Even without climate legislation, other market forces are compelling the industry to change. Wind and other forms of renewable energy are becoming more cost-competitive with fossil-fuel based generation, and states are setting aggressive renewable energy targets while the federal government provides financial incentives. Energy efficiency is gaining regulatory support as the lowest-cost option for meeting energy demand. Environmental rules for limiting mercury, SO2 and other air pollutants are getting tighter. And with climate legislation stalled, EPA greenhouse gas regulations are looming. Add these trends together, and it's easy to see why the traditional business model of building large fossil fuel-fired power plants to sell more electricity is becoming outdated. Among those embracing a cleaner future is Exelon CEO John Rowe, whose company has set a goal to cut its carbon emissions by 15 million tons per year by 2020, which is equivalent to taking nearly three million cars off our roads. "Whether harmful (CO2) emissions are priced or regulated, our combined capacity of nearly 19,000 megawatts of zero-emission wind, solar, hydro, landfill gas and nuclear power remains a clear competitive advantage that will only become more powerful," Rowe told the New York Times last week. Power giant Tennessee Valley Authority, whose 15,000-megawatt coal plant fleet is among the nation's largest, is also lowering its carbon exposure. Last month, TVA announced plans to ramp up energy efficiency and demand response efforts by 1,900 megawatts and idle 1,100 megawatts of coal capacity by 2015. Use of coal is already declining in the U.S., reaching its lowest level in 15 years in 2009. Bernstein Research recently forecast the retirement of about 20 percent of the nation's coal-fired capacity by 2015. But whether such forecasts become reality is difficult to know. Even without climate legislation, coal-based power production is being held somewhat in check by low prices for natural gas, a cleaner fossil fuel that emits roughly half the CO2 as coal when it is burned. But this is a temporary solution and pollution reduction gains could easily be eclipsed if gas prices rise again. What's required now is continued support that accelerates the development of renewable energy and new EPA pollution rules that spur innovation in the power sector. The long-term solution, however, is in the hands of Congress. The longer it delays passing national legislation to reduce carbon emissions and provide clarity for the industry, the greater the temptation for utilities to cling to the past with old dirty technologies -- stalling the promising paradigm shift now sweeping the industry.

### Environment Defense

Humans adapt to environment destruction.

Rose 4 – Professor Ecology and Evolutionary Biology @ UC Irvine, Michael, Extinction: Evolution and the End of Man, The Historian, Vol.66

He may well be right about our immediate extinction, but this book does not amount to a lawyer's brief for his conclusion. One would have to accept his Spenglerian sense of inevitability to be affrighted by his reasoning. It is important to realize that his morbid inference applies with equal force to every ungulate, great ape, and bear on the planet. Boulter's interpretation of the fossil data is that all large mammals are about to go extinct, including humans. He does not address the substantial difference between humans and other large mammals with respect to adaptability. He hardly considers the alternative view that the human species is an ineradicable scourge for the planet, given our ability to live in a wide diversity of habitats while feeding on a broad spectrum of species, from vegetables to vertebrates. Boulter repeatedly fails to address obvious arguments against his thesis. This is a pity because there is no more important issue than the continued survival of our species.

Environmental destruction won’t cause extinction.

Doremus 2k – Holly, Professor of Law at UC Davis, Washington & Lee Law Review, "The Rhetoric and Reality of Nature Protection: Toward a New Discourse," 57 Wash & Lee L. Rev. 11, Winter, ln

Reluctant to concede such losses, tellers of the ecological horror story highlight how close a catastrophe might be, and how little we know about what actions might trigger one. But the apocalyptic vision is less credible today than it seemed in the 1970s. Although it is clear that the earth is experiencing a mass wave of extinctions, n213 the complete elimination of life on earth seems unlikely.  n214 Life is remarkably robust. Nor is human extinction probable any time soon. Homo sapiens is adaptable to nearly any environment. Even if the world of the future includes far fewer species, it likely will hold people.  n215  [\*47]  One response to this credibility problem tones the story down a bit, arguing not that humans will go extinct but that ecological disruption will bring economies, and consequently civilizations, to their knees. n216 But this too may be overstating the case. Most ecosystem functions are performed by multiple species. This functional redundancy means that a high proportion of species can be lost without precipitating a collapse.  n217 Another response drops the horrific ending and returns to a more measured discourse of the many material benefits nature provides humanity. Even these more plausible tales, though, suffer from an important limitation. They call for nature protection only at a high level of generality. For example, human-induced increases in atmospheric carbon dioxide levels may cause rapid changes in global temperatures in the near future, with drastic consequences for sea levels, weather patterns, and ecosystem services. n218 Similarly, the loss of large numbers of species undoubtedly reduces the genetic library from which we might in the future draw useful resources.  n219 But it is difficult to translate these insights into convincing arguments against any one of the small local decisions that contribute to the problems of global warming or biodiversity loss.  n220 It is easy to argue that the material impact of any individual decision to increase carbon emissions slightly or to destroy a small amount of habitat will be small. It is difficult to identify the specific straw that will break the camel's back. Furthermore, no unilateral action at the local or even national level can solve these global problems. Local decisionmakers may feel paralyzed by the scope of the problems, or may conclude that any sacrifices they might make will go unrewarded if others do not restrain their actions. In sum, at the local level at which most decisions affecting nature are made, the material discourse provides little reason to save nature. Short of the ultimate catastrophe, the material benefits of destructive decisions frequently will exceed their identifiable material costs.  n221

Empirics are on our side.

Maier 9 – Env Scholar @ U of St Francis, Don, “What’s So Good About Biodiversity?”, Paper presented to the 6th Annual Joint International Society for Environmental Philosophy/ISEE Conferencehttp://www.environmentalphilosophy.org/ISEEIAEPpapers/2009/Maier.pdf

One might insist that the concern for biodiversity should be restricted even further – to the sustaining of life (just) as we know it right now in the early 21st century. But with this additional restriction, we have finally reached a confluence with the just-so model of biodiversity value and its attendant problems – discussed in Section 4.1.4 on "The just-so model". Yet another reworking of Noss' statement would place a different restriction on biodiversity – as that which sustains human life. But an historical perspective shows that none of the transformational changes in the kinds that are diverse, as well as changes in the diversity itself – have prevented humanity from emerging from a bottleneck population of perhaps 10,000 (or fewer) individuals some 60,000 – 70,000 years ago, to grow to its current population size, now nearing 7 billion, and become the world's apex species to boot. That is not just "sustaining human life". It is a spectacular flourishing of a species by any purely biological standard. To give it some degree of plausibility, I can only interpret this last reworking of Noss' statement as way to reinterpret the threshold model of biodiversity value. That is, at some point not yet in the experience of H. sapiens, with enough change (most likely reduction) in biodiversity, human life will not be possible – even though almost certainly other life forms will still flourish. The question then becomes, where is the threshold? Although megafauna have undoubtedly suffered globally at human hands, H. sapiens clearly has not suffered as a biological species on account of that. Moreover, we still stand at something near an all-time earth history high point in species diversity – indeed, at an all-time high for diversity considered at pretty much every taxonomic level. 147 Also, we know that some species – particularly the most adaptable generalists such as H. sapiens – have often survived dramatic extinction events and squeezed through the narrowest of population bottlenecks. As a result, the most straightforward inductions argue against any immediate danger to the continuation of human life

### Technology Solves Enviro

Technology insulates us from environmental damage.

Stossel 7 – John, Environmental Alarmists Have It Backwards, 4-25, real clear politics, http://www.realclearpolitics.com/articles/2007/04/how\_about\_economic\_progress\_da.html

Watching the media coverage, you'd think that the earth was in imminent danger -- that human life itself was on the verge of extinction. Technology is fingered as the perp. Nothing could be further from the truth. John Semmens of Arizona's Laissez Faire Institute points out that Earth Day misses an important point. In the April issue of The Freeman magazine, Semmens says the environmental movement overlooks how hospitable the earth has become -- thanks to technology. "The environmental alarmists have it backwards. If anything imperils the earth it is ignorant obstruction of science and progress. ... That technology provides the best option for serving human wants and conserving the environment should be evident in the progress made in environmental improvement in the United States. Virtually every measure shows that pollution is headed downward and that nature is making a comeback." (Carbon dioxide excepted, if it is really a pollutant.) Semmens describes his visit to historic Lexington and Concord in Massachusetts, an area "lush with trees and greenery." It wasn't always that way. In 1775, the land was cleared so it could be farmed. Today, technology makes farmers so efficient that only a fraction of the land is needed to produce much more food. As a result, "Massachusetts farmland has been allowed to revert back to forest." Human ingenuity and technology not only raised living standards, but also restored environmental amenities. How about a day to celebrate that?

Technology prevents human extinction.

Powers, August 9, 2002 Lawrence W., Professor of Natural Sciences Oregon Institute of Technology “Humans, Alas, May Survive the Next Mass Extinction”

 Mass extinctions appear to result from major climatic changes or catastrophes, such as asteroid impacts. As far as we know, none has resulted from the activities of a species, regardless of predatory voracity, pathogenicity, or any other interactive attribute. We are the first species with the potential to manipulate global climates and to destroy habitats, perhaps even ecosystems -- therefore setting the stage for a sixth mass extinction. According to Boulter, this event will be an inevitable consequence of a "self-organized Earth-life system." This Gaia-like proposal might account for many of the processes exhibited by biological evolution before man's technological intervention, but ... the rules are now dramatically different. ... Many species may vanish, ... but that doesn't guarantee, unfortunately, that we will be among the missing. While other species go bang in the night, humanity will technologically isolate itself further from the natural world and will rationalize the decrease in biodiversity in the same manner as we have done so far. I fear, that like the fabled cockroaches of the atomic age, we may be one of the last life-forms to succumb, long after the "vast tracts of beauty" that Boulter mourns we will no longer behold vanish before our distant descendants' eyes.

### Species Defense

Species loss has no impact and is slow.

Sagoff 97 – U Maryland School of Public Affairs Institute for Philosophy and Public policy Senior Research Scholar, Mark, “INSTITUTE OF BILL OF RIGHTS LAW SYMPOSIUM DEFINING TAKINGS: PRIVATE PROPERTY AND THE FUTURE OF GOVERNMENT REGULATION: MUDDLE OR MUDDLE THROUGH? TAKINGS JURISPRUDENCE MEETS THE ENDANGERED SPECIES ACT”, 38 Wm and Mary L. Rev. 825, Lexis

Somewhat fewer than 1,000 domestic species are listed as endangered, and roughly one third that number or more are considered threatened or in jeopardy. n335 In biodiversity-rich California, the problem is particularly troubling. About one third of the species in jeopardy in the United States reside in California, and of these approximately 125 are listed as endangered. n336 Although these grim statistics should appall us for ethical reasons, we may wonder if the extinction of hundreds of species in California and thousands nationwide will cause any harm to human welfare. If any of these extinct species had a known economic use, for example, as crops, we would be able to judge the value of the species in terms of its market price. As a rule, creatures that have a direct economic use, such as crops, have habitats created for them (e.g., farms) rather than taken from them. The economic benefits, if any, that flow from endangered species are indirect and not likely to fetch a market price. To estimate the economic value of such an endangered species we must determine its worth "at the margin," in other words, in relation to the cost of obtaining the least expensive substitute species that performs the same function or service. Suppose, for example, that the American burying beetle, a marvelous but endangered creature, n337 functions in the ecosystem by decomposing the corpses of small animals. We would ask to what expense we must go to find a different kind of beetle or some other animal ready, willing, and able to do the same work of decomposing [\*904] small corpses. Nothing can be assessed economically except at the margin, that is, in relation to the price of substitutes. "Healthy ecosystems carry out a diverse array of processes that provide both goods and services to humanity," observed the Ecological Society of America in a recent report. n338 Ecosystem services, according to the report, include: "Maintaining hydrological cycles[;] [r]egulating climate; [c]leansing water and air; [m]aintaining the gaseous composition of the atmosphere; [p]ollinating crops and other important plants[;] [g]enerating and maintaining soils[;] [s]toring and cycling essential nutrients; [a]bsorbing and detoxifying pollutants[;] [and] [p]roviding beauty, inspiration, and research[.]" n339 For one reason or another, no extinction of any species in the United States seems thus far to have altered the capacity of the ecosystems to provide these services. The reason may be that for any species that is lost, tens, hundreds, or thousands of others are ready, willing, and able to perform the same functions and services valuable to human beings. Perhaps twenty species of birds have vanished in the United States since 1492; of those, fifteen have vanished in Hawaii. n340 What specific losses in ecosystem services, such as those listed above, have occurred as a result? Mammals that have become extinct include Goof's pocket gopher, Shaman's pocket gopher, and the Tacoma pocket gopher-all of which disappeared this century. "The loss of a species from a particular area may have little or no net effect on the ability of the ecosystem to perform its ecological processes if competitors take the species' place." n341 Has any ecosystem service diminished owing to the loss of these gophers? Or have other species, including many other kinds of gophers, simply taken their place? [\*905] To be sure, if extinctions continue at present rates indefinitely, at some point there may be too few viable species ready, willing, and able to substitute for those that have been lost. How much of a "buffer" exists? How many "extra" rivets are in the wings? Many ecologists follow Paul Ehrlich, Peter Raven, and others in declaring that with every extinction we run the risk of calamitous damage to the environment. n342 Although one may agree with ecologists such as Ehrlich and Raven that the earth stands on the brink of an episode of massive extinction, it may not follow from this grim fact that human beings will suffer as a result. On the contrary, skeptics such as science writer Colin Tudge have challenged biologists to explain why we need more than a tenth of the 10 to 100 million species that grace the earth. Noting that "cultivated systems often out-produce wild systems by 100-fold or more," Tudge declared that "the argument that humans need the variety of other species is, when you think about it, a theological one." n343 Tudge observed that "the elimination of all but a tiny minority of our fellow creatures does not affect the material well-being of humans one iota." n344 This skeptic challenged ecologists to list more than 10,000 species (other than unthreatened microbes) that are essential to ecosystem productivity or functioning. n345 "The human species could survive just as well if 99.9% of our fellow creatures went extinct, provided only that we retained the appropriate 0.1% that we need." n346

### Deforestation Defense

Deforestation is rapidly reversing.

NYT 9 - New Jungles Prompt a Debate on Rain Forest, 1-29, <http://www.nytimes.com/2009/01/30/science/earth/30forest.html?pagewanted=1>

Here, and in other tropical countries around the world, small holdings like Ms. Ortega de Wing’s — and much larger swaths of farmland — are reverting to nature, as people abandon their land and move to the cities in search of better livings. These new “secondary” forests are emerging in Latin America, Asia and other tropical regions at such a fast pace that the trend has set off a serious debate about whether saving primeval rain forest — an iconic environmental cause — may be less urgent than once thought. By one estimate, for every acre of rain forest cut down each year, more than 50 acres of new forest are growing in the tropics on land that was once farmed, logged or ravaged by natural disaster. “There is far more forest here than there was 30 years ago,” said Ms. Ortega de Wing, 64, who remembers fields of mango trees and banana plants. The new forests, the scientists argue, could blunt the effects of rain forest destruction by absorbing carbon dioxide, the leading heat-trapping gas linked to global warming, one crucial role that rain forests play. They could also, to a lesser extent, provide habitat for endangered species. The idea has stirred outrage among environmentalists who believe that vigorous efforts to protect native rain forest should remain a top priority. But the notion has gained currency in mainstream organizations like the Smithsonian Institution and the United Nations, which in 2005 concluded that new forests were “increasing dramatically” and “undervalued” for their environmental benefits. The United Nations is undertaking the first global catalog of the new forests, which vary greatly in their stage of growth. “Biologists were ignoring these huge population trends and acting as if only original forest has conservation value, and that’s just wrong,” said Joe Wright, a senior scientist at the Smithsonian Tropical Research Institute here, who set off a firestorm two years ago by suggesting that the new forests could substantially compensate for rain forest destruction.

This is true in almost every part of the world – deforestation is over.

National Geographic 6 – World's Forests Rebounding, Study Suggests, 11-13, http://news.nationalgeographic.com/news/2006/11/061113-forests.html

Forests are branching out across the planet anew, raising hopes that an end to deforestation may be in sight, a new study claims. The study suggests that deforestation is not as drastic as it once was and that forests are recovering in many countries. The researchers say that over the past 15 years the amount of woodland has increased in 22 of the world's 50 most forested nations. China and the U.S. have achieved the greatest overall forest expansion, the team says, while tree cover has spread fastest in China, Vietnam, and Spain. Asia as a whole is shown to have gained 2.5 million acres (1 million hectares) of forest between 2000 and 2005. "Earth has suffered an epidemic of deforestation," said co-researcher Jesse Ausubel, from Rockefeller University in New York City. "Now humans may help spread an epidemic of forest restoration." Ausubel said the trend identified in the study could "stop the styling of a skinhead Earth" and lead to a 10 percent increase in global forest cover—an area the size of India—by 2050. The team reports its findings this week in the Proceedings of the National Academy of Sciences. Forest Density This encouraging picture of global forest growth comes from an international research team that studied data from a 2005 forest-resources assessment by the United Nations Food and Agriculture Organization (FAO). The team advocates "a more sophisticated approach" to measuring forest cover.

Secondary forests will support species.

NYT 9 - New Jungles Prompt a Debate on Rain Forest, 1-29, <http://www.nytimes.com/2009/01/30/science/earth/30forest.html?pagewanted=1>

Dr. Wright — an internationally respected scientist — said he knew he was stirring up controversy when he suggested to a conference of tropical biologists that rain forests might not be so bad off. Having lived in Panama for 25 years, he is convinced that scientific assessments of the rain forests’ future were not taking into account the effects of population and migration trends that are obvious on the ground. In Latin America and Asia, birthrates have dropped drastically; most people have two or three children. New jobs tied to global industry, as well as improved transportation, are luring a rural population to fast-growing cities. Better farming techniques and access to seed and fertilizer mean that marginal lands are no longer farmed because it takes fewer farmers to feed a growing population. Gumercinto Vásquez, a stooped casual laborer who was weeding a field in Chilibre in the blistering sun, said it had become hard for him to find work because so many farms had been abandoned. “Very few people around here are farming these days,” he said. Dr. Wright, looking at a new forest, sees possibility. He says new research suggests that 40 to 90 percent of rain-forest species can survive in new forest.

Wiping out 99% of the forest won’t destroy biodiversity

Simon 1998 (Julian, Malthus slaying economist, The Ultimate Resource II, Feb 16 www.juliansimon.com/writings/Ultimate\_Resource/TCHAR31.txt)

Projected change in the amount of tropical forests implicitly underlies the difference between past and projected species-loss rates in Lovejoy's diagram. But to connect this element logically, there must be systematic evidence relating an amount of tropical forest removed to a rate of species reduction. Against the theory, Ariel Lugo details the situation in Puerto Rico, where "human activity reduced the area of primary forests by 99%, but, because of coffee shade and secondary forests, forest cover was never below 10 to 15%. This massive forest conversion did not lead to a correspondingly massive species extinction, certainly nowhere near the 50% alluded to by Myers."

Rainforests not key to oxygen or carbon.

Barry, 2000 (Wigmore, “Eco-scientists deny Amazon extinction,” Human Events, June 9, http://findarticles.com/p/articles/mi\_qa3827/is\_200006/ai\_n8914244/)

"This lungs of the earth business is nonsense, the daftest of all theories," Stott adds. "If you want to put forward something which, in a simple sense, shows you what's wrong with all the science they espouse, it's that image of the lungs of the world. "In fact, because the trees fall down and decay, rainforests actually take in slightly more oxygen than they give out. Rainforests Not 'Lungs of the Earth' "The idea of them soaking up carbon dioxide and giving out oxygen is a myth. It's only fast-growing young trees that actually take up carbon dioxide," Stott says. "In terms of world systems, the rainforests are basically irrelevant World weather is governed by the oceans-that great system of ocean atmospherics. "Most things that happen on land are mere blips to the system, basically insignificant," he says. Both scientists say the argument that the cure for cancer could be hidden in a rainforest plant or animal-while plausible is also based on false science because the sea holds more mysteries of life than the rainforests. And both say fears that man is destroying this raw source of medicine are unfounded because the rainforests are remarkably healthy. "They are just about the healthiest forests in the world. This stuff about them vanishing at an alarming rate is a con based on bad science," Moore says. "Anyone who has been in the jungle knows that if you want to live there you'd better take a few machetes. Otherwise, it'll take it all back."

### Ozone Defense

Ozone is fine

Pearce 10 – Sr Environmental Correspondent for New Scientist, Fred, Earth's nine lives, New Scientist, 2/27, Vol. 205, Issue 2749

The world acted quickly to heal the hole. With most of the culprit chemicals now banned, the worst of the danger has passed. It is not over entirely, however. One concern is global warming. Trapping more heat close to the Earth's surface leaves the stratosphere colder. This means that the Arctic stratosphere could get cold enough in coming years for the remaining ozone-eating chemicals in the atmosphere to open up an ozone hole over the northern continents. Away from the poles we look safe, unless there is some unknown quirk of atmospheric chemistry waiting to trip us up. Rockström and Paul Crutzen of the Potsdam Institute for Climate Impact Research in Germany - who won his Nobel prize for ozone-layer chemistry - recommend preventing stratospheric ozone concentrations outside the polar regions from falling by more than 5 per cent, or below a global average of 276 Dobson units (a measurement of the density of stratospheric ozone). With the concentrations of ozone-eaters still falling, it seems likely that we will stay within this planetary boundary.

## \*\*\*Warming\*\*\*

### Growth Solves Warming

Growth prevents warming from causing extinction.

Switkowski 10 - Former research physicist, is the chairman of the Australian Nuclear Science and Technology Organisation and a former chief executive of the Australian telecommunications company Telstra, Ziggy, Innovation has climate change in hand, Cosmos, 2-3, http://www.cosmosmagazine.com/features/online/3283/innovation-will-produce-solutions-climate-change-problem?page=0%2C0

The combination of slowing population growth, closing the lifestyle gap with the West and the arrival of new clean energy systems supplying more efficient products and processes could stabilise greenhouse effects by century end. Along the way, adapting to climate changes is a matter of resources and resolve - barriers can be built to withstand sea-level rises, emergency services can be improved, property and personnel can be better protected, and so on. But the legacy of generations of excessive emissions remains: our climate and environment will be highly stressed and may yet be locked into a runaway warming trajectory. A key headline claim is that the 200-year industrial era has brought the planet to within 100 years of irreversible climate catastrophe and that the responsibility lies with today's generation to prevent such a cataclysmic situation. This conclusion rests on the assumption that the risk of climate catastrophe is growing faster than the rate at which technology can be developed to mitigate this risk. Is this a reasonable assumption? The U.S. National Academy of Engineering recently produced a list of the most significant technical advances of the 20th century. The top 10 included: electrification, automobiles, airplanes, water supply and distribution, electronics, radio and television, agricultural mechanisation, computers, telephony, air conditioning and refrigeration (the early Internet appeared at No. 13). Might the 21st century of innovation produce an even more influential list that, if appropriately prioritised, includes the tools to address global warming before runaway effects occur? Today, even seemingly permanent damage such as species extinction appears addressable with emerging gene technology. Tomorrow, geo-engineering (extracting greenhouse gases from the atmosphere), soil sequestration and non-fossil fuel systems may give us all the answers. Is it a modern vanity to presume we must solve technological challenges today that will seem trivial to society next century, especially if our history of technical innovation continues? (Afterall, as environmental scientist Jesse Ausubel from The Rockefeller University, New York City, noted "At the start of the 20th century there was widespread concern that horse manure and chimney smoke would bury or choke cities.") This reasoning does not suggest global inaction but emphasises the key role that public policy, innovation, research and development must play. Climate change should be a global priority that leads to collaborative focused research efforts to find solutions. Australia's leadership in carbon capture and storage technology is one good example of this. Nations have to be wealthy enough to make the required long-term investments in R&D. In any policy choice between economic growth and more conservative, restricted lifestyles, go for growth and wealth creation supporting a culture of innovation every time.

### Growth Solves Warming

Growth solves the environment, economic collapse increases destruction

Anderson, 04 - fellow at the Hoover Institution, (Terry, Hoover Digest, Summer, ) <<http://www.perc.org/publications/articles/econ_growth.php>>

Market forces also cause economic growth, which in turn leads to environmental improvements. Put simply, poor people are willing to sacrifice clean water and air, healthy forests, and wildlife habitat for economic growth. But as their incomes rise above subsistence, "economic growth helps to undo the damage done in earlier years," says economist Bruce Yandle. "If economic growth is good for the environment, policies that stimulate growth ought to be good for the environment." The link between greenhouse gas emissions and economic prosperity is no different. Using data from the United States, Professor Robert McCormick finds that "higher GDP reduces total net [greenhouse gas] emissions." He goes a step further by performing the complex task of estimating net U.S. carbon emissions. This requires subtracting carbon sequestration (long-term storage of carbon in soil and water) from carbon emissions. Think of it this way: When you build a house, the wood in it stores carbon. In a poor country that wood would have been burned to cook supper or to provide heat, thus releasing carbon into the atmosphere. McCormick shows that economic growth in the United States has increased carbon sequestration in many ways, including improved methods of storing waste, increased forest coverage, and greater agricultural productivity that reduces the acreage of cultivated land. Because rich economies sequester more carbon than poor ones, stored carbon must be subtracted from emissions to determine an economy's net addition to greenhouse gas emissions. McCormick's data show that "rich countries take more carbon out of the air than poorer ones" and that "the growth rate of net carbon emission per person will soon be negative in the United States." Put differently—richer may well be cooler.

### DeDev Worse for Climate

De-dev makes warming worse.

Dickinson 8 - Pete, “Will the downturn save the planet? – A green new deal?” Socialist Alternative, 12-24, http://www.socialistalternative.org/news/article19.php?id=981

On the face of it, these figures seem to indicate that there is, indeed, a possibility of serious reductions in greenhouse gasses due to the economic crisis, even if it is significantly less than the extreme example of Russia. A closer look, however, reveals that it is unlikely that an economic downturn will significantly mitigate climate change effects, particularly in the medium or long term, for several reasons. Firstly, Crutzen, in addition to predicting falling emissions due to the crisis, also made the point that the downturn could result in less being spent on research, which could make global warming worse, a fear that is already being justified. Latest figures show that global investment by firms in renewable technology has slumped, even before the current deepening of the crisis, falling 24% from the second to the third quarter of this year, from $5.8 billion to $4.4 billion (Financial Times, November 11). The markets clearly see no future in green technology in the short term, either, as various indices of share values in the sector have fallen from between 50-80% over the past twelve months. Market forces are now working strongly against renewables, with the fall in the price of oil undermining profitability projections and the credit crunch cutting off access to funding for new projects. In California, a leading renewables firm, Ausra, had plans to raise money to develop a promising new type of solar energy. This is called solar thermal power, that uses mirrors to concentrate the sun’s rays to heat water to use in turbines to generate electricity, which could turn out to be far cheaper than solar panels. Now, sources of finance have dried up. The second reason not to expect the crisis to solve global warming is that production in the Soviet Union was heavily biased to highly polluting "smokestack" industries, whereas in the G7 countries, which account for most of world production, output is much more oriented to services, IT and consumer goods. For this reason, any downturn will result in much smaller reductions in emissions, since these sectors are very significantly less energy intensive. Thirdly, the scale of a downturn is extremely unlikely to approach that of the Soviet catastrophe. To get a comparison, output in the USA in the Great Depression fell by about one third – significantly less in some countries such as Britain. On a world scale, the economy in the 1930s fell by a fraction of that in the Soviet Union in the 1990s. Also, while a slump rather than a recession may still happen today, the lessons that have been learnt by the bourgeoisie since mean that a downturn probably will not happen on a similar scale to the 1930s. For example, policy interventions in downturns since the second world war have resulted in world production falling only once, in 1975/76, and then only marginally. An uncertain factor is China, which has become the world’s biggest emitter of global warming gasses, partly by expanding energy intensive industries such as steel in the past seven years. There is some evidence now that a significant fall in production is taking place. If this is repeated across other previously rapidly expanding energy guzzling sectors in China, significant falls in greenhouse gasses could happen. However, the Chinese government has just launched a stimulus package, which has got massive accumulated resources to back it up, and which could significantly mitigate any overall fall in production in that country. Even if a deep slump unfortunately does occur, following the suffering and devastation, at some point an upturn will take place that will reverse ultimately any falls that had taken place in greenhouse gasses, if the capitalist system is allowed to continue. Also, whatever the severity of the economic crisis, there are enough global warming gasses trapped in the atmosphere already to drive global temperature rises for decades to come. The reality is that there is no way to deal with climate change except through the transformation of the mode of production, the global application of sustainable technologies (see Planning Green Growth, by Pete Dickenson, Socialist Publications and CWI, 2003).

### DeDev Can’t Solve Warming

Collapse won’t solve the environment

Dickinson, 12/24/2008 (Pete, “Will the downturn save the planet? – A green new deal?” Socialist Alternative, http://www.socialistalternative.org/news/article19.php?id=981)

On the face of it, these figures seem to indicate that there is, indeed, a possibility of serious reductions in greenhouse gasses due to the economic crisis, even if it is significantly less than the extreme example of Russia. A closer look, however, reveals that it is unlikely that an economic downturn will significantly mitigate climate change effects, particularly in the medium or long term, for several reasons. Firstly, Crutzen, in addition to predicting falling emissions due to the crisis, also made the point that the downturn could result in less being spent on research, which could make global warming worse, a fear that is already being justified. Latest figures show that global investment by firms in renewable technology has slumped, even before the current deepening of the crisis, falling 24% from the second to the third quarter of this year, from $5.8 billion to $4.4 billion (Financial Times, November 11). The markets clearly see no future in green technologyin the short term, either, as various indices of share values in the sector have fallen from between 50-80% over the past twelve months. Market forces are now working strongly against renewables, with the fall in the price of oil undermining profitability projections and the credit crunch cutting off access to funding for new projects. In California, a leading renewables firm, Ausra, had plans to raise money to develop a promising new type of solar energy. This is called solar thermal power, that uses mirrors to concentrate the sun’s rays to heat water to use in turbines to generate electricity, which could turn out to be far cheaper than solar panels. Now, sources of finance have dried up. The second reason not to expect the crisis to solve global warming is that production in the Soviet Union was heavily biased to highly polluting "smokestack" industries, whereas in the G7 countries, which account for most of world production, output is much more oriented to services, IT and consumer goods. For this reason, any downturn will result in much smaller reductions in emissions, since these sectors are very significantly less energy intensive. Thirdly, the scale of a downturn is extremely unlikely to approach that of the Soviet catastrophe. To get a comparison, output in the USA in the Great Depression fell by about one third – significantly less in some countries such as Britain. On a world scale, the economy in the 1930s fell by a fraction of that in the Soviet Union in the 1990s. Also, while a slump rather than a recession may still happen today, the lessons that have been learnt by the bourgeoisie since mean that a downturn probably will not happen on a similar scale to the 1930s. For example, policy interventions in downturns since the second world war have resulted in world production falling only once, in 1975/76, and then only marginally. An uncertain factor is China, which has become the world’s biggest emitter of global warming gasses, partly by expanding energy intensive industries such as steel in the past seven years. There is some evidence now that a significant fall in production is taking place. If this is repeated across other previously rapidly expanding energy guzzling sectors in China, significant falls in greenhouse gasses could happen. However, the Chinese government has just launched a stimulus package, which has got massive accumulated resources to back it up, and which could significantly mitigate any overall fall in production in that country. Even if a deep slump unfortunately does occur, following the suffering and devastation, at some point an upturn will take place that will reverse ultimately any falls that had taken place in greenhouse gasses, if the capitalist system is allowed to continue. Also, whatever the severity of the economic crisis, there are enough global warming gasses trapped in the atmosphere already to drive global temperature rises for decades to come. The reality is that there is no way to deal with climate change except through the transformation of the mode of production, the global application of sustainable technologies (see Planning Green Growth, by Pete Dickenson, Socialist Publications and CWI, 2003).

### DeDev Can’t Solve Warming

Dedev can’t prevent us from crossing the tipping point—its inevitable.

Washington Post, 2008 (Juliet Eilperin, “Carbon is building up in atmosphere faster than predicted,” September 26, http://www.washingtonpost.com/wp-dyn/content/article/2008/09/25/AR2008092503989.html)

Moreover, new scientific research suggests Earth is already destined for a greater worldwide temperature rise than previously predicted. Last month, two scientists from the Scripps Institution of Oceanography and the University of California at San Diego published research showing that even if humans stopped generating greenhouse gases immediately, the world's average temperature would "most likely" increase by 4.3 degrees Fahrenheit by the end of this century. Writing in the journal Proceedings of the National Academy of Sciences, they based their calculations on the fact that new air-quality measures worldwide are reducing the amount of fine particles, or aerosols, in the atmosphere and diminishing their cooling effect. The IPCC has warned that an increase of between 3.2 and 9.7 degrees Fahrenheit could trigger massive environmental changes, including major melting of the Greenland ice sheet, the Himalayan-Tibetan glaciers and summer sea ice in the Arctic. The prediction that current emissions put the planet on track for a temperature rise of more than 11 degrees Fahrenheit, Le Quéré said, means the world could face a dangerous rise in sea level as well as other drastic changes. Richard Moss, vice president and managing director for climate change at the World Wildlife Fund, said the new carbon figures and research show that "we're already locked into more warming than we thought." "We should be worried, really worried," Moss said. "This is happening in the context of trying to reduce emissions." The new data also show that forests and oceans, which naturally take up much of the carbon dioxide humans emit, are having less impact. These "natural sinks" have absorbed 54 percent of carbon dioxide emissions since 2000, a drop of 3 percent compared with the period between 1959 and 2000.

### Warming Defense

Warming will be small.

Nature 12—Warming, but not as much, Nature 481, 413 (26 January 2012), http://www.nature.com/nature/journal/v481/n7382/full/481413e.html?WT.ec\_id=NATURE-20120126

The climate system may be less sensitive to greenhouse-gas warming than many models have predicted. Nathan Gillett and his co-workers at Environment Canada in Victoria, British Columbia, analysed how well the latest Canadian Earth System Model tracked temperature changes attributable to volcanoes, man-made aerosols and rising greenhouse-gas emissions. They adjusted the model using temperature records from 1851 to 2010 — 60 years of data more than most previous analyses. The model predicted a short-term increase of 1.3–1.8 °C for a doubling of atmospheric carbon dioxide levels, which is low in the range of estimates from previous forecasts.

No impact to warming.

Stampf 7—Olaf Stampf, Not the End of the World as We Know It, Der Spiegel, 5-7, http://www.spiegel.de/international/germany/0,1518,481684,00.html

The truth is probably somewhere between these two extremes. Climate change will undoubtedly have losers -- but it will also have winners. There will be a reshuffling of climate zones on earth. And there is something else that we can already say with certainty: The end of the world isn't coming any time soon. Largely unnoticed by the public, climate researchers are currently embroiled in their own struggle over who owns the truth. While some have always seen themselves as environmental activists aiming to shake humanity out of its complacency, others argue for a calmer and more rational approach to the unavoidable. One member of the levelheaded camp is Hans von Storch, 57, a prominent climate researcher who is director of the Institute for Coastal Research at the GKSS Research Center in Geesthacht in northern Germany. "We have to take away people's fear of climate change," Storch told DER SPIEGEL in a recent interview. "Unfortunately many scientists see themselves too much as priests whose job it is to preach moralistic sermons to people." Keeping a cool head is a good idea because, for one thing, we can no longer completely prevent climate change. No matter how much governments try to reduce carbon dioxide emissions, it will only be possible to limit the rise in global temperatures to about 2 degrees Celsius (3.6 degrees Fahrenheit) by the end of the century. But even this moderate warming would likely have far fewer apocalyptic consequences than many a prophet of doom would have us believe. For one thing, the more paleontologists and geologists study the history of the earth's climate, the more clearly do they recognize just how much temperatures have fluctuated in both directions in the past. Even major fluctuations appear to be completely natural phenomena. Additionally, some environmentalists doubt that the large-scale extinction of animals and plants some have predicted will in fact come about. "A warmer climate helps promote species diversity," says Munich zoologist Josef Reichholf. Also, more detailed simulations have allowed climate researchers to paint a considerably less dire picture than in the past -- gone is the talk of giant storms, the melting of the Antarctic ice shield and flooding of major cities. Improved regionalized models also show that climate change can bring not only drawbacks, but also significant benefits, especially in northern regions of the world where it has been too cold and uncomfortable for human activity to flourish in the past. However it is still a taboo to express this idea in public. For example, countries like Canada and Russia can look forward to better harvests and a blossoming tourism industry, and the only distress the Scandinavians will face is the guilty conscience that could come with benefiting from global warming. Palm Trees in Germany There is no doubt that there will be droughts in other parts of the world, especially in subtropical regions. But the widespread assumption that it is developing countries -- that is, the world's poor -- who will, as always, be the ones to suffer is incorrect. According to current predictions, precipitation in large parts of Africa will hardly decrease at all, except in the southern part of the continent. In fact, these same forecasts show the Sahel, traditionally a region beset by drought and famine, actually becoming wetter. By contrast, some wealthy industrialized nations -- in fact, those principally responsible for climate change -- will likely face growing problems related to drought. The world's new drought zones lie in the southern United States and Australia, but also in Mediterranean countries like Spain, Italy and Greece. All of this will lead to a major shift within Europe, potentially leading to tough times for southern Spain's mega-resorts and boom times for hotels along the North Sea and Baltic Sea coasts. While the bulk of summer vacationers will eventually lose interest in roasting on Spain's Costa del Sol, Mediterranean conditions could prevail between the German North Sea island of Sylt and Bavaria's Lake Starnberg. The last few weeks of spring in Germany offered a taste of what's to come, as sun-loving crowds packed Berlin's urban beach bars and Munich's beer gardens. The predicted temperature increase of 3 degrees Celsius would mean that summers in Hamburg, not far from the North Sea coast, would be as warm as they are today in the southwestern city of Freiburg, while conditions in Freiburg would be more like those in Marseille today. Germany will undoubtedly be one of the beneficiaries of climate change. Perhaps palm trees will be growing on the island of Helgoland in the North Sea soon, and German citizens will be saving billions in heating costs -- which in turn would lead to a reduction in CO2 emissions. But climate change will also have its drawbacks. While German summers will be less rainy, fall and winter rainfall in the country's north will increase by up to 30 percent -- and snow will be a thing of the past. Heavy downpours will also become more common. To avoid flooding, steps will have to be taken to provide better drainage for fields and farmlands, as well as to restore natural flood plains. Meanwhile, the Kiel Institute for World Economics warns that higher temperatures could mean thousands of heat-related deaths every year. But the extrapolations that lead to this dire prediction are based on the mortality rate in the unusually hot summer of 2003, for which Germans were wholly unprepared. But if hot summer days do become the norm, people will simply adjust by taking siestas and installing air-conditioning. The medical benefits of higher average temperatures have also been ignored. According to Richard Tol, an environmental economist, "warming temperatures will mean that in 2050 there will be about 40,000 fewer deaths in Germany attributable to cold-related illnesses like the flu.” Another widespread fear about global warming -- that it will cause super-storms that could devastate towns and villages with unprecedented fury -- also appears to be unfounded. Current long-term simulations, at any rate, do not suggest that such a trend will in fact materialize. "According to our computer model, neither the number nor intensity of storms is increasing," says Jochem Marotzke, director of the Hamburg-based Max Planck Institute for Meteorology, one of the world's leading climate research centers. "Only the boundaries of low-pressure zones are changing slightly, meaning that weather is becoming more severe in Scandinavia and less so in the Mediterranean." According to another persistent greenhouse legend, massive flooding will strike major coastal cities, raising horrific scenarios of New York, London and Shanghai sinking into the tide. However this horror story is a relic of the late 1980s, when climate simulations were far less precise than they are today. At the time, some experts believed that the Antarctic ice shield could melt, which would in fact lead to a dramatic 60-meter (197-foot) rise in sea levels. The nuclear industry quickly seized upon and publicized the scenario, which it recognized as an argument in favor of its emissions-free power plants. But it quickly became apparent that the horrific tale of a melting South Pole was nothing but fiction. The average temperature in the Antarctic is -30 degrees Celsius. Humanity cannot possibly burn enough oil and coal to melt this giant block of ice. On the contrary, current climate models suggest that the Antarctic will even increase in mass: Global warming will cause more water to evaporate, and part of that moisture will fall as snow over Antarctica, causing the ice shield to grow. As a result, the total rise in sea levels would in fact be reduced by about 5 cm (2 inches). It's a different story in the warmer regions surrounding the North Pole. According to an American study published last week, the Arctic could be melting even faster than previously assumed. But because the Arctic sea ice already floats in the water, its melting will have virtually no effect on sea levels. 'We Still Have Enough Time to React' Nevertheless, sea levels will rise worldwide as higher temperatures cause the water in the oceans to expand. In addition, more water will flow into the ocean with the gradual thawing of the Greenland ice sheet. All things considered, however, in the current IPCC report climatologists are predicting a rise in sea levels of only about 40 centimeters (16 inches) -- compared with the previous estimate of about one meter (more than three feet). A 40-centimeter rise in sea levels will hardly result in more catastrophic flooding. "We have more computer models and better ones today, and the prognoses have become more precise as a result," explains Peter Lemke of the Alfred Wegener Institute for Polar and Marine Research in the northern German port city of Bremerhaven. Some researchers do, however, estimate that regional effects could produce an 80-centimeter (31-inch) rise in the sea level along Germany's North Sea coast. This will lead to higher storm surges -- a problem the local population, already accustomed to severe weather, could easily address by building taller dikes. Another comforting factor -- especially for poorer countries like Bangladesh -- is that none of these changes will happen overnight, but gradually over several decades. "We still have enough time to react," says Storch. In short, the longer researchers allow their supercomputers to crunch the numbers, the more does the expected deluge dissipate. A rise in sea levels of several meters could only occur if Greenland were largely ice-free, but this is something scientists don't expect to happen for at least a few more centuries or even millennia. This lengthy timeframe raises the question of whether the current prognoses are even reliable.

## \*\*\*Growth Good/Impact Defense\*\*\*

### Growth K2 Hegemony

US growth key to hegemony, solves great power war.

Khalilzad 11 – Zalmay Khalilzad is a counselor at the Center for Strategic and International Studies. From 2007 to 2009, he served as U.S. permanent representative to the United Nations. He has also previously served as U.S. ambassador to Iraq, as well as U.S. ambassador to Afghanistan and also as special presidential envoy to Afghanistan,

Mearsheimer ignores positive outcomes arising from American global leadership in Europe and Asia. Successive administrations since the Cold War have sought to preclude hostile regional hegemony and expand the zone of democracy. On both continents, the United States maintained a permanent military presence, upheld its security commitments, and supported the expansion of alliances—notably NATO and EU enlargement into Eastern Europe. These policies have helped avoid resurgences of nationalism, proliferation, and arms races among major powers. They have enabled democracy and free markets to expand in Europe and Asia. Rather Mearsheimer points to U.S. troubles in the greater Middle East to justify his more general criticism of post-Cold War U.S. grand strategy. Yet, before 9/11, America acted as an offshore balancer in the region. We carried out occasional strikes against al-Qaeda sanctuaries and Iraqi regime targets in response to specific provocations. We abandoned Afghanistan after the Soviet withdrawal. And we pursued Arab-Israeli peace through energetic diplomatic engagement. Instead of empowering democratic reformers, American strategy relied on alliances with dictatorships to maintain stability. Even the policy of dual containment against Iran and Iraq—which Mearsheimer criticizes for being too interventionist—at a practical level reflected the logic of offshore balancing. The limited U.S. military presence in the region, flagging efforts to enforce the post-Gulf War ceasefire against Saddam, and minimal attempts to topple the regimes, meant in practice that regional players had to preserve the balance of power. When the George W. Bush administration entered office, it supported American global leadership, but did not believe that this strategy necessitated the occupations of Afghanistan and Iraq. The 9/11 attacks changed the strategic calculus. Addressing the region’s dysfunctionality and the extremism and terror that it produced now came front and center. The United States liberated Afghanistan out of fear that failing to confront the Taliban regime (considering its alliances with al-Qaeda and other terrorists) would lead to even more catastrophic outcomes. In the case of invading Iraq —the basic reason was that it was a festering issue that if left unattended would likely become a big strategic threat. A new set of objectives became priorities: counterterrorism, stability and democratization in Iraq and Afghanistan, containment of Iran, Israeli-Palestinian peace, and liberalization and reform of the region. Was it inevitable for the efforts in Iraq and Afghanistan to become so expensive? The costs were certainly underestimated. But the interventions have been costly due in large part to specific tactical errors that were avoidable. The United States did not train enough indigenous security forces early on, deal with terrorist sanctuaries in Pakistan, level the playing field between moderate and sectarian factions in Iraq, or pay sufficient attention to crafting political deals among local forces. Instead of dealing directly with these key decisions, Mearsheimer assumes that setbacks in the Middle East were inevitable consequences of post-Cold War U.S. grand strategy. On this faulty premise, he argues that America has overstated the threat of terrorism, that the risk of WMD terrorism or other potentially game-changing attacks are remote, and that, therefore, the United States should confront these threats via offshore balancing. He does not answer why the United States would be worse off dealing with these issues appropriately within the framework of American global leadership. U.S. grand strategy since the end of the Cold War has not fundamentally endangered American global primacy. Our current military budget as a percentage of GNP is consistent with past levels. The more serious threat to our position in the world is our continued economic problems and the rise of rival powers such as China. Whether we can address slow growth and mounting debt before they force us to retrench internationally is our test. Should we fail to get our economic house in order while others continue to grow at a rapid pace, a multipolar world may reemerge. In such a scenario, offshore balancing could be a sensible option. Shifting to an offshore-balancer role now is premature. Adopting such as strategy would accelerate the rise of multipolarity and increase the risk of conflict among major powers. Pursuing a global-leadership strategy remains the best option, albeit in a way that incorporates lessons of the past two decades. Looking ahead, future administrations should adjust specific policies to deal with changing domestic and global circumstances—the rise of China and threats resulting from globalization such as cyber attacks for example—while maintaining a grand strategy of American global leadership.

### Decline 🡪 Terrorism

The global financial crisis will intensify and create ideal breeding grounds for terrorism

Bremmer 9 (Ian, president of Eurasia Group, a political-risk consultancy, “Call: Global Recession = More Terrorism,” Foreign Affairs, 3/4/09, http://eurasia.foreignpolicy.com/posts/2009/03/04/the\_global\_recession\_heightens\_terrorist\_risks )

Across Pakistan, suicide bombers killed two people in 2005, six in 2006, 56 in 2007, and 61 in 2008. Suicide attackers killed more people in Pakistan last year than in either Iraq or Afghanistan.There are two important reasons why the threat of global terrorism is growing. The first is long-term and structural. The second is more directly tied to the global financial crisis. Both have everything to do with what's happening in Pakistan. First, a report released in December from the U.S. Commission on the Prevention of Weapons of Mass Destruction, Proliferation, and Terrorism hints at both sets of problems. The report notes an increasing supply of nuclear technology and material around the world and warns that "without greater urgency and decisive action by the world community, it is more likely than not that a weapon of mass destruction will be used in a terrorist attack somewhere in the world by the end of 2013."Destructive (and potentially destructive) technologies are now more accessible than at any time in history for small groups and even individuals. This will dramatically increase the baseline threat of disruptive violence from non-state actors over time. It's not just biological and nuclear material. GPS tracking devices help pirates operating off Somalia's coast venture further from shore and undertake increasingly ambitious attacks on private and commercial vessels.Second, it's unlikely that we'll see the "greater urgency and decisive action by the world community" called for in the report. For the moment, political leaders around the world are too busy wrestling with the effects of the global financial crisis on their domestic economies (and their political standing) to coordinate action against such a diffuse threat. But there's another reason why the financial crisis heightens the risk of global terrorism. Militants thrive in places where no one is fully in charge. The global recession threatens to create more such places. No matter how cohesive and determined a terrorist organization, it needs a supportive environment in which to flourish. That means a location that provides a steady stream of funds and recruits and the support (or at least acceptance) of the local population. Much of the counter-terrorist success we've seen in Iraq's al Anbar province over the past two years is a direct result of an increased willingness of local Iraqis to help the Iraqi army and US troops oust the militants operating there. In part, that's because the area's tribal leaders have their own incentives (including payment in cash and weaponry) for cooperating with occupation forces. But it's also because foreign militants have alienated the locals.The security deterioration of the past year in Pakistan and Afghanistan reflects exactly the opposite phenomenon. In the region along both sides of their shared border, local tribal leaders have yet to express much interest in helping Pakistani and NATO soldiers target local or foreign militants. For those with the power to either protect or betray the senior al-Qaeda leaders believed to be hiding in the region, NATO and Pakistani authorities have yet to find either sweet enough carrots or sharp enough sticks to shift allegiances. The slowdown threatens to slow the progress of a number of developing countries. Most states don't provide ground as fertile for militancy as places like Afghanistan, Somalia, and Yemen. But as more people lose their jobs, their homes, and opportunities for prosperity -- in emerging market countries or even within minority communities inside developed states -- it becomes easier for local militants to find volunteers. This is why the growing risk of attack from suicide bombers and well-trained gunmen in Pakistan creates risks that extend beyond South Asia. This is a country that is home to lawless regions where local and international militants thrive, nuclear weapons and material, a history of nuclear smuggling, a cash-starved government, and a deteriorating economy. Pakistan is far from the only country in which terrorism threatens to spill across borders

A recession now presents the ideal conditions for terrorist recruitment

The Irish Times 8 (“Leaked British Report warns recession may lead to surge in terrorism,” 9/2/08, Lexis)

An economic downturn in Britain could aggravate racial tensions and grievances that help to feed terrorist recruitment, according to a leaked British government document.The draft letter from the Home Office warned that a recession could create conditions likely to increase support for radical Islamist groups. As jobs become more scarce, "we should expect increased public hostility to migrants", said the leaked memo, entitled Responding to Economic Challenges." There is also a risk of a downturn increasing the appeal of far-right extremism and racism, which presents a threat as there is evidence that grievances based on experiencing racism are one of the factors that can lead to people becoming terrorists," the memo claimed. The warning came after British finance minister Alistair Darling said the current slump could be the worst for 60 years - increasing pressure on prime minister Gordon Brown, who is trailing the opposition Conservatives in the polls. The downturn has already seen house prices tumble, the pound fall against the dollar and economic growth grind to a halt for the first time since 1992.A Home Office spokeswoman said yesterday that the letter contained draft advice to Mr Brown's 10 Downing Street office, but was never sent."We do not normally comment on leaked documents but this is draft advice that the home secretary has not cleared and has not been sent to Number 10," the department added in a statement."It is, however, appropriate that the Home Office considers the effects the economic climate may have on crime and other policy areas."Britain has been a frequent target of plots by militant groups which accuse it of waging war against Islam by supporting the United States in the invasions of Afghanistan and Iraq.The MI5 intelligence agency has said it knows of at least 2,000 British-based individuals who pose a direct threat to national security because of their support for terrorism.In 2005, four young British Muslims with links to al-Qaeda carried out suicide bombings on London's transport network, killing 52. - (Reuters)

### Terrorism Defense

No terrorism

Mueller ‘6 – Prof. PolSci @ Ohio State, John, “Is There Still a Terrorist Threat?: The Myth of the Omnipresent Enemy”, Foreign Affairs, Sep./Oct., http://www.foreignaffairs.org/20060901facomment85501-p0/john-mueller/is-there-still-a-terrorist-threat-the-myth-of-the-omnipresent-enemy.html

One reason al Qaeda and "al Qaeda types" seem not to be trying very hard to repeat 9/11 may be thatthatdramatic act of destruction itself proved counterproductive by massively heightening concerns about terrorism around the world. No matter how much they might disagree on other issues (most notably on the war in Iraq), there is a compelling incentive for states-- even ones such as Iran, Libya, Sudan, and Syria -- to cooperate in cracking down on al Qaeda, because they know that they could easily be among its victims.The FBI may not have uncovered much of anything within the United States since 9/11, but thousands of apparent terrorists have been rounded, or rolled, up overseas with U.S. aid and encouragement. Although some Arabs and Muslims took pleasure in the suffering inflicted on 9/11 -- Schadenfreude in German, shamateh in Arabic -- the most common response amongjihadistsand religious nationalists was a vehement rejection of al Qaeda's strategy and methods. When Soviet troops invaded Afghanistan in 1979, there were calls for jihad everywhere in Arab and Muslim lands, and tens of thousands flocked to the country to fight the invaders. In stark contrast, when the U.S. military invaded in 2001 to topple an Islamist regime, there was, as the political scientist FawazGerges points out, a "deafening silence" from the Muslim world, and only a trickle of jihadists went to fight the Americans. Other jihadists publicly blamed al Qaeda for their post-9/11 problems and held the attacks to be shortsighted and hugely miscalculated.The post-9/11 willingness of governments around the world to take on international terrorists has been much reinforced and amplified by subsequent, if scattered, terrorist activity outside the United States. Thus, a terrorist bombing in Bali in 2002 galvanized the Indonesian government into action. Extensive arrests and convictions -- including of leaders who had previously enjoyed some degree of local fame and political popularity -- seem to have severely degraded the capacity of the chief jihadist group in Indonesia, Jemaah Islamiyah. After terrorists attacked Saudis in Saudi Arabia in 2003, that country, very much for self-interested reasons, became considerably more serious about dealing with domestic terrorism; it soon clamped down on radical clerics and preachers. Some rather inept terrorist bombings in Casablanca in 2003 inspired a similarly determined crackdown by Moroccan authorities. And the 2005 bombing in Jordan of a wedding at a hotel (an unbelievably stupid target for the terrorists) succeeded mainly in outraging the Jordanians: according to a Pew poll, the percentage of the population expressing a lot of confidence in bin Laden to "do the right thing" dropped from 25 percent to less than one percent after the attack.

Terrorism Overexaggerated

Mueller ‘6 – Prof. PolSci @ Ohio State, John, “Is There Still a Terrorist Threat?: The Myth of the Omnipresent Enemy”, Foreign Affairs, Sep./Oct., http://www.foreignaffairs.org/20060901facomment85501-p0/john-mueller/is-there-still-a-terrorist-threat-the-myth-of-the-omnipresent-enemy.html

A fully credible explanation for the fact that theUnited States has suffered no terrorist attacks since 9/11 is that the threat posed by homegrown or imported terrorists -- like that presented by Japanese Americans during World War II or by American Communists after it -- has been massively exaggerated. Is it possible that the haystack is essentially free of needles?The FBI embraces a spooky I-think-therefore-they-are line of reasoning when assessing the purported terrorist menace. In 2003, its director, Robert Mueller, proclaimed, "The greatest threat is from al Qaeda cells in the U.S. that we have not yet identified." He rather mysteriously deemed the threat from those unidentified entities to be "increasing in part because of the heightened publicity" surrounding such episodes as the 2002 Washington sniper shootings and the 2001 anthrax attacks (which had nothing to do with al Qaeda). But in 2001, the 9/11 hijackers received no aid from U.S.-based al Qaeda operatives for the simple reason that no such operatives appear to have existed. It is not at all clear that that condition has changed.Mueller also claimed to know that "al Qaeda maintains the ability and the intent to inflict significant casualties in the U.S. with little warning." If this was true -- if the terrorists had both the ability and the intent in 2003, and if the threat they presented was somehow increasing -- they had remained remarkably quiet by the time the unflappable Mueller repeated his alarmist mantra in 2005: "I remain very concerned about what we are not seeing."Intelligence estimates in 2002 held that there were as many as 5,000 al Qaeda terrorists and supporters in theUnited States. However, a secret FBI report in 2005 wistfully noted that although the bureau had managed to arrest a few bad guys here and there after more than three years of intense and well-funded hunting, it had been unable to identifya single trueal Qaeda sleeper cell anywhere in the country.Thousands of people in the United States have had their overseas communications monitored under a controversial warrantless surveillance program. Of these, fewer than ten U.S. citizens or residents per year have aroused enough suspicion to impel the agencies spying on them to seek warrants authorizing surveillance of their domestic communications as well; none of this activity, it appears, has led to an indictment on any charge whatever.In addition to massive eavesdropping and detention programs, every year some 30,000 "national security letters"are issued without judicial review, forcingbusinesses and other institutions to disclose confidential information about their customers without telling anyone they have done so. Thatprocess has generated thousands of leads that, when pursued, have led nowhere. Some 80,000 Arab and Muslim immigrants have been subjected to fingerprinting and registration, another 8,000 have been called in for interviews with the FBI, and over 5,000 foreign nationals have been imprisoned in initiatives designed to prevent terrorism. This activity, notes the Georgetown University law professor David Cole, has not resulted in a single conviction for a terrorist crime. In fact, only a small number of people picked up on terrorism charges -- always to great official fanfare -- have been convicted at all, and almost all of these convictions have been for other infractions, particularly immigration violations. Some of those convicted have clearly been mental cases or simply flaunting jihadist bravado -- rattling on about taking down the Brooklyn Bridge with a blowtorch, blowing up the Sears Tower if only they could get to Chicago, beheading the prime minister of Canada, or flooding lower Manhattan by somehow doing something terrible to one of those tunnels.

### Decline 🡪 Disease

Economic downturns divert funds from disease treatment

Skirble, 09 (Rosanne- reporter for the Voice of America, VOA “Economic Downturn Threatens Global Fund for AIDS, TB, Malaria” 04 February 2009, http://www.voanews.com/english/archive/2009-02/2009-02-04-voa23.cfm?CFID=256884522&CFTOKEN=31 541345&jsessionid=de307b49f1da35d5dbcd4a1e52696331c2f6)

As world leaders grapple with the global financial crisis, the world's largest source of funds to combat killer diseases is facing a crisis of its own. The Global Fund to Fight AIDS, Tuberculosis and Malaria supplies one-quarter of all AIDS funding, two-thirds of tuberculosis funding and three-fourths of malaria funding. A $5 billion funding gap now threatens this institution's worldwide programs. Every year since 2001, leaders from the world's wealthier nations have renewed their commitments to fund all approved disease treatment, prevention and research programs in poor countries. According to Jeffrey Sachs, a special United Nations advisor and director of the Earth Institute at Columbia University, the Global Fund was designed to keep the promises made to the world's poor to help them fight AIDS, TB and malaria. Sachs says that despite the urgency of its mission, the Global Fund has been forced by the recession-pinched budgets of its donor countries to cut back or delay funding. "It already cut by 10 percent the budgets for the approved plans. And it's warned that it would have to cut by 25 percent the second half of those plans," he says. The current funding cycle has been postponed for several months, which he says, "puts at risk the malaria control effort." The cutbacks are all the more distressing to Global Fund supporters because in its relatively short life, the organization has reported remarkable progress against killer diseases. For example, malaria deaths are down 66 percent in Rwanda and 80 percent in Eritrea over the past five years. Peter Chernin is one of a number of business leaders who've supported a $100 million campaign to fight the malaria pandemic in Africa. He says the disease has cost industry on the continent about $12 billion in lost worker productivity. "And [with] just a fraction of that investment, we can end malaria deaths and remove a major obstacle to economic development." Keeping up the fight against killer diseases like malaria, TB and AIDS is essential to the economic development of poor nations, says Sachs. And it's just bad economic policy, he believes, to cut long-term investments in development for near-term savings. "For Africa to be a full trading partner, one that could be picking up the slack by buying our goods and being a full productive part of the world economy, [it] requires that these diseases be brought under control.

Economic decline leads to disease spread

Alexander, 9 (Brian, “Recession may worsen spread of exotic diseases,” msnbc, www.msnbc.msn.com/id/29599786)

To most Americans, diseases with names like dengue fever, chikungunya, malaria, Chagas and leishmaniasis might sound like something out of a Victorian explorer’s tales of hacking through African jungles. Yet ongoing epidemics of these diseases are killing millions of people around the world. Now, disease experts are increasingly concerned these and other infections may become as familiar in the United States as West Nile or Lyme disease. Few believe Americans face a killer epidemic from tropical diseases. But scientists who specialize in emerging infectious diseases say such illnesses may become more common here as the economic downturn batters an already weakened public health system, creating environmental conditions conducive to infectious diseases spread by insects or other animals. At the same time, such vector-borne diseases are capable of spreading around the world much more rapidly due to massive south-to-north immigration, rapid transportation, and global trade.

Economic decline causes disease spread

Dr Andrew Robertson, [an editorial published online in Emerging Health Threats Journal. In Physorg.com] June 12th, 2009 (“Economic downturn will have severe, far-reaching effects on global health

“)http://www.physorg.com/news163993567.html

There are concerns that the financial crisis has already hit tuberculosis control, which has global ramifications, says Robertson.“There are already indications that funding for TB diagnosis and management is decreasing in developing countries and a surge of new cases there may flow onto the US and other countries,” he says.Healthcare in developed countries will also suffer if budgets are cut and incomes fall. Fewer people are accessing private health services in the USA, which will increase the burden on public health services.Resources for disease surveillance are often cut back during difficult economic times, jeopardising the systems we rely on to identify and deal with emerging diseases - including the current swine flu epidemics.The 1995 economic crisis in Mexico led to 27,000 excess deaths in that country alone - but the effect of this far greater, global downturn is currently “impossible to quantify,” according to Robertson.

### Disease Defense

Diseases not a threat.

Posner, Federal Judge and Senior Lecturer at U Chicago Law, 2005

Richard, Catastrophe: the dozen most significant catastrophic risks and what we can do about them, Skeptic, 1-1, http://goliath.ecnext.com/coms2/gi\_0199-4150331/Catastrophe-the-dozen-most-significant.html

Yet the fact that Homo sapiens has managed to survive every disease to assail it in the 200,000 years or so of its existence is a source of genuine comfort, at least if the focus is on extinction events. There have been enormously destructive plagues, such as the Black Death, smallpox, and now AIDS, but none has come close to destroying the entire human race. There is a biological reason. Natural selection favors germs of limited lethality; they are fitter in an evolutionary sense because their genes are more likely to be spread if the germs do not kill their hosts too quickly. The AIDS virus is an example of a lethal virus, wholly natural, that by lying dormant yet infectious in its host for years maximizes its spread. Yet there is no danger that AIDS will destroy the entire human race. The likelihood of a natural pandemic that would cause the extinction of the human race is probably even less today than in the past (except in prehistoric times, when people lived in small, scattered bands, which would have limited the spread of disease), despite wider human contacts that make it more difficult to localize an infectious disease. The reason is improvements in medical science. But the comfort is a small one. Pandemics can still impose enormous losses and resist prevention and cure: the lesson of the AIDS pandemic. And there is always a lust time.

Adaptation checks disease

Galdwell 95 (Staff writer for New Yorker (Malcolm, The New Republic, 7-17)

McNeill's point, however, is that while man's efforts to "remodel" his environment are sometimes a source of new disease, they are seldom a source of serious epidemic disease. Quite the opposite. As humans and new microorganisms interact, they begin to accommodate each other. Human populations slowly build up resistance to circulating infections. What were once virulent infections, such as syphilis, become attenuated. Over time, diseases of adults, such as measles and chicken pox, become limited to children, whose immune systems are still naive. McNeill remarks that it was during the mid-fifteenth century that the population of Europe began to expand steadily, even though "it was during these decades that the oceanic discoveries took place, and European sailors had the opportunity to import new infections into their homelands from the ports of all the earth." Precisely because they had been exposed to these micro-organisms, the Europeans were hardened to their effects. This, says McNeill, is the paradox of infection: "The more diseased a community, the less destructive its epidemics become." Who, after all, suffered the most from the discovery of the New World? Not the conquerors, the ones who were despoiling a virgin environment. It was the conquered, the American Indians, the peoples living on a secluded and pristine continent, who were all but wiped out by the sudden arrival of smallpox. This does not mean, of course, that we should not worry about the effects of man's continuing assault on nature. But it does mean that there is nothing inherently terrifying about the fact that the West is now being exposed to new microbes from equatorial Africa. We are ultimately safer in a world where new viruses and bacteria are in constant circulation, and where human populations can encounter and build defenses against them. Unlocking the viruses of the rainforest is part of the way we tame nature, not the way nature tames us.

### Asia War Defense

No scenario for asian war.

Pempel, Prof. PoliSci @ UC Berkley, 2010 TJ, “More Pax, Less Americana in Asia”, International Relations of the Asia-Pacific, 10.3

Without much imagination a wealth of scare scenarios can easily be built around such multiple triggers. The region's security problems appear as ominous as the deep fault lines that form Asia's geological ‘ring of fire’, with its regular and devastating earthquakes. Unquestionably hard security confrontations are easy to envision (Alagappa, 2003; Pempel, 2005, inter alia). Yet as noted in the previous section, Northeast Asia has been fundamentally at peace for decades. A security ‘order’ has prevailed within what Buzan (2003) calls this ‘regional security complex’ leaving it with no major wars, the management and resolution of many major disputes, and the ongoing accommodation of change without violence (Mastanduno, 2002, p. 182; Alagappa, 2003). Indeed, as Alagappa (2003, pp. 1–33) and others (e.g. Kang, 2003; Cha, 2007, p. 110; Goh, 2007/2008, p. 113) have shown, despite the bevy of latent security problems, many prior conflicts have been resolved; others are being deliberately avoided; and a series of confidence-building measures continue to reduce tensions across the region. This constitutes the Asia-Pacific's ‘big surprise’, the absence of state-to-state warfare despite the numerous potential triggers for such confrontations. Solingen (2007, p. 757) underscores this improved security climate: ‘Existing disputes have been restrained as never before in recent history, and major powers have normalized diplomatic relations despite continued tensions … . Military modernization has not undermined macroeconomic and regional stability. Military expenditures relative to GNP have declined from 2.6% (1985) to 1.8% (2001), lower than world averages of 5.4% (1985 and 2.5% (2001), with parallel declines – in most states – in military expenditures relative to central government expenditures’. Potential security threats or military confrontations remain low on the political priority list for most governments across the Asia-Pacific (Pempel, 1999; Woo-Cumings, 1999; Frost, 2008; Mahbubani, 2008; Overholt, 2008, inter alia). Important as the United States contribution may have been in facilitating the overall reduction in tensions and the reduced focus on Asian military spending historically, numerous moves toward tranquilizing relations have also taken place independently of the US military presence. China and Russia, for example, have resolved their multiple border disputes and demilitarized their shared 2,640 mile border; commercial interactions between the two (including increased military sales) have increased steadily (Weitz, 2007, p. 53), and meanwhile the probability that such cooperation will come at the expense of the rest of the region is limited. Japan has moved to downplay its negative wartime legacy and prime ministers since Koizumi have avoided visits to the regionally radioactive Yasukuni shrine. Meanwhile, summits have become regular occurrences among top leaders from Japan, China, and Korea. Although relations across the Taiwan Straits remain tense, the last PRC missiles were fired over Taiwan in 1996, and the two sides have moved toward a strategic standoff sans shooting, while advancing economic linkages and tangible measures toward cooperation, particularly since the 2008 election of Ma Ying-jeou. Meanwhile, contrary to the predictions of self-described realists (e.g. Mearsheimer, 2001), there has been no Asian ‘balancing’ against American hegemony, nor against a ‘rising China’ (Kang, 2007). Instead virtually all governments in Northeast Asia (with the conspicuous exception of the DPRK) have prioritized economic development while irredentist territorial claims and military freelancing have been relegated to the policymaking back burners.

### China Rise Defense

China won’t be revisionist.

Dyer, 05 (PhD in Military History, Gwynne, “China unlikely to engage in military confrontation,” March 12,The Jakarta Post, http://www.thejakartapost.com/news/2005/03/12/china-unlikely-engage-military-confrontation.html)

Given America's monopoly or huge technological lead in key areas like stealth bombers, aircraft carriers, long-range sensors, satellite surveillance and even infantry body armor, Goss's warning is misleading and self-serving. China cannot project a serious military force even 200 miles (km) from home, while American forces utterly dominate China's ocean frontiers, many thousands of miles (kilometers) from the United States. But the drumbeat of warnings about China's ""military build-up"" continues. Just the other week U.S. Defense Secretary Donald Rumsfeld was worrying again about the expansion of the Chinese navy, which is finally building some amphibious landing ships half a century after Beijing's confrontation with the non-Communist regime on the island of Taiwan began. And Senator Richard Lugar, head of the Senate Foreign Relations Committee, warned that if the European Union ends its embargo on arms sales to China, the U.S. would stop military technology sales to Europe. It will come as no surprise, therefore, that the major U.S. defense review planned for this year will concentrate on the rising ""threat"" from China, or that this year for the first time the joint U.S.-Japanese defense policy statement named China as a ""security concern"", or that the Taiwan government urged the ""military encirclement"" of China to prevent any ""foreign adventures"" by Beijing. It comes as no surprise -- but it still makes no sense. China's defense budget this year is 247.7 billion yuan: Around US$30 billion at the official exchange rate. There are those in Washington who will say that it's more like $60 billion in purchasing power, but then there used to be ""experts"" who annually produced hugely inflated and frightening estimates of the Soviet defense budget. Such people will always exist: to justify a big U.S. defense budget, you need a big threat. It's true that 247.7 billion yuan buys an awful lot of warm bodies in military uniform in the low-wage Chinese economy, but it doesn't actually buy much more in the way of high-tech military systems. It's also true that the Chinese defense budget has grown by double-digit increases for the past fourteen years: This year it's up by 12.6 percent. But that is not significantly faster than the Chinese economy as a whole is growing, and it's about what you have to spend in order to convert what used to be a glorified peasant militia into a modern military force. It would be astonishing if China chose NOT to modernize its armed forces as the rest of the economy modernizes, and the end result is not going to be a military machine that towers above all others. If you project the current growth rates of military spending in China and the United States into the future, China's defense budget catches up with the United States about the same time that its Gross Domestic Product does, in the late 2030s or the early 2040s. As to China's strategic intentions, the record of the past is reassuring in several respects. China has almost never been militarily expansionist beyond the traditional boundaries of the Middle Kingdom (which do include Tibet in the view of most Chinese), and its border clashes with India, the Soviet Union and Vietnam in the first decades of Communist rule generally ended with a voluntary Chinese withdrawal from the disputed territories. The same moderation has usually applied in nuclear matters. The CIA frets that China could have a hundred nuclear missiles targeted on the United States by 2015, but that is actually evidence of China's great restraint. The first Chinese nuclear weapons test was forty years ago, and by now China could have thousands of nuclear warheads targeted on the U.S. if it wanted. (The United States DOES have thousands of nuclear warheads that can strike Chinese targets.) The Beijing regime is obsessed with economic stability, because it fears that a severe downturn would trigger social and political upheaval. The last thing it wants is a military confrontation with its biggest trading partner, the United States. It will go on playing the nationalist card over Taiwan to curry domestic political favor, but there is no massive military build-up and no plausible threat of impending war in East Asia.

### Russia War Defense

Zero risk of Russia war.

Graham 7 - Senior advisor on Russia in the US National Security Council staff 2002-2007, Thomas, " The Dialectics of Strength and Weakness”, Russia in Global Affairs, July, http://eng.globalaffairs.ru/numbers/20/1129.html

An astute historian of Russia, Martin Malia, wrote several years ago that “Russia has at different times been demonized or divinized by Western opinion less because of her real role in Europe than because of the fears and frustrations, or hopes and aspirations, generated within European society by its own domestic problems.” Such is the case today. To be sure, mounting Western concerns about Russia are a consequence of Russian policies that appear to undermine Western interests, but they are also a reflection of declining confidence in our own abilities and the efficacy of our own policies. Ironically, this growing fear and distrust of Russia come at a time when Russia is arguably less threatening to the West, and the United States in particular, than it has been at any time since the end of the Second World War. Russia does not champion a totalitarian ideology intent on our destruction, its military poses no threat to sweep across Europe, its economic growth depends on constructive commercial relations with Europe, and its strategic arsenal – while still capable of annihilating the United States – is under more reliable control than it has been in the past fifteen years and the threat of a strategic strike approaches zero probability. Political gridlock in key Western countries, however, precludes the creativity, risk-taking, and subtlety needed to advance our interests on issues over which we are at odds with Russia while laying the basis for more constructive long-term relations with Russia.

# Keynesianism Good

### Stimulus K2 Economy-Laundry List

Deficit spending within the transportation sector is crucial to create the federal reserves needed to sustain economic growth and prevent economic collapse in the long term.

Stliglitz and Weisman 10 (Joseph E., Professor at Columbia University; Author, "Freefall: America, Free Markets, and the Sinking of the World Economy", Steven R., Editorial Director and Public Policy Fellow, Peter G. Peterson Institute For International Economics, “Global Economic Trends: A Conversation with Joseph E. Stiglitz”, Thursday, January 21, 2010, New York, Council on Foreign Relations, <http://www.cfr.org/united-states/global-economic-trends-conversation-joseph-e-stiglitz/p21301> |SK)

But, you know, the basic Keynesian idea is that, if you have a weak economy, spend, and spend very cleverly, because in the long run -- you know, what they're doing is they're trying to stimulate the economy in the short run, but do investments that provide the basis of long-run economic growth. So one of the things they're spending on, one of the major things, is creating a high-speed railroad system. And just like the cross -- the intercontinental railroads changed America's economic geography, they're doing the same. And they now have the fastest trains in the world. And it really is -- you can really see how it is changing their economic geography, and is going to lead them to be in a position to have faster growth. But now, to return to the question of the global imbalances, there are two aspects I want to comment on. You know, the first is, why are they saving so much? One of the reasons that -- one of the reasons that many of the countries in East Asia are saving so much is because they recognize that there's a lot of volatility in the world, and they have to rely on themselves for insurance, for self-insurance. WEISMAN: And of course, their experience in the Asian crisis which led them to that, right? STIGLITZ: That -- exactly. In fact, one -- the prime minister of one of these countries told me quite frankly, he said -- the way he put it was very amusing. He said, "We were in the class of '97." (Laughter.) You know, "We learned what happened when you don't have enough reserves." And he said, "Well, now, never again," he said, "would we allow that to happen." And so they built up the reserves, hundreds of billions of dollars a year put in reserves: increases their security, but that's money that's not spent, and money that's not spent doesn't -- leads to weaknesses in global aggregate demand. That's part of globalization; it's the whole global aggregate demand that matters. Now, the way we've managed this crisis, the way things have evolved, things are worse, because which countries did better? The countries that had large reserves could undertake stimulus actions. And they've fared better. Russia had about $600 billion of reserves before the crisis. They've lost a large fraction of that. But you know, you talk to any Russian government official. If they hadn't had those reserves, they would be in another -- they would really be back in '98, in the Ruble crisis. So everybody looking at those examples, say, you have to have more reserves. Well, what does that mean? That means what you call a savings glut. But now this is -- the final point I want to make, the issue is not a savings glut. When you talk about savings glut, it's a balance of savings on the one hand and investment. And I'd rather call it an investment dearth and a shortage of investment, not of investment needs. I look around the world and I say, look, a billion people in extreme poverty, more than that, a couple billion people in poverty. We need to invest, to enable their standard of living to go up. The world faces a problem of global warming. We have to retrofit the whole global economy. That's going to take a lot of investment. We're talking about -- how are we going to change our, you know, investment in energy -- new energy systems, new transportation systems. That's going to take a lot of investment. So we shouldn't be telling people, don't save. We should be figuring out how to take the savings and transform that into productive investment. And that comes back to the big failure in this crisis: the failure of the financial system to do its job. Its job is to take savings and transform them into the place where they have the highest return. Putting savings into housing beyond people's ability to pay, in the richest country in the world, is not the globally most useful place to put the savings. And so it's a real -- from my point of view, it's another piece of evidence that our financial system didn't perform its social function. WEISMAN: Let me ask a final question, before we go to the group, about American leadership and in particular about the role of the dollar. Do you see the dollar as being dethroned in this crisis? Is that a terrible thing that we should try and avoid? Or is it inevitable, given the way the economy, the global economy, is growing? STIGLITZ: That's a good question. It's one that I spend some time talking about in the book "Freefall." The dollar reserve system has already been fraying. It's -- you know, the world has been using dollars as the basis of their currencies and backing of their countries for a long time. But for a currency to be used as a reserve, as a storer of value, it has to be stable in value. And in the last decade, it's been highly volatile, very unstable. And so there's been a big move out of the dollar. You can see it in China. It still holds $1.5 trillion of reserves. But it holds a large fraction not in dollars. But the crisis is going to accelerate that process. Particularly you know, you listen to the leaders of China, and they are very worried that they're holding $1.5 trillion of dollars. And they are worried that -- we're not going to renege on our debt but that we will inflate away the debt. The value of the dollar will go down. And they -- you know, they started lecturing the United States, about managing its macropolicies, from their self-interest. And it's very clear that they will be trying to figure out ways of moving out of the dollar. I chaired a U.N. commission on reform of the global economic and financial system. And our strongest recommendation for, you might say, medium-term reforms, although we thought it needed to be done as quickly as possible, was a new global reserve system. I was just at a meeting with President Sarkozy the week before last. And you know, he put it in a way that I think a lot of people have said. It's very strange in a world of globalization, multilateral system, to have the currency of one country to be this asymmetric role in the global system.

### Stimulus K2 Economy-Solves Competetiveness

investments like the high-speed rail are the reason for competing nations’ success; if the US were to follow suit, then the Chinese threats to U.S. primacy would be gone.

Stiglitz ’10 (Joseph, New Perspectives Quarterly, “Time for a Second Stimulus”, pg. 63, <http://onlinelibrary.wiley.com/doi/10.1111/j.1540-5842.2010.01164.x/pdf>, Stiglitz is an economist and a professor at Columbia University. He was awarded the Nobel Prize for economics in 2001. He was chief economist of the World Bank and chairman of President Clinton's Council of Economic Advisers.)

ON CHINA - One of the reasons the Chinese are recovering so well is that they have read all the good American textbooks on macroeconomic management that we’ve recently ignored. The Keynesian idea, which they’ve adopted, is that if you have a weak economy, the government should spend. And they are doing it the right way by stimulating the economy in the short run through investments that provide the basis for long-term economic growth. For example, their stimulus includes spending on a high-speed rail system. Just as the transcontinental railroad changed America’s economic geography when it was built, it will do the same for them. Now they have the fastest trains in the world. When completed, that will leave them in a position for faster growth.

### Stimulus K2 Economy-Sustains Capitalism

The world economy faces devastation without intervention from the government.

Stiglitz ’08 (Joseph, Time Magazine, “How to Get Out of the Financial Crisis”, pg. 1, http://flash.lakeheadu.ca/~kyu/E5118/Crisis1.pdf, Stiglitz is an economist and a professor at Columbia University. He was awarded the Nobel Prize for economics in 2001. He was chief economist of the World Bank and chairman of President Clinton's Council of Economic Advisers.)

The amount of bad news over the past weeks has been bewildering for many people in the world. Stock markets have plunged, banks have stopped lending to one another, and central bankers and treasury secretaries appear daily on television looking worried. Many economists have warned that we are facing the worst economic crisis the world has seen since 1929. The only good news is that oil prices have finally started to come down. While these times are scary and strange for many Americans, a number of people in other countries feel a sense of deja vu. Asia went through a similar crisis in the late 1990s, and various other countries (including Argentina, Turkey, Mexico, Norway, Sweden, Indonesia and South Korea) have suffered through banking crises, stock-market collapses and credit crunches. Capitalism may be the best economic system that man has come up with, but no one ever said it would create stability. In fact, over the past 30 years, market economies have faced more than 100 crises. That is why I and many other economists believe that government regulation and oversight are an essential part of a functioning market economy. Without them, there will continue to be frequent severe economic crises in different parts of the world. The market on its own is not enough. Government must play a role. It's good news that Treasury Secretary Henry Paulson seems to finally be coming around to the idea that the U.S. government needs to help recapitalize our banks and should receive stakes in the banks that it bails out. But more must be done to prevent the crisis from spreading around the world. Here's what it will take.

The economy is ailing due to the lack of stimulus and deregulation of the economy during the Bush years.

Stiglitz ’08 (Joseph, Time Magazine, “How to Get Out of the Financial Crisis”, pg. 1, http://flash.lakeheadu.ca/~kyu/E5118/Crisis1.pdf, Stiglitz is an economist and a professor at Columbia University. He was awarded the Nobel Prize for economics in 2001. He was chief economist of the World Bank and chairman of President Clinton's Council of Economic Advisers.)

How We Got Here The troubles we now face were caused largely by the combination of deregulation and low interest rates. After the collapse of the tech bubble, the economy needed a stimulus. But the Bush tax cuts didn't provide much stimulus to the economy. This put the burden of keeping the economy going on the Fed, and it responded by flooding the economy with liquidity. Under normal circumstances, it's fine to have money sloshing around in the system, since that helps the economy grow. But the economy had already overinvested, and so the extra money wasn't put to productive use. Low interest rates and easy access to funds encouraged reckless lending, the infamous interest-only, no-down-payment, no-documentation (“liar") subprime mortgages. It was clear that if the bubble got deflated even a little, many mortgages would end up under water - with the price less than the value of the mortgage. That has happened - 12 million so far, and more every hour. Not only are the poor losing their homes, but they are also losing their life savings.

### Stimulus K2 Economy-State Economies

States are incapable of providing for their own stimulus. In fact, the USFG needs to use stimulus to help their problems.

Stiglitz ’09 (Joseph, Eastern Economic Journal, “The Current Economic Crisis and Lessons for Economic Theory”, http://www.palgrave-journals.com/eej/journal/v35/n3/full/eej200924a.html, Stiglitz is an economist and a professor at Columbia University. He was awarded the Nobel Prize for economics in 2001. He was chief economist of the World Bank and chairman of President Clinton's Council of Economic Advisers.)

In assessing the appropriate size of the stimulus, we need to take into account the negative stimulus coming from the automatic destablizers built into state expenditures. Most states have balanced budget frameworks. This means that when tax revenues fall — as they do when the economy goes into a recession and when real estate prices plummet — they either have to cut back on expenditures or raise taxes. California alone has faced a shortfall of $40 billion. A little while ago, the shortfall of the States was estimated to be around $150 billion per year; but as the crisis has deepened, that number has increased. Thus, almost half of the stimulus simply offsets the negative stimulus coming from the states. We should have enacted a simple revenue sharing arrangement, making up for states’ revenue shortfalls.

### Infrastructure Spending K2 Economy

A stimulus in the form of an investment in transportation infrastructure is necessary to save America’s economy.

Stiglitz ’08 (Joseph, Time Magazine, “How to Get Out of the Financial Crisis”, pg. 3, http://flash.lakeheadu.ca/~kyu/E5118/Crisis1.pdf, Stiglitz is an economist and a professor at Columbia University. He was awarded the Nobel Prize for economics in 2001. He was chief economist of the World Bank and chairman of President Clinton's Council of Economic Advisers.)

3. Pass a stimulus that works. Helping Wall Street and stopping the foreclosures are only part of the solution. The U.S. economy is headed for a serious recession and needs a big stimulus. We need increased unemployment insurance; if states and localities are not helped, they will have to reduce expenditures as their tax revenues plummet, and their reduced spending will lead to a contraction of the economy. But to kick-start the economy, Washington must make investments in the future. Hurricane Katrina and the collapse of the bridge in Minneapolis were grim reminders of how decrepit our infrastructure has become. Investments in infrastructure and technology will stimulate the economy in the short run and enhance growth in the long run.

A large investment in infrastructure can solve the economic crisis.

Stiglitz ’09 (Joseph, Eastern Economic Journal, “The Current Economic Crisis and Lessons for Economic Theory”, http://www.palgrave-journals.com/eej/journal/v35/n3/full/eej200924a.html, Stiglitz is an economist and a professor at Columbia University. He was awarded the Nobel Prize for economics in 2001. He was chief economist of the World Bank and chairman of President Clinton's Council of Economic Advisers.)

The stimulus Within the economics profession, there is, I think, a clear understanding of what makes for a good stimulus: it has to work quickly (we say, be timely), it should have a big bang for the buck, and it should help — and certainly not worsen — our long run problems. Having a big bang for the buck is especially important because of the growth in the size of the national debt, from $5.7 trillion in the beginning of the Bush Administration to over $10 trillion today, with an expected deficit this year of $1.5 to $2 trillion, depending on how one does the calculations. (If we use standard accounting procedures, of the kind that the IMF employs, which consolidate government owned enterprises into the government's debt, we would have to add another $5 trillion or so as a result of the government take-over of Fannie Mae and Freddie Mac.) But most economists were never enamored of standard government accounting, which focuses on liabilities and pays no attention to assets. If we spend money to create assets (new technology, infrastructure, human capital), then these assets offset the new liabilities, and the national balance sheet can even be strengthened. These criteria imply that the tax cuts, which comprise about a third of the stimulus package, don't make the mark. Americans are likely to save significant fractions of the tax cut because they are saddled with heavy debt, have uncertainties about access to credit and job insecurity, and had large fractions of their wealth destroyed because of falling asset prices. This means that the tax cuts are not likely to provide much stimulus.

### Infrastructure Spending K2 Economy

Technological innovation should be a part of our transportation infrastructure investment in a fiscal stimulus --- helps maintain U.S. competitiveness, spur activity in the economy, and is bipartisan.

Dawson ’08 (Rhett, June 2, The Washington Times, “A needed stimulus; Improving technology infrastructure”, Dawson is president of the Information Technology Industry Council.)

Recently, there has been a lot of talk about investing in our nation's infrastructure. But too often that focus tends to be strictly on building new roads, bridges or sewer lines. While those are all necessary and important, I've watched with dismay as the Bush administration and Congress devote less and less attention to an ever more vital segment of our infrastructure: our Innovation Infrastructure. By this I'm referring to a broad category of needs vital to the critical high-tech sector - the often-neglected areas of research funding, tax credits and trade that are essential if we are to continue to thrive and be a world leader. These issues are even more important now, as policy-makers in Washington engage in a new round of discussions about a second "stimulus package" to jumpstart the economy, get more Americans back to work and put money in their pockets. This new stimulus package - as envisioned by some members of Congress - would emphasize rebuilding our physical infrastructure. Such a plan is aimed at complementing the stimulus legislation from earlier this year that recently sent government checks to millions of American families. As an alternative, I'd like to suggest the following as an outline for a new and more far-reaching stimulus package that is certain to strengthen our economy. Our "innovation infrastructure" stimulus plan could offer a bipartisan solution to the immediate needs of our sagging economy. It could also provide a roadmap for bringing our country back to the forefront of the high-tech economy. Our plan would include: \* R&D funding: Research and development funding has been basically flat for more than a decade. We should immediately invest more in support for research and development. We should look for new ways to fund the National Science Foundation and the National Institutes of Standards and Technology.

### Infrastructure Spending K2 Economy

New infrastructure investment by the federal government will be easy to fund and will provide a much-needed stimulus to the economy by creating jobs, increase efficiency, and acting as a multiplier.

New America Foundation ’10 (February 3, “The Case for an Infrastructure-Led Jobs and Growth Strategy”, http://www.newamerica.net/publications/policy/the\_case\_for\_an\_infrastructure\_led\_jobs\_and\_growth\_strategy, The New America Foundation is a nonprofit, nonpartisan public policy institute that invests in new thinkers and new ideas to address the next generation of challenges facing the United States [as copied from their website].)

As the Senate takes up a greatly scaled down $15 billion jobs bill stripped of all infrastructure spending, the nation should consider the compelling case for public infrastructure investment offered by Governors Arnold Schwarzenegger (R-CA) and Ed Rendell (D-PA). Appearing on ABC’s "This Week" on Sunday, the bipartisan Co-Chairs of Building America's Future explained why rebuilding America’s infrastructure is the key to both job creation in the short and medium term and our prosperity in the longer term. Rather than go from one negligible jobs bill to the next, the administration and Congress should, as the governors suggest, map out a multi-year plan of infrastructure investment and make it the centerpiece of an ongoing economic recovery program. Here is why: With American consumers constrained by high household debt levels and with businesses needing to work off overcapacity in many sectors, we need a new, big source of economic growth that can replace personal consumption as the main driver of private investment and job creation. The most promising new source of growth in the near to medium term is America’s pent-up demand for public infrastructure improvements in everything from roads and bridges to broadband and air traffic control systems to a new energy grid. We need not only to repair large parts of our existing basic infrastructure but also to put in place the 21st-century infrastructure for a more energy-efficient and technologically advanced society. This project, entailing billions of dollars of new government spending over the next five to ten years, would generate comparable levels of private investment and provide millions of new jobs for American workers. More specifically, public infrastructure investment would have the following favorable benefits for the economy: Job Creation. Public infrastructure investment would directly create jobs, particularly high-quality jobs, and thus would help counter the 8.4 million jobs lost since the Great Recession began. One study estimates that each billion dollars of spending on infrastructure can generate up to 17,000 jobs directly and up to 23,000 jobs by means of induced indirect investment. If all public infrastructure investment created jobs at this rate, then $300 billion in new infrastructure spending would create more than five million jobs directly and millions more indirectly, helping to return the economy to something approaching full employment. A Healthy Multiplier Effect. Public infrastructure investment not only creates jobs but generates a healthy multiplier effect throughout the economy by creating demand for materials and services. The U.S. Department of Transportation estimates that, for every $1 billion invested in federal highways, more than $6.2 billion in economic activity is generated. Mark Zandi, chief economist at Moody’s Economy.com, offers a more conservative but still impressive estimate of the multiplier effect of infrastructure spending, calculating that every dollar of increased infrastructure spending would generate a $1.59 increase in GDP. Thus, by Zandi’s conservative estimates, $300 billion in infrastructure spending would raise GDP by nearly $480 billion (close to 4 percent). A More Productive Economy. Public infrastructure investment would not only help stimulate the economy in the short term but help make it more productive over the long term, allowing us to grow our way out of the increased debt burdens resulting from the bursting of the credit bubble. As numerous studies show, public infrastructure increases productivity growth, makes private investment more efficient and competitive, and lays the foundation for future growth industries. In fact, many of the new growth sectors of the economy in agriculture, energy, and clean technology require major infrastructure improvements or new public infrastructure. Needed Investments that Will Pay for Themselves. New infrastructure investment can easily be financed at historically low interest rates through a number of mechanisms, including the expansion of Build America Bonds and Recovery Zone bonds (tax-credit bonds that are subsidized by favorable federal tax treatment) and the establishment of a National Infrastructure Bank. Public infrastructure investment will pay for itself over time as a result of increased productivity and stronger economic growth. Several decades of underinvestment in public infrastructure has created a backlog of public infrastructure needs that is undermining our economy’s efficiency and costing us billions in lost income and economic growth. By making these investments now, we would eliminate costly bottlenecks and make the economy more efficient, thereby allowing us to recoup the cost of the investment through stronger growth and higher tax revenues.

### Infrastructure Spending K2 Economy

Government investment in transportation infrastructure creates jobs.

Boushey ’11 (Heather, September 22, Center for American Progress, ”Now Is the Time to Fix Our Broken Infrastructure”, <http://www.americanprogress.org/issues/2011/09/aja_infrastructure.html>, Boushey is a Senior Economist at American Progress.)

Investing in infrastructure creates jobs and yields lasting benefits for the economy, including increasing growth in the long run. Upgrading roads, bridges, and other basic infrastructure creates jobs now by putting people to work earning good, middle-class incomes, which expands the consumer base for businesses. These kinds of investments also pave the way for long-term economic growth by lowering the cost of doing business and making U.S. companies more competitive. There is ample empirical evidence that investment in infrastructure creates jobs. In particular, investments made over the past couple of years have saved or created millions of U.S. jobs. Increased investments in infrastructure by the Department of Transportation and other agencies due to the American Recovery and Reinvestment Act saved or created 1.1 million jobs in the construction industry and 400,000 jobs in manufacturing by March 2011, according to San Francisco Federal Reserve Bank economist Daniel Wilson.[1] Although infrastructure spending began with government dollars, these investments created jobs throughout the economy, mostly in the private sector.[2] Infrastructure projects have created jobs in communities nationwide.

Transportation infrastructure investments in particular are the most cost-effective way to create jobs and revitalize the economy.

Boushey ’11 (Heather, September 22, Center for American Progress, ”Now Is the Time to Fix Our Broken Infrastructure”, <http://www.americanprogress.org/issues/2011/09/aja_infrastructure.html>, Boushey is a Senior Economist at American Progress.)

Infrastructure investments are an especially cost-effective way to boost job creation with scare government funds. Economists James Feyrer and Bruce Sacerdote found for example that at the peak of the Recovery Act’s effect, 12.3 jobs were created for every $100,000 spent by the Department of Transportation and the Department of Energy—much of which was for infrastructure.[6] These two agencies spent $24.7 billion in Recovery dollars through September 2010, 82 percent of which was transportation spending. This implies a total of more than 3 million jobs created or saved. The value of infrastructure spending Analysis of all fiscal stimulus policies shows a higher “multiplier” from infrastructure spending than other kinds of government spending, such as tax cuts, meaning that infrastructure dollars flow through the economy and create more jobs than other kinds of spending. Economist Mark Zandi found, for example, that every dollar of government spending boosts the economy by $1.44, whereas every dollar spent on a refundable lump-sum tax rebate adds $1.22 to the economy.[7] In a separate study conducted before the Great Recession, economists James Heintz and Robert Pollin of the University of Massachusetts, Amherst, found that infrastructure investment spending in general creates about 18,000 total jobs for every $1 billion in new investment spending. This number include jobs directly created by hiring for the specific project, jobs indirectly created by supplier firms, and jobs induced when workers go out and spend their paychecks and boost their local economy.[8] Investing in transportation infrastructure in particular boosts employment. The Federal Highway Administration periodically estimates the impact of highway spending on direct employment, defined as jobs created by the firms working on a given project; on supporting jobs, including those in firms supplying materials and equipment for projects; and on indirect employment generated when those in the first two groups make consumer purchases with their paychecks. In 2007, $1 billion in federal highway expenditures supported about 30,000 jobs—10,300 in construction, 4,675 in supporting industries, and 15,094 in induced employment.[9]

### Infrastructure Spending K2 Economy

Right now, it is key to invest in our infrastructure to decrease unemployment and spark long-term economic growth.

Boushey ’11 (Heather, September 22, Center for American Progress, ”Now Is the Time to Fix Our Broken Infrastructure”, <http://www.americanprogress.org/issues/2011/09/aja_infrastructure.html>, Boushey is a Senior Economist at American Progress.)

Infrastructure is a good investment now because it will get people to work, and at this point, given the lingering high unemployment, we shouldn’t be too concerned if projects take a bit of time to get up and running. As Mark Zandi said in August 2011: Infrastructure development has a large bang for the buck, particularly now when there are so many unemployed construction workers. It also has the potential for helping more remote hard-pressed regional economies and has long-lasting economic benefits. It is difficult to get such projects up and running quickly—“shovel ready” is in most cases a misnomer—but given that unemployment is sure to be a problem for years to come, this does not seem in the current context as significant a drawback.[16] We can create jobs. With nearly 14 million Americans unemployed, now is the time to make long-lasting investments in infrastructure that will not only get people to work today but pave the way for long-term economic growth. Repairing potholes, upgrading an elementary school’s aging furnace, and replacing old water mains are all infrastructure investments. These are repairs that must be done and are often cheaper to do as maintenance than waiting to repair a totally failed system. Now is the right time for America to invest in maintaining and upgrading our infrastructure. We have millions of American workers who want to get off the unemployment queue and into a job and borrowing costs at decade lows, making it extraordinarily cost effective to make big investments today.

### Infrastructure Spending Good-AT: Crowd Out

government investment in infrastructure actually increases the size of the economy, allowing for increased growth in both the public and private sectors.

Han ’12 (Xue, February, Global Infrastructure Asset Management LLC, “Why Invest in Infrastructure?”, Han holds a Bachelor’s degree in Mathematics and Economics from Beloit College.)

In order to see this fact, let‘s start with probably the single most common and influential argument against increasing the level of public investment, that is it will ―crowd out‖ private investment – i.e. an increase in public infrastructure spending will be associated with an equivalent decline in private investment. To test the validity of this argument, let‘s first understand the two kinds of resources required by investments in infrastructure: real economic resources – materials, equipment and people‘s labor, and financial resources – money coming either from tax revenues or government borrowing. The ‗crowding out‘ argument assumes that when the public sector consumes more of 16 these real and financial resources, it necessarily diminishes the amount available to the private sector. Therefore, an increase in public capital expenditures results in less private sector production. In other words, the ‗economic pie‘ is fixed. When the government takes a bigger slice, it leaves less for the private economy. However, even at the level of simple logic, the crowding out argument only holds under a specific set of narrow economic circumstances. These circumstances would be when: 1) all the economy‘s real resources are being fully utilized, i.e. workers are fully employed, and the existing productive apparatus is being run full-tilt; 2) the economy‘s financial resources are similarly already being fully used up in financing productive investment projects; and 3) new public investment spending makes no contribution toward expanding the economy‘s productive capacity—i.e. it is not succeeding in its purpose of increasing the overall size of the economic pie. In the current economic crisis, unemployment is rising toward its highest level in a generation and financial institutions are providing almost no loans for private investment, preferring instead to hoard huge cash reserves and to purchase U.S. Treasury bonds, the single safest asset available on financial markets. Under these circumstances, there is no possibility of public investment projects bidding resources away from the private sector. Rather, higher rates of public infrastructure will increase the total number of people who can find employment, and it will put to good use the financial resources flowing into the U.S. Treasury. But these are of course extraordinary circumstances. It is also important to recognize that crowding out need not occur even when the economy is booming and unemployment is low. This is because public infrastructure investments will expand the economy‘s long-term productive capacity, with benefits flowing primarily to the private sector. Because public infrastructure investment actually increases the overall size of the economic pie, both the public and the private sectors can expand together through a complimentary, mutually-supportive growth path. More specifically, public spending provides goods and services essential for private production, including roads, bridges, energy, water, aviation, and water transport. Infrastructure improvements can increase labor productivity—e.g. more efficient transportation systems to and from work reduce wasted time.

### Infrastructure Spending Good-Multiplier Effect

Infrastructure investments make the economy stronger through the multiplier effect.

Han ’12 (Xue, February, Global Infrastructure Asset Management LLC, “Why Invest in Infrastructure?”, Han holds a Bachelor’s degree in Mathematics and Economics from Beloit College.)

Multiplier Effects on the Economy Besides its improving effects on productive capacity as the major reason for the infrastructure investment‘s contribution to the economic growth, a second reason is its relatively larger multiplier effects on the overall economy compared to other types of investment of the same amount. The multiplier effect refers to the dollar amount impact on the economy, measured as GDP, that each dollar of spending could generate; since the effect of each dollar of spending is usually beyond itself – i.e. larger than 1 – due to its stimulating effects on other components of the GDP, such as consumption, investment and net exports, it is often referred to as the multiplier effects. There is more than one kind of multiplier effect based on different investments, but in most studies and ours as well, we are specifically interested in and refer to the fiscal multiplier, that is the dollar amount impact on the economy for each dollar of government spending. As discussed in details in a previous research of mine on the subject of the Automatic Budget Enforcement Procedures, the size of the multiplier under current circumstances is estimated to be 1.88, with the interest rate at the zero lower bound taken into account in illustrations of a series of Keynesian models. With regards to the fact that multiplier specifically for infrastructure investments is larger than other types of investments and thus the general average fiscal multiplier, the theoretical reasons behind are quite easy to understand. The two major reasons infrastructure spending are: (1) less leakage to imports and (2) stronger stimulus in consumption compared to other types of spending such as tax cuts, where a higher proportion of the additional money is saved or spent on imported goods and services. In order to estimate the size of multiplier specifically for infrastructure investments, we utilize the employment effects estimated using the Input-Output Model in the research How Infrastructure Investments Support the U.S. Economy: Employment, Productivity and Growth (Heintz, Pollin and Peltier, 2009). According to their research, for each $1 billion infrastructure investment made, an average of 18,681 jobs will be created in core economic infrastructure through direct, indirect and induced effects. As of December 2010, the total employment in the U.S. was 130.26 million, which translates an increase of 18,681 jobs into a percentage increase of 0.0143%. From there, based on the solid basic assumption on the relationship between employment and GDP increases that was used by Romer and Bernstein in their paper The Job Impact of the American Recovery and Reinvestment Act (Romer and Bernstein, 2009), we can trace back to a reliable estimate of GDP increase in dollar amount for each $1 billion investments in infrastructure, and thus an infrastructure multiplier. The assumption made by Romer and Bernstein and also agreed by Heintz, Pollin and Peltier is that employment will rise by 0.75% for every 1% increase in GDP. Therefore, the 0.0143% increase in employment generated per $1 billion infrastructure investment can be translated as a 0.0191% increase in GDP. With a GDP of $14,660.2 billion in 2010, such percentage increase is equivalent to a dollar amount increase of 19 $2.8 billion in GDP. That said, the conclusion is that, for each $1 billion spending on infrastructure, an increase of approximately $2.8 billion in GDP can be observed, meaning that the multiplier for infrastructure investments specifically is about 2.8, much larger than the average size of 1.88 for all types of investments as estimated in previous study. This well established larger multiplier effects of infrastructure investments become particularly important due to the slow economic recovery we have faced since the crisis. Even without the more influential and fundamental effects of infrastructure investments on productivity improvement, the larger multiplier such investments have is a strong enough reason to call for more spending, or at least less cuts, on infrastructure projects.

### Infrastructure Spending Good-Multiplier

The employment opportunities created by infrastructure investment are critical to getting rid of unemployment.

Zandi ’11 (Mark, November 2, Moody’s Analytics, “Doing Infrastructure the Right Way”, <http://www.economy.com/dismal/article_free.asp?cid=226001&src=mark-zandi>, Zandi holds a PhD in economics from the University of Pennsylvania.)

More public infrastructure investment would be an especially effective way to fuel job growth and re-employ unemployed workers, nearly half of whom have been out of work more than six months. Long-term unemployment is at record levels; in a well-functioning economy, fewer than a fifth of the unemployed would be in this predicament. Not surprisingly, given the nationwide real estate bust, many of the long-term unemployed formerly worked in construction; infrastructure projects could put many of them back to work quickly, since they already have many of the required skills. Employment in various manufacturing, wholesaling and transportation industries would also receive a sizable lift from increased construction. Indeed, infrastructure spending provides an outsize economic bang for the buck. In the current weak environment, we estimate that every $1 spent on new roads, bridges and schools produces more than $1.40 in economic output in the subsequent year. This is measurably larger than the multipliers for most types of tax cuts. Whether projects are "shovel-ready"—a major criticism of the infrastructure spending in the 2009 Recovery Act—isn't particularly relevant in the current context. To be sure, some infrastructure projects can require years to go from planning to actual work. Even if new funds are used to finance projects that are well along in the planning process, it is difficult to know just when projects will get under way. This is an important caveat to using infrastructure spending to quickly help a struggling economy. Nevertheless, since unemployment is sure to be a problem in the U.S. for years, shovel-ready need not be a criterion for funding projects today. Spreading the wealth Infrastructure spending can also help remote, hard-pressed regions of the country. Many unemployed workers live in areas with limited job opportunities. Historically, people who lost jobs in these areas could move to more active regions of the country. But this has become extraordinarily difficult for nearly 20 million homeowners whose homes have fallen in value near or below the amount they owe on their mortgages. It would be tough for such workers to move even if they could figure out where to go. Indeed, migration flows have been significantly curtailed in recent years. Given the difficulty households have moving to find jobs, infrastructure is a way of moving jobs to them.

# Keynesianism Fails

### Stimulus Fails-Laundry List

Keynesianism fails – short-run focus, not evidence-based, and doesn’t consider incentives

Ron Ross, July 22nd, 2011 (Ph.D., economist who lives in Arcata, California, author of The Unbeatable Market, “Fatal Flaws of Keynesian Economics,” <http://spectator.org/archives/2011/07/22/fatal-flaws-of-keynesian-econo/1> >:)

It's now clear that the federal government's massive stimulus spending has not achieved its objectives. Why hasn't it? It's important that we have answers to that question. The stimulus was premised on the economic model known as Keynesianism: the intellectual legacy of the late English economist John Maynard Keynes. Keynesianism doesn't work, never has worked, and never will work. Without a clear understanding of why Keynesianism cannot work we will be forever doomed to pursuing the impossible. There's no real mystery about why Keynesianism fails. There are numerous reasons why and they've been known for decades. Keynesians have an unrealistic and unsupportable view of how the economy works and how people make decisions. Short-Run Focus Keynesian policy advocates focus primarily on the short run -- with no regard for the future implications of current events -- and they assume that all economic decision-makers do the same. Consider the following quote by John Maynard Keynes: "But the long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean will be flat again." After passage of the stimulus package, Lawrence Summers, Obama's chief economic advisor at the time, often said that the spending should be "timely, targeted, and temporary." Although those sound like desirable objectives, they illustrate the Keynesian focus on the short term. Sure it would be convenient if you could just spend a bunch of money and make the economy get well, but it's not that simple. The implication of a Keynesian perspective is that you can hit the economy a few times with a cattle prod and get society back to full employment. Remember that so-called "cash-for-clunkers" program? Maybe it accelerated some new car sales by a month or two, but it had no lasting impact. The "Chicago School" is the primary source of serious research and analysis related to the Keynesian model. Two Chicago School conclusions, in particular, make it clear where Keynesian policies run aground. The two theories are the "permanent income hypothesis" and the theory of "rational expectations." The "permanent income hypothesis" was how Milton Friedman termed the findings of his research on the spending behavior of consumers. The MIT Dictionary of Economics defines the permanent income hypothesis as "The hypothesis that the consumption of the individual (or household) depends on his (or its) permanent income. Permanent income may be thought of as the income an individual expects to derive from his work and holdings of wealth during his lifetime." Whether consumers and investors focus mostly on the short run or the long run is basically an "empirical question." A convincing theoretical case can be made either way. To find out which focus actually conforms closer to reality, you have to gather evidence. Not Evidence-Based Much of the difference between the two schools of thought can be explained by differences in their methodologies. Keynes was not known for his research or empirical efforts. Keynesianism is definitely not an evidence-based model of how the economy works. So far as I know, Keynes did no empirical studies. Friedman was a far more diligent researcher and data collector than was Keynes. Friedman fit the theory to the data, rather than vice versa. The Keynesian disregard for evidence is reflected in their advocacy for more stimulus spending even in the face of the obvious failure of the what's already been spent. At a minimum, we are due an explanation of why it hasn't worked. (Don't expect that to be forthcoming, however). Failure to Consider Incentives Another of the Chicago School's broadsides against Keynesianism is the theory of "rational expectations." It's a theory for which the 1995 Nobel Prize for Economics was awarded to Robert Lucas of the University of Chicago. As economic theories go, it is relatively straightforward. It essentially states that "individuals use all the available and relevant information when taking a view about the future." (MIT Dictionary of Modern Economics) The rational expectations hypothesis is the simple assertion that individuals take into account their best guesses about the future when they make decisions. That seemingly simple concept has profound implications. The Chicago School's research led them to conclude that individuals are relatively deliberate and sophisticated in how they make economic choices. Keynesians and their liberal followers apparently think individuals are short-sighted and simple-minded. An elemental but too often overlooked reality about our economy is that it is based on voluntary exchange. Voluntary exchange is an even more fundamental feature of our economy than is the market. A market is any arrangement that brings buyers and sellers together. In other words, the primary purpose of a market is to make voluntary exchange possible. Voluntary exchange leaves large amounts of control in the hands of private individuals and businesses. The market relies on carrots rather than sticks, rewards rather than punishment. The actors, therefore, need to be induced to move in certain desired directions rather than simply commanded to do so. This is the basic reason why incentives are such an important part of economics. If not for voluntary exchange, incentives wouldn't much matter. In designing economic policy in the context of a market economy it becomes important to take into account what actually motivates people and how they make choices. If you want to change behavior in a voluntary exchange economy, you have to change incentives. Keynesian policies do not take that essential step. The federal government's share of GDP has gone from 19 percent to 24 percent during Obama's time in the White House. A larger government share of GDP ultimately necessitates higher taxes or more debt. In and of themselves, higher taxes retard economic growth because of their impact on incentives. The disincentive effect of higher taxes illustrates why big government is far costlier than it first appears. It's no accident that Keynesianism is so popular with liberals. It blends well with their unquenchable thirst for expansive government. It doesn't work for the economy but it works for them. The obvious failure of Keynesianism is further evidence of the bankruptcy of liberalism. Keynesianism is essentially all the Democrats have. It's a one-trick pony. That one trick hasn't worked and now Dems are floundering with nothing more to offer. All but one member of the president's original economic team has exited. According to liberal columnist Ezra Klein, "Lawrence Summers and Christina Romer were two of the most influential Keynesians in the country. Obama didn't just have a team of Keynesians. He had a Keynesian all-star team." Now the president has a Keynesian all-gone team. It will be a brighter day for the country when Keynesianism itself is gone for good.

Stimulus fails – three reasons

Glenn Hubbard, July 17th, 2012, 7/17, dean of Columbia Business School, Chairman of the Council of Economic Advisers under George W Bush, adviser to Mitt Romney, “A conservative growth agenda for the US economy,” <http://www.ft.com/cms/s/0/aae75fcc-cf4d-11e1-a1ae-00144feabdc0.html#axzz20zuaSaSr>

The most recent grim US jobs report brought forth calls for more Federal Reserve action on fiscal stimulus. Meanwhile, business leaders call for clarity about long-term policy and the need to return to growth. A recent and intriguing project of the George W Bush Institute weighs in on the emphasis of business leaders with a “4 per cent solution.” While a 4 per cent long-term growth rate for the US is aggressive, this discussion is the right road map for policy. It is right because the nation faces structural impediments to growth. These are akin to carrying too many extra pounds of weight. They don’t seem to slow us down much walking on a flat surface, but are a burden walking upstairs or up a hill. The injuries to our economy since the onset of the financial crisis were made more painful by our failure to make structural adjustments. No single presidential administration deserves the blame for structural problems, but an important lens through which to judge a policy agenda is whether it recognises and mitigates those problems. While a growth-focused agenda would have many parts, two fiscal policy issues stand out – getting our fiscal house in order and reforming the tax code. The US is on an unsustainable fiscal trajectory, with a debt-to-gross domestic product ratio projected to rise to second world war levels in the coming years. High and rising debt burdens are a structural impediment to growth. They raise expected future tax burdens, discouraging investment and limiting productivity growth. Some recent estimates of this adverse effect suggest our debt-to-GDP levels would reduce expected growth by half a percentage point per year over the next decade. How debt reduction occurs is also important. Recent research by Alberto Alesina of Harvard, and others, has emphasised that reducing transfer spending is more likely to lead to long-lasting decrease in debt and support for growth than raising taxes. Gradual fiscal consolidation may also be stimulative in the short run. Research by Hoover Institution economists concludes that reducing federal spending relative to GDP to pre-financial-crisis levels over a decade would increase GDP in the short and long term. This outcome reflects lower future tax rates and the boost from lower interest rates to investment and net exports. Our tax code discourages work and entrepreneurship, saving and investment, and distorts the allocation of capital. Sweeping tax reform offers one of the best chances to raise growth; by this I mean reform which reduces marginal tax rates on work, investment and saving, and reduces tax preferences for particular industries and assets. With highly mobile capital, high US rates discourage investment in the US (with attendant job creation) by US and foreign firms, suggesting that economic estimates of growth effects of tax reform may be conservative. Many in Washington argue that an emphasis on the long term is misplaced, that we should focus on near-term “stimulus” and can confront long-term problems later. While there were strong reasons to argue for policy intervention at the onset of the crisis, there are three reasons to be sceptical about the call for “stimulus first”. First, failure to address structural problems contributed to the crisis (for example, the tax bias against business investment and misallocation of capital to housing). Second, making progress on longer-term debt reduction and tax reform would have given policy makers room to implement bolder short-term fiscal policy to support growth. Third, ad hoc responses to the crisis exacerbated policy uncertainty, weakening the recovery. We should not underestimate the costs of businesses holding off on investment and job creation because they cannot predict the course of policy, and the cost of consumers deferring large purchases against the backdrop of policy uncertainty. Businesses and households know structural problems must be addressed. But how? When? One group of economists estimates that policy uncertainty could have contributed to a 1.4 per cent reduction in GDP last year. By their figures, returning to pre-crisis levels of policy uncertainty would add about 2.3m jobs in 18 months. A growth agenda suggests a policy scorecard for voters: Does a policy platform promote fiscal consolidation and tax reform? Does it promote a clear policy path, minimising uncertainty? For Governor Mitt Romney the answers are yes and yes. For President Obama the answers are no and no.

### Deficit Spending Fails-Laundry List

Deficit spending fails—

JD Foster, February 16th, 2011 (Norman B. Ture Senior Fellow in the Economics of Fiscal Policy, Heritage Foundation, “Why the Demand Side Stimulus Failed,” <http://www.heritage.org/research/testimony/2011/02/why-the-demand-side-stimulus-failed> >:)

My name is J.D. Foster. I am the Norman B. Ture Senior Fellow in the Economics of Fiscal Policy at The Heritage Foundation. The views I express in this testimony are my own, and should not be construed as representing any official position of The Heritage Foundation. At best, stimulus efforts based on government spending and tax cuts with little or no incentive effects have done no harm. At best. It is quite possible most of these efforts over the past couple of years have slowed the recovery while adding hundreds of billions of dollars to the national debt. The record is all the more unfortunate because it is possible for a President and Congress to work together to stimulate the economy to faster growth during and after a recession. They can do so by improving incentives to produce and to work: for example, by reducing regulations and tax distortions. They can do so by reducing the uncertainties surrounding future policy. They can do so by expanding foreign markets for domestic goods and services. Recent efforts to stimulate the economy have been unsuccessful because they did little or none of these things. Regulations have increased. Uncertainty has increased. Tax distortions have been left in place or even increased in some areas. And efforts toward free trade have been anemic, at best. Stimulus can work, but it has not worked because the Administration took another approach, emphasizing tax relief with little or no incentive effects combined with massive increases in spending. The President inherited a ballooning budget deficit and opted to grow it further. At best, this would be expected to be ineffectual. At best, because the resulting increased deficits infused economic decision-making with even more uncertainty about the consequences of massive deficit spending and how and when government will act to restore fiscal sanity. Fortunately, the economy is showing clear signs of sustained recovery; uneven recovery to be sure, stronger in some areas than others both geographically and by industry, but recovery nonetheless. Despite the tremendous blows from the financial crisis and all that it entailed, the underlying strengths of our free market system once again are at work, giving expression to the vitality, energy, and innovation of the American people. Make no mistake: Our economy is recovering despite—not because of—the actions taken in Washington to grow it. Signs of Taking the Wrong Road The heart of the Administration’s approach to stimulus is the equivalent of fiscal alchemy. Alchemy, “the art of transmuting metals,” refers specifically to turning base metals like lead into gold. Fiscal alchemy is the attempt to turn government deficit spending—whenever, wherever, and on whatever—into jobs. Regarding near-term stimulus, it is not a matter of how wisely or foolishly the money is spent. It is not a matter of how quickly or slowly the money is spent. It is not a matter of whether some is saved or not—any more than the phase of the moon or adding a bit more wolfsbane or a stronger electric current enhances the prospects for lead to become the substance of an alchemist’s dreams. The basic theory of demand-side stimulus is beguilingly simple. The theory observes that the economy is under performing and total demand is too low, and thus total supply needed to meet that demand is too low. It would appear obvious enough, then, that a solution is to increase demand by deficit spending and rising supply will naturally follow. The net of government spending over tax revenues adds to total demand. Increase the deficit and you increase demand, supply naturally follows, and voila: the economy is stronger and employment is up. One wonders then why government should not simply increase spending much, much more and create instant full employment. Why, indeed. The answer, as is now obvious, is that this policy does not work for the simple reason that government must somehow fund this additional spending, and it does so by borrowing. Suppose you take a dollar from your right pocket and transfer it to your left pocket. Do you have a new dollar to spend? Of course not. Or suppose you pour a bucket of water into a bathtub. You would expect the level of the water to rise. But where did the water in the bucket come from? It came from dipping it into the bathtub. You may make a splash, but when the water settles, in terms of the water level nothing will have changed. An increase in government borrowing to finance an increase in deficit spending produces one of two ensuing events, either of which (or in combination) leaves total demand unchanged. First, the increase in government borrowing can mean a reduction in the amount of saving available for private consumption and private investment. Government demand goes up, private demand goes down, total demand is unchanged. Alternatively, the increase in government borrowing may be financed not by reducing private borrowing but by an increase in net inflows of foreign saving—either a reduction in the gross outflows of U.S. saving or an increase in the gross inflows of foreign-sourced saving. Total demand remains unaffected, however, because the balance of payments still balances, and so the increase in net inflows of saving is matched by an increase in the net inflows of goods and services—the increase in the trade deficit offsets the increase in deficit spending. Underlying this simple confusion surrounding demand-side stimulus is that the theory ignores the existence of a well-developed financial system, the job of which fundamentally is to direct private saving into private consumption, private investment, or government deficit spending. Even in the past few years, when the financial system has worked poorly in the sense that institutions have failed, markets struggled, and the direction of investment dollars has been less than stellar, the markets still managed to take every dollar of saving and direct it toward a borrower willing to take it and use it. Demand-side theory presumes the existence of financial markets, as government must rely on those markets to issue debt to finance deficit spending, but then ignores that absent the additional government borrowing, markets would have directed the saving to other purposes, which would have added to total demand in the same amount. These economic relationships are analogous to the law of conservation of energy, which says that energy can be neither created nor destroyed in a closed system, but can only be transformed from one state to another. If we exclude the possibility of cross-border capital flows, then the closed system is the domestic economy and the energy conserved is the amount of saving available. If we allow for the possibility of cross-border capital flows, then the closed system is the global economy and the energy conserved is the amount of domestic saving augmented or diminished by the second closed system of the balance of payments. You Could Be a Demand-Sider If… There are some tell-tale signs that one has intentionally or inadvertently fallen prey to demand-side stimulus alchemy. One such sign arises when one engages in discussions about multipliers. The multiplier principle is simple enough—if government deficit spending rises by a dollar, does total demand rise by more than a dollar? Make no mistake. One must first accept the possibility that government deficit spending can boost total demand before one embarks on an empirical investigation of multipliers. First, one must believe that lead can be turned into gold to investigate the advantages of incantations over potions. Another tell-tale sign is references to whether amounts are saved or spent. For example, one argument in favor of direct spending over broad-based tax relief is that every dollar of spending is spent, whereas some portions of a tax cut are saved, and the higher the income of the tax cut recipient, the more from a tax cut is likely to be saved. A related example is the argument that the additional cash income from extending the Unemployment Insurance program for the long-term unemployed is highly likely to be spent virtually in toto, suggesting that such a policy is particularly efficacious stimulus. Whether the monies resulting from deficit spending are saved or spent matters not a whit to the immediate level of economic activity. If these monies are spent, then private demand must fall by the amount borrowed. If the monies are saved, then government debt is higher and private saving is higher, yet total demand is again unmoved. One of the original motivations for the demand-side theory of fiscal stimulus was the observation that private saving might be parked in unproductive locations. We hear echoes of this today when, for example, the President refers to the need for private companies to employ their enormous cash hoards to increase investment and employment. For example, during the Great Depression many citizens took to stashing their saving around the house as faith in the security of private financial institutions crumbled. They would bury it in a coffee can in the back yard, or perhaps sew twenty-dollar bills into the lining of a suit. Clearly, in these cases, the saving has been withdrawn from the financial system and so total demand as commonly measured fell. However, this cautious financial behavior lends no support for increased deficit spending. There is nothing about a government going deeper into debt that is going to instill such confidence in a coffee can-based saver as to entice that person to disinter his or her cash just to make it available to the government. Unless the saving has been withdrawn entirely and held in cash, it remains part of the financial system, and banks and other financial institutions are lending those monies to someone else to use. Companies today with large cash hoards are choosing not to invest these monies themselves in expanded productive capacity; however they are not locking them in the Chief Financial Officer’s office safe, either. These corporate savings are deposited with and deployed by the financial system. Why Are Demand-Siders Not Quaking? The Congressional Budget Office recently released its analysis of the near- and intermediate-term budget picture showing a budget deficit for 2011 of almost $1.5 trillion or 9.8 percent of our economy.[1] However, under the CBO forecast based on current law, the deficit drops dramatically to 7 percent of our economy by 2012 and it drops a similar amount as a share of the economy by 2013. The Administration’s Mid-Session Review released last July showed a similar pattern.[2] (This testimony was written prior to the release of the President’s Fiscal Year 2012 Budget, which presumably will show the same general pattern. In light of these forecasts, if the Administration and other demand-side stimulus proponents believed their own theory they would today be concerned to the point of apoplexy. Rather than forecasting reasonably good growth for 2011 and 2012, they would be forecasting a growth recession at best, and more likely a return to recessionary conditions. The measure of the amount of demand-side stimulus is whether the deficit is rising or falling relative to the size of the economy. From 2008 to 2009, the ratio of the deficit to Gross Domestic Product (GDP) rose from 3.2 percent to 9.9 percent. This 6.7 percent massive dose of fiscal stimulus represented the largest deficit burst since 1942. It was half again as large as the next biggest dose in the post-war era—a 4.4 percentage point burst in 1949. If demand-side stimulus worked, the economy’s growth today should be China-esque. On the flip side, a 5.5 percentage point drop in the deficit-to-GDP ratio from 9.8 percent in 2011 to 4.3 percent in 2013, as CBO forecasts, should raise loud alarms amongst demand-side supporters. If demand-side deficit-soaring stimulus works to boost the economy, then a rapidly shrinking deficit should undercut the economy. Yet, no such concern is in evidence. Instead, the Administration forecasts a steady improvement in output and employment. The Administration apparently no longer believes in demand-side stimulus. To be clear, a rapid decline in the budget deficit through a combination of strong spending restraint and revenue recovery through economic growth is exactly what the nation needs today. The point, in the current context, is merely that demand-side supporters apparently expect as little downward effect from the rapid drop in the deficit’s share of our economy as we saw stimulative pressures when the deficit began its historic ascent. The Fall, Rise, and Fall of Demand-Side Stimulus It was not that long ago that demand-side stimulus was generally understood to be ineffective. After a couple decades of unsuccessful attempts at fiscal fine-tuning in the 1950s through the 1970s, not just in the United States but around the world, a reluctant consensus for abandoning these policies developed. For some reason, this consensus fell apart during the recession President George W. Bush inherited from President Clinton. While Bush emphasized the importance of rate reductions, it also became acceptable again to talk about “putting money in people’s pockets so they could spend.” Demand-side stimulus was back, and as ineffective as ever as we learned in 2001 and 2002. The demand-siders remained ascendant as President Obama took office and as yet another recession unfolded. Facing a choice of cutting tax rates à la first President Reagan in 1981 and then Bush in 2001 and 2003, or returning to the deficit spending policies of the early post-war period, Obama and his congressional allies naturally chose not to emulate their ideological opponents. They chose to increase mightily an already rapidly growing spending bulge and budget deficit. If ever this policy was going to work, this was it. It failed. That demand-side stimulus has again failed is increasingly obvious even to those who advanced the policy, some reluctantly, some with gusto. It is safe to predict that many of those who remained silent in opposition will soon come out and say they opposed this policy all along. It is even safe to predict that some of the loudest proponents will recant in some future year, likely asserting in all seriousness and hoping no one will check, that they knew all along that the President’s demand-side stimulus policy was doomed. It matters far less that these voices will still have currency in certain quarters than that, for awhile at least, demand-side stimulus policies will again be tabled as effective only in growing the national debt. Stimulus That Would Have Helped There is much the last Congress could have done to stimulate the economy. A simple example is that Congress might have acted quickly, rather than waiting until the last minute, to extend the Bush tax cuts through 2012. The uncertainty surrounding tax policy slowed the recovery. The Congress could have resisted the temptation to tinker. For example, it could have resisted the temptation of the first-time homebuyer’s credit, which on balance slowed the recovery in the housing sector by first confusing and then slowing the price discovery process. To be sure, home sales at first increased, and then collapsed, and in the meanwhile housing markets had a powerful new source of market noise to filter out as they searched for proper price levels. The Congress and the President could have halted the storm of new regulations and threatened regulations, beginning but not limited to Obamacare. According to estimates by my colleague James Gattuso, the cost of the federal regulatory burden now tops $1 trillion—before Obamacare.[3] Above all, Congress could have focused its fiscal policies on the sources of recovery and growth, rather than give in to the perennial delight of increasing spending on politically favored causes. One example among many is that the Congress could have cut the corporate income tax rate from 35 percent to 25 percent for a decade for about the same deficit impact as all the so-called fiscal stimulus. President Obama acknowledged in his State of the Union address that the corporate tax rate is too high. Had he acknowledged this two years ago and pressed for a reduction at that time, many more fellow citizens would today have gainful employment. Because the budget deficit today is so enormous, the nation’s policy options aside from halting or reversing the regulatory onslaught are severely limited, confined essentially to expanding free trade and cutting spending deeply to restore fiscal balance. Near-term efforts to cut non-security discretionary spending are essential, but must be seen as but the first step in a steady march against government spending, including reforming the major entitlement programs to stabilize these programs and to stabilize government spending. The best Congress and the President can do now in terms of fiscal policy is to get the nation’s fiscal house in order by cutting spending, repeatedly.

### Stimulus Fails-Politically Impossible

Keynesian economics fails in practice – maintaining surplus during a boom is politically impossible

Tim Worstall, June 29th, 2012, 6/29, writer, The Telegraph, UK newspaper, “Failed Keynesianism caused the economic crisis,” pg. l/n

Professors Paul Krugman and Richard Layard have launched a manifesto- they are trying to get economists to sign up to their version of what went wrong with the world economy and what we should do about it. I can't sign it as I'm not an economist. But even if I were, I wouldn't - because they've made a very bad error in the analysis of the basic cause of the crisis. Leave entirely aside their advice on what should be done now; I'd argue that what went wrong is the perfect proof of why Keynesian demand management of the economy will never work. Here's an extract from Krugman and Layard: The causes. Many policy makers insist that the crisis was caused by irresponsible public borrowing. With very few exceptions - other than Greece - this is false. Instead, the conditions for crisis were created by excessive private sector borrowing and lending, including by over-leveraged banks. The collapse of this bubble led to massive falls in output and thus in tax revenue. So the large government deficits we see today are a consequence of the crisis, not its cause. Think back to what basic Keynesianism demands: fiscal policy, the gap between what the government collects in taxes and what it spends, should be counter-cyclical. When demand is weak, as now, there should be a big deficit to compensate. However, it is also true that when demand is strong, the same theory insists that there should be a large surplus. Nigel Lawson's Public Sector Debt Repayment should be going on. These are two halves of the same theory. If you want a budget deficit in a slump then you must also want a budget surplus in a boom. So, let us look around the world and see whether, in the tail end years of the longest boom of modern times (roughly, 2000 to 2007) governments were running budget surpluses. Spain was, yes, and Ireland too. The UK certainly wasn't, as Brown decided to borrow more to "invest" and the idea that the younger Bush ran a surplus will be greeted with hollow laughter. But even Spain wasn't running a large enough surplus. The deficit/surplus should be symmetrical to some extent. If the slump is going to bring forth 5pc or 10pc of GDP deficits then at the peak of the boom we should be having 5pc or 10pc surpluses. No, this isn't just to pay off the old debt, nor is it to build up borrowing firepower for when we need it. It's integral to the entire theory, that if we are to manage demand then we must suck it out of the economy in the boom just as we pump it in in the slump. But here's the catch - sucking demand out, what Paul Volker called taking the punchbowl away just as the party heats up (although that was about monetary policy), doesn't seem to be possible in any realistic political system. As soon as that surplus starts to pile up, we get the joint cries of we should cut taxes or increase spending. Think about the Left calling for us to abolish child poverty, rebuild all the schools and remedy decades of neglect about social housing. Perhaps these were good things to spend money on. Perhaps they weren't. But Keynesianism demands that in a boom one runs a substantial budget surplus. The bigger the boom, the bigger that surplus should be for reasons purely of demand management. Governments did not run such surpluses when they should have. What caused our current problems was the inherent failure of Keynesian economics. No politician is ever going to do the hard part when necessary: running gargantuan budget surpluses at the peak of a boom. And if an economic theory cannot survive implementation in the real world, which is to say the collision with politics, then it's not all that useful a theory to use to guide our politics, is it?

### Stimulus Fails-Private Crowd Out-Empirics

Stimulus fails – it either crowds out private investments or kills dollar hegemony – all empirics go our way

Steve Stanek, March 11th, 2011, research fellow at the Heartland Institute, managing editor of Budget & Tax News, “Two years of epic stimulus failures: Keynesian spending creates nothing but a wealth of debt,” pg. l/n

We've just passed the second anniversary of "economic stimulus" under President Obama. Aside from spending on the stimulus itself - the actual price tag soon climbed from $787 billion to $821 billion - not much else has been stimulated. Nearly a trillion dollars have been poured into the U.S. economy, courtesy of the American Recovery and Reinvestment Act of 2009. Result? Unemployment has barely budged, housing prices continue to fall in many markets and more mortgages slip into foreclosure. How can this be happening when so many people in government assure us that government spending spurs the economy? Because it's not true. For government to pour money into the economy, it must take money out of the economy in the first place. To hand out money, government must first take money from taxpayers. It's like moving money from the left pocket to the right pocket. It doesn't make us any wealthier. What it really stimulates is more government, not more economic activity. Or government can borrow money, which is simply taking money now and promising to pay it back later with money that will come from taxpayers who are around when "later" arrives. Government borrowing reduces the amount of money available for private businesses and individuals to borrow. The federal government also can create money, which leads to price inflation, making today's dollars worth less than yesterday's. We're already seeing the impact of a less-valuable dollar in items ranging from gold and silver to cotton and gasoline, all of which are at or near record prices. As high prices for essentials such as food and energy work their way through the economy, consumers will have less money to spend on everything else. The nonsensical idea that government should spend more in economic downturns stems from "Keynesianism," which is all the rage in government policy circles today, and for good reason. It provides cover to people who believe in expansive, interventionist government. Keynesianism claims government can spur demand for goods by spending money to make up for what private businesses and consumers are not spending. This provides an excuse to grow government, even when - especially when - the economy is slowing or contracting, and it gives government more power. But if government spending can boost an economy, how did the U.S. economy ever decline in the first place? When George W. Bush became president, total federal spending was $1.8 trillion. When he left office eight years later in January 2009, federal spending topped $3.4 trillion. And by 2009, the country was in the second year of the worst economic downturn since the 1930s. Spending under Mr. Bush increased at more than twice the rate of increase under President Clinton during the 1990s, a decade many Democrats now clamoring for even more government spending point to as years of strong economic growth. And let us not forget state and local governments. They did their part to supposedly prevent an economic slowdown by expanding their spending by more than $1 trillion - from $1.74 trillion in 2000 to $2.83 trillion in 2008 - when the financial crisis began. Record government spending did nothing to stop the recession. More government spending will do nothing to end it. Ah, but what about World War II spending, ending the Great Depression, you say? It did no such thing. Keynesian economists in the 1940s warned the end of war spending and return of millions of soldiers would result in an economy every bit as bad as or worse than we had during the Depression. Instead, federal spending plummeted from 40 percent of the economy to less than 15 percent (it's about 25 percent today), unemployment fell to less than 4 percent, and the economy boomed - the opposite of what many government economists said would happen, and another refutation of Keynesianism. The way to end this recession is for government to cut spending, shrink the deficit, end corporate welfare, stop using taxpayer money to bail out politically connected businesses and industries, and reduce regulations that make investing for the future more difficult.

### Stimulus Fails-AT Multiplier Effect

Stimulus fails – businesses exploit workers, wages don’t stay sticky long enough and government spending crowds out the private sector – the multiplier effect goes our way

Garett Jones and Veronique de Rugy, September 2009, (1) senior scholar at the Mercatus Center at George Mason University, macroeconomics, monetary economics, and the microfoundations of economic growth, (2) Senior research fellow at the Mercatus Center at George Mason University, federal budget, homeland security, taxation, tax competition, and financial privacy issues, “Will the Stimulus Bill Crowd Out Good Economics?” pdf

On February 13, 2009, President Obama signed into law the American Recovery and Reinvestment Act (ARRA), with the promise that this $787 billion stimulus would "create or save" 3.5 million jobs over the next two years, mostly in the private sector.1 The basis for the law was a study by Christina Romer, the Chairman of the Council of Economic Advisors, and Vice-President Biden's chief economist Jared Bernstein, who warned that without an economic stimulus, unemployment would reach 9 percent by the end of 2010.2 Since the president signed the stimulus package into law, the U.S. economy has shed more than 2 million jobs and the unemployment rate has climbed to 9.7 percent, higher than the White House predicted it would have reached without the stimulus.3 By examining the government's ability to create jobs through spending, this Mercatus on Policy shows that in the best-case scenario, the stimulus will mostly shift jobs from privately funded to publicly funded ones. In the worst-case scenario, the ARRA will destroy jobs and halt economic growth. PROMISES, PROMISES The stimulus bill draws on the views of economist John Maynard Keynes. According to Keynesian thought, a fall in demand causes a fall in spending. Since one person's spending is someone else's income, a fall in demand makes a nation poorer. When that poorer nation prudently cuts back on spending, it sets off yet another wave of falling income. So, a big shock to consumer spending or business confidence can set off waves of job losses and layoffs. Can anything stop this cycle? Keynesians say yes: Government spending can take the place of private spending during a crisis. If the government increases its own spending, it will create new jobs. These new workers should consume more, and businesses should then buy more machines and equipment to meet the government's and revitalized public's demands. This increase in gross domestic product is what economists call the multiplier effect. It means that one dollar of government spending will end up creating more than a dollar of new national income. STICKY WAGES: KEY TO THE MULTIPLIER DEBATE As appealing as the Keynesian story sounds, some economists have always had doubts. Historical evidence from throughout the world has shown that high government spending hurts the economy in the long run.4 It's a negative multiplier. In the short run, a big drop in the demand for workers cannot cause mass unemployment by itself. If all of those workers really want to work, wages will fall until they all have jobs. That's how markets end a glut, whether it's a glut of workers or a glut of blue jeans: with lower prices.5 If recessions really are caused by a fall in demand (and nothing else), workers' wages should fall enough to keep people from losing their jobs. It's just a matter of waiting for it to happen. But it won't happen, the Keynesians explain, because of "sticky wages."6 Wages and salaries don't change on a daily basis the way that stock prices and gas prices do. Those prices are fluid, but wages are rather . . . sticky. Thus, if a company hits a sales slump, the salespeople will earn fewer commissions, but the company won't instantly cut the pay of most workers. Most companies would rather fire a few people than reduce everyone's salary.7 If a fall in demand means mass firings, then a rise in demand should mean mass hirings. As long as wages are sticky, a rise in demand from anywhere in the economy—from consumers spending a tax rebate, a new government construction program, or an investment tax credit—will mean some unemployed workers will get jobs somewhere in the economy. Even if government spending is inefficient, pork-laden, and paid for with future tax increases, in theory, it still creates some real jobs and some real output in both the government sector and private sector. But as we'll see, things are different when we move from the chalkboard to the real world. THE KEYNESIAN ASSUMPTION: BUSINESSES DON'T EXPLOIT WORKERS In a world of sticky wages—the world in which most of us live in on a month-to-month basis—a Keynesian stimulus starts to sound reasonable, especially if we are willing to overlook the longer-term consequences of this policy, such as debt, higher taxes, or inflation. But the Obama Administration said the stimulus bill would create jobs over the next four years. Are wages sticky for that long? Eventually, won't businesses find a way to cut wages and hire those millions of unemployed workers? Stimulus defenders have only one answer: "No." They maintain that millions of unemployed workers won't push wages down very much and firms won't take advantage of their plights; wages can stay too high for years. This is quite an assumption. The Keynesian belief that wages never adjust to a fall in demand seems as extreme as the alternative Real Business Cycle belief that wages instantly adjust to a fall in demand. That's why most macroeconomists have come down somewhere in the middle, a position known as "New Keynesian Economics."8 New Keynesians—including Obama economic adviser Larry Summers and Bush economic adviser John Taylor—teach that government spending can only grow the economy for as long as wages remain sticky. After that, more government hiring means less private-sector hiring. Keynesian success lasts only as long as it takes for wages to adjust. It beggars belief that wages could stay sticky for four years. In the midst of a deep recession, even two years of wage stickiness seems quite a stretch, which makes the government's decision to push off most spending into 2010 quite puzzling in pure Keynesian terms. The government is waiting for the market to start healing itself before it does most of the spending. As wages grow more flexible in coming months and years—as they surely will when the unemployed bid for scarce jobs—the Keynesian multiplier should shrink. Even if $1 of government spending could raise GDP by $1.50 this year, as the CBO's model assumes, it's hard to believe that $1 of government spending in fiscal 2011 will raise GDP by nearly that much. THE KEYNESIAN MULTIPLIER: A SURPRISINGLY WIDE RANGE OF ESTIMATES So, what do the data say? There aren't many studies on the issue, but two have found that government spending shrinks the private sector, at least a little.9 Looking at war spending, economist Robert Barro estimates that the multiplier of government spending is 0.8: when the government grows by $1, the private sector shrinks by 20 cents. Economist Valerie Ramey's work on how U.S. military spending influences GDP gives a preferred estimate of 1.2, but she also finds evidence that consumer and business spending fall after a rise in government purchases. Thus, both papers support the "crowding out" hypothesis.10 And Clinton Administration economist Brad Delong reports a short-run multiplier of only 0.5: a dollar of government spending shrinks the private sector by 50 cents.11 Those are estimates by leading figures in the profession. What do other studies say? Economist Patrick Van Brusselen surveyed all available multiplier estimates and found, "Government spending multipliers varied between -3.8 and +3.8; tax cut multipliers vary between -4.8 and +3.0."12 The studies are all over the map. Some say tax cuts and extra spending hurt the economy in the short run; some say they help. JOB CREAATING OR JUST JOB SHIFTING? It's obvious that the government can hire people. But how many of these jobs will be taken by people already working in the private sector? This is a statistic that desperately needs to be calculated over the coming years. After all, if most stimulus jobs are taken by people just switching over from privately funded jobs to publicly funded ones, that hurts any short-run Keynesian stimulus effect. In fact, in the last six months, some people have switched from private to public-sector jobs. According to the Boston Globe, these people were willing to take a cut in pay because they valued the security and fringe benefits of a government job.13 Every worker who switches to a government job for the good benefits hurts the Keynesian story. In a 2007 paper, economists Vincenzo Quadrini and Antonella Trigari posed another important question: If a government routinely hires more workers during a recession, will the unemployed intentionally stay unemployed longer, in hopes of getting a good government job?14 Since government jobs and stimulus-funded Davis-Bacon prevailing wage jobs15 tend to have high wages and good benefits, there might be a strong incentive for unemployed workers to search a bit longer before settling for a private-sector job. In a simulation, Quadrini and Trigari found that when government spending stimulates the economy during a recession, it makes the typical recession worse. Many of the unemployed stay unemployed a few weeks longer in the hopes of finding a high-paying, secure, stimulus-funded job. Common sense for an unemployed worker searching for the best job possible means a longer recession for all of us. So the Quadrini/Trigari multiplier isn't just zero: it's negative, even in the short run. By leaving out the Keynesian sticky-wage story, the Quadrini/ Trigari story is incomplete. Likewise, a simple Keynesian story that leaves out the Quadrini/Trigari story is also lacking. If stimulus jobs paid market wages rather than high Davis-Bacon wages, this would be less of a problem, though still a problem.16 And it's a problem that points in only one direction: a smaller multiplier. Perhaps it won't push the short-run multiplier down to zero (or less than zero), but a multiplier between zero and one starts to sound much more plausible—just the kind of small multiplier that Brad Delong recently found. And if that's the case, then fiscal "stimulus" grows the government at the cost of shrinking the private sector. We can see the same story if we look at how the jobs are funded. Government doesn't have money. To spend it, it needs to either borrow, tax, or print it (or a combination of these). Money that is taxed or borrowed from the private sector is money that firms can't spend on goods or employees. So, just as a government stimulus usually shrinks private-sector jobs, it also shrinks private-sector wealth. In other words when the government makes its slice of the pie bigger, it makes the rest of the pie smaller. CONCLUSION Perhaps there are good reasons to think that in this recession, government spending has a better chance than usual of helping the economy. After all, with high unemployment rates, the unemployed might just grab at the first available job. But if that's true, then we have to worry that nervous private sector workers will be equally willing to jump to a safe government job. A terrible job market doesn't clearly favor the Keynesian theory that government can create jobs, nor does the fact that the government has to take the money from one side of the economy to inject it on the other side support this idea. While the stimulus may appear to be a wise investment, it is really no wiser than a junk-rated mortgage-backed security: it may appear to pay off, but in reality it's quite a risky scheme.

Stimulus funds don’t improve the economy – borrowing decreases the purchasing power of investors

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Moving forward, the important question is why government spending fails to end recessions. Spending-stimulus advocates claim that Congress can "inject" new money into the economy, increasing demand and therefore production. This raises the obvious question: From where does the government acquire the money it pumps into the economy? Congress does not have a vault of money waiting to be distributed. Every dollar Congress injects into the economy must first be taxed or borrowed out of the economy. No new spending power is created. It is merely redistributed from one group of people to another.[7] Congress cannot create new purchasing power out of thin air. If it funds new spending with taxes, it is simply redistributing existing purchasing power (while decreasing incentives to produce income and output). If Congress instead borrows the money from domestic investors, those investors will have that much less to invest or to spend in the private economy. If they borrow the money from foreigners, the balance of payments will adjust by equally raising net imports, leaving total demand and output unchanged. Every dollar Congress spends must first come from somewhere else

### Stimulus Fails-Empirics

Keynesian economics is false – empirical studies disprove

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The stimulus was premised on the economic model known as Keynesianism: the intellectual legacy of the late English economist John Maynard Keynes. Keynesianism doesn't work, never has worked, and never will work. Without a clear understanding of why Keynesianism cannot work we will be forever doomed to pursuing the impossible. There's no real mystery about why Keynesianism fails. There are numerous reasons why and they've been known for decades. Keynesians have an unrealistic and unsupportable view of how the economy works and how people make decisions. Short-Run Focus Keynesian policy advocates focus primarily on the short run -- with no regard for the future implications of current events -- and they assume that all economic decision-makers do the same. Consider the following quote by John Maynard Keynes: "But the long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean will be flat again." After passage of the stimulus package, Lawrence Summers, Obama's chief economic advisor at the time, often said that the spending should be "timely, targeted, and temporary." Although those sound like desirable objectives, they illustrate the Keynesian focus on the short term. Sure it would be convenient if you could just spend a bunch of money and make the economy get well, but it's not that simple. The implication of a Keynesian perspective is that you can hit the economy a few times with a cattle prod and get society back to full employment. Remember that so-called "cash-for-clunkers" program? Maybe it accelerated some new car sales by a month or two, but it had no lasting impact. The "Chicago School" is the primary source of serious research and analysis related to the Keynesian model. Two Chicago School conclusions, in particular, make it clear where Keynesian policies run aground. The two theories are the "permanent income hypothesis" and the theory of "rational expectations." The "permanent income hypothesis" was how Milton Friedman termed the findings of his research on the spending behavior of consumers. The MIT Dictionary of Economics defines the permanent income hypothesis as "The hypothesis that the consumption of the individual (or household) depends on his (or its) permanent income. Permanent income may be thought of as the income an individual expects to derive from his work and holdings of wealth during his lifetime." Whether consumers and investors focus mostly on the short run or the long run is basically an "empirical question." A convincing theoretical case can be made either way. To find out which focus actually conforms closer to reality, you have to gather evidence. Not Evidence-Based Much of the difference between the two schools of thought can be explained by differences in their methodologies. Keynes was not known for his research or empirical efforts. Keynesianism is definitely not an evidence-based model of how the economy works. So far as I know, Keynes did no empirical studies. Friedman was a far more diligent researcher and data collector than was Keynes. Friedman fit the theory to the data, rather than vice versa. The Keynesian disregard for evidence is reflected in their advocacy for more stimulus spending even in the face of the obvious failure of the what's already been spent. At a minimum, we are due an explanation of why it hasn't worked. (Don't expect that to be forthcoming, however). Failure to Consider Incentives Another of the Chicago School's broadsides against Keynesianism is the theory of "rational expectations." It's a theory for which the 1995 Nobel Prize for Economics was awarded to Robert Lucas of the University of Chicago. As economic theories go, it is relatively straightforward. It essentially states that "individuals use all the available and relevant information when taking a view about the future." (MIT Dictionary of Modern Economics) The rational expectations hypothesis is the simple assertion that individuals take into account their best guesses about the future when they make decisions. That seemingly simple concept has profound implications. The Chicago School's research led them to conclude that individuals are relatively deliberate and sophisticated in how they make economic choices. Keynesians and their liberal followers apparently think individuals are short-sighted and simple-minded. An elemental but too often overlooked reality about our economy is that it is based on voluntary exchange. Voluntary exchange is an even more fundamental feature of our economy than is the market. A market is any arrangement that brings buyers and sellers together. In other words, the primary purpose of a market is to make voluntary exchange possible. Voluntary exchange leaves large amounts of control in the hands of private individuals and businesses. The market relies on carrots rather than sticks, rewards rather than punishment. The actors, therefore, need to be induced to move in certain desired directions rather than simply commanded to do so. This is the basic reason why incentives are such an important part of economics. If not for voluntary exchange, incentives wouldn't much matter. In designing economic policy in the context of a market economy it becomes important to take into account what actually motivates people and how they make choices. If you want to change behavior in a voluntary exchange economy, you have to change incentives. Keynesian policies do not take that essential step. The federal government's share of GDP has gone from 19 percent to 24 percent during Obama's time in the White House. A larger government share of GDP ultimately necessitates higher taxes or more debt. In and of themselves, higher taxes retard economic growth because of their impact on incentives. The disincentive effect of higher taxes illustrates why big government is far costlier than it first appears.

Empirically deficit spending fails

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This is no longer a theoretical exercise. The idea that increased deficit spending can cure recessions has been tested repeatedly, and it has failed repeatedly. The economic models that assert that every $1 of deficit spending grows the economy by $1.50 cannot explain why $1.4 trillion in deficit spending did not create a $2.1 trillion explosion of new economic activity.

### AT-Increases Employment

No risk of aff offense – there’s no evidence that the stimulus created jobs

Riedl 10 — Brian M. Riedl, Grover M. Hermann Fellow in Federal Budgetary Affairs at The Heritage Foundation, holds a B.A. in Economics and Political Science from the University of Wisconsin and an M.A. in Public Affairs from Princeton University, 2010 (“Stimulus Jobs Count: CBO Admits It Ignored the Economy’s Actual Performance,” Heritage Foundation WebMemo #2843, March 23rd, Available Online at http://www.heritage.org/Research/Reports/2010/03/Stimulus-Jobs-Count-CBO-Admits-It-Ignored-the-Economys-Actual-Performance, Accessed 11-07-2011)

If a meteorologist was asked what the day's high temperature had been, would it be acceptable to simply repeat his/her earlier forecast? Of course not. The forecast was merely a prediction, which should now be replaced with what actually happened. Yet that is the approach the Congressional Budget Office (CBO) used when declaring that the stimulus had saved 1.5 million jobs. Rather than actually examine the performance of the post-stimulus economy, it essentially re-released its old forecast that the stimulus would likely create jobs. CBO Confirms Its Methodology In a recent speech to the National Association of Business Economics, CBO Director Doug Elmendorf confirmed this by stating: [W]e don't think one can learn much from watching the evolution of particular components of GDP [gross domestic product] over the last few quarters about the effects of the stimulus … so we fall back on repeating the sort of analysis we did before. And we tried to be very explicit about it that it is essentially repeating the same exercise we did rather than an independent check on it.[1] When asked if this means that any actual underperformance of the stimulus would fail to show up in the CBO's stimulus jobs count, Elmendorf replied "That's right." This means the 1.5 million jobs saved estimate was pre-determined. Of course, the stimulus was originally promised to create (not just save) more than 3 million jobs.[2] Instead, the economy has since lost more than 3 million additional net jobs. The abject failure of the stimulus policies recommended by Keynesian economic models should induce some fundamental re-analysis of these models' assumptions. Instead, the CBO is re-releasing the same jobs analysis—with the same economic assumptions—that they had used a year ago. The "Begging the Question" Fallacy The CBO's conclusion that the stimulus created jobs is based on an economic model that began with the premise that all stimulus bills create jobs. In other words, the conclusion is already assumed as a premise. Logicians call this the fallacy of begging the question. Mathematicians call it assuming what you are trying to prove. More specifically, the CBO's model started by automatically assuming that government spending increases GDP by pre-set multipliers, such as: \* Every $1 of government spending that directly purchases goods and services ultimately raises the GDP by $1.75; \* Every $1 of government spending sent to state and local governments for infrastructure ultimately raises GDP by $1.75; \* Every $1 of government spending sent to state and local governments for non-infrastructure spending ultimately raises GDP by $1.25; and \* Every $1 of government spending sent to an individual as a transfer payment ultimately raises GDP by $1.45.[3] (Note that all CBO figures in this paper represent the midpoint between their high and low estimates.) Then the CBO plugged the stimulus provisions into the multipliers above, came up with a total increase in GDP of 2.6 percent, and then converted that additional GDP into 1.5 million jobs. The problem here is obvious. Once the CBO decided to assume that every dollar of government spending increased GDP by the multipliers above, its conclusion that the stimulus saved jobs was pre-ordained. The economy could have lost 30 million jobs, and the model would have said that the economy would otherwise have lost 31.5 million jobs without the stimulus. An asteroid could have hit the United States, wiping out everyone outside of Washington, D.C., and (as long as Washington still spent the stimulus money) the CBO's economic model would have produced the same stimulus jobs data. There is no adjustment made to reflect what actually happened in the economy after the stimulus was enacted.

### Stimulus Fails-Trade off

Government spending doesn’t improve the economy – it’s a zero sum tradeoff with other sectors

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Critics' Objection No. 4: During a Recession, Government Spending Can Put Unused Resources to Work. This restates the overall spending fallacy. Yes, government spending can put under-utilized factories and individuals to work--but only by idling other resources in whatever part of the economy supplied the funds. If adding $1 billion would create 40,000 jobs in one depressed part of the economy, then losing $1 billion will cost roughly the same number of jobs in whatever part of the economy supplied Washington with the funds. It is a zero-sum transfer regardless of whether the unemployment rate is 5 percent or 50 percent.

### Stimulus Fails-Kills Productivity

Large Term Stimulus bills often reduce long-term productivity

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Government spending can affect long-term economic growth, both up and down. Economic growth is based on the growth of labor productivity and labor supply, which can be affected by how governments directly and indirectly influence the use of an economy's resources. However, increasing the economy's productivity rate—which often requires the application of new technology and resources—can take many years or even decades to materialize. It is not short-term stimulus.[13] In fact, large stimulus bills often reduce long-term productivity by transferring resources from the more productive private sector to the less productive government. The government rarely receives good value for the dollars it spends. However, stimulus bills provide politicians with the political justification to grant tax dollars to favored constituencies. By increasing the budget deficit, large stimulus bills eventually contribute to higher interest rates while dropping even more debt on future generations.