The Return of Limits

written by Ashley Dawson | January 21, 2010

> "Nature has a habit of returning with a pitchfork" — Francis Bacon

NEAR THE BEGINNING of Voltaire's satirical classic *Candide*, the protagonist is told by his learned mentor Dr. Pangloss that he lives in the best of all possible worlds. No sooner has Candide absorbed this nugget of life-defining wisdom than he is booted out of the manor in which he has been living, conscripted into an army, and exposed to the clarifying rigors of a gore-filled modern battlefield. Throughout the rest of the novel, Voltaire subjects his naïve protagonist to a series of remorseless misadventures, designed one and all to demonstrate the foolhardiness of Panglossian optimism. The goal of Voltaire's bathetic epic was to skewer the pre-Enlightenment belief that god had ordained the world to remain as it was and that the attempts of human beings to ameliorate their situation were a form of blasphemy. *Candide* holds particular relevance today, for, notwithstanding the many tribulations human beings have experienced since it was written, we live today within a Panglossian frame of mind.

Nowhere is this truer than in the United States of America, the most wealthy and technologically advanced civilization in human history. Americans tend to believe that they live in the best of all possible worlds, regardless of mounting evidence to the contrary. Despite the impressive scientific acumen and the resulting material abundance that surrounds the residents of developed nations like the U.S., there is little discussion of the crisis that looms in our collective future. Indeed, Americans are blinded by their affluence, by the significant freedoms that they enjoy, and by their sense that the U.S. is god's chosen country, a liberal democratic capitalist light to the nations. So fortunate do Americans feel that some of them have even come to believe that the pageant of human history has finally drawn to a close as a result of their immense accomplishments.[1] Of course, this attitude is quite a convenient one for those who currently hold power, since the doctrine of optimism tends to discourage efforts to eradicate injustice and inequality, just as it did during Voltaire's time. Yet the U.S., and the rest of the planet with it, faces a dire future unless it awakens from its Panglossian trance.

U.S. armed forces are currently engaged in the first nakedly resource-driven conflict of the post-Cold War period.[2] "Operation Iraqi Freedom" was, of course, initially touted as a battle to destroy Saddam Hussein's weapons of mass destruction and to rupture the links between his regime and Al Qaeda. As these bloody lies have been exposed, the war has been revealed ever more clearly as an attempt to secure control over the world's second largest oil reserves and, with it, to exert geo-political sway over a significant portion of the Middle East.[3] Behind this agenda lies a more long term strategy of gaining a choke hold on industrial development, ensuring that current economic rivals such as the European Union and Japan and developing powers such as China will be dependent on American largesse for the fuel that supplies their industrial production.[4] As America loses its economic and political hegemony over the globe, in other words, its fundamental strategic objective will be to use its unrivalled military might to gain control of the world's key natural resources, particularly petroleum, in order to maintain its declining power.[5]

Yet this military strategy, whose viability is already being put in question by a significant resistance movement in Iraq, was doomed at the outset. For America's obscenely bellicose policy, which was framed well before the horrifying attacks of 9/11/01, is based on the illusion that America

can continue to consume the earth's resources at the current rate.[6] This idea is, remarkably, seldom challenged in American public life today. But then the American way of life is predicated on deeply ingrained cultural presuppositions about eternal plenty. As a settler colonial society, early denizens of the United States formed a potent ideology based on the myth of limitless virgin territory ripe for exploitation.[7] Although this territory was of course already occupied, the Native Americans had no genuine claim to the land on which they resided in the eyes of European settlers because they had done nothing to develop it. Freed from the weight of the feudal past and blessed with apparently limitless land to develop, American attitudes towards economy in the broadest sense have been framed not as the study of the optimum allocation of scarce resources but instead as a religion of ceaseless expansion.[8]

The peak of the world's cheap supply of petroleum in the near future will shatter this perennial American attitude and, potentially, destroy the material underpinnings of American prosperity. Inevitable rises in the cost of crude as a result of increasing scarcity over the next couple of decades will rock the economy of the United States, triggering a wave of recessions that are likely to end in unrelenting depression. In addition, the end of cheap oil will reveal the ecologically unsustainable character of fundamental aspects of contemporary American culture such as suburban development and industrialized corporate agriculture. Not only will we find it difficult to get around quickly and to heat our homes in the winter, but the abundant food supplies that Americans and other residents of industrialized nations have taken for granted over the last century are likely to dwindle. How quickly all of this will happen is of course subject to debate, yet there can be no denying the fact that the so-called American way of life and the cultural attitudes on which it is based are unsustainable in the long run. If Americans do not awaken from their Panglossian reverie, like Candide they will soon learn that they do not live in the best of all possible worlds.

The Return of Limits

BACK IN THE 1970S, the publication of *The Limits to Growth* spurred fears that excessive consumption of nonrenewable resources would inevitably trigger a global economic crisis.[9] In response to such fears, President Jimmy Carter had solar panels placed on the roof of the White House and began telling Americans that they'd have to learn to consume less. As a result of conservation measures, increases in fuel efficiency, and strategic political amnesia, concerns about resource depletion largely faded during the subsequent decade, to be replaced by the more distant threat of fossil fuel-induced climate change. Now, however, the specter of petroleum depletion has been revived by the predictions of a group of geologists. After a thirty year long interlude during which consumption reached unprecedented heights in the U.S., we are once again confronted by the possibility of a catastrophic breakdown of industrial civilization.

The last wave of concern about oil depletion had very real material causes: in 1970, U.S. oil production — the primary factor that powered the inexorable rise of the U.S. to global hegemony during the 20th century — peaked. This is not to say that oil wells in the U.S. suddenly ran dry, but rather that they reached their maximum productive capacity. Consequently, after 1970, the U.S. produced increasingly smaller amounts of crude. The ravenous appetite of its growth-oriented economy for fuel meant that the U.S. was forced to turn increasingly to imported sources of petroleum. In 1973, however, the members of the recently organized OPEC cartel established an oil embargo to punish the U.S. for its military and economic support of Israel. The resulting long lines at gas stations brought home the message of *The Limits to Growth* in the most tangible form.

The U.S. responded to this crisis in a variety of ways. Not only did Americans learn to drive smaller, less gas-guzzling cars, to insulate their houses better and buy more energy efficient appliances; in addition, the major oil companies began diversifying their sources of oil. OPEC and, more specifically, the Middle Eastern nations that sit on the world's greatest petroleum reserves,

became less crucial suppliers for the U.S. as new fields were opened up in less politically volatile sites such as the North Sea and Alaska's North Slope. Despite the recession that was provoked by the Iranian revolution and the consequent withdrawal of that country's oil from the global market, Americans quickly forgot their fears of resource depletion.[10] The nation welcomed Ronald Reagan's feel-good message that it was "morning in America" and chuckled as he had Carter's solar panels torn off the White House roof and junked. So filled with optimism were Americans that they embarked on a consumption spree over the following twenty years that had few historical precedents.

Of course, there were always wild-eyed prophets of doom warning of the dire consequences of such profligate lifestyles. But Americans in general basically ignored such crazies. Every now and then news reports about the cataclysmic loss of biodiversity, rapid climate change, and the hole in the ozone layer would penetrate through this complacent cocoon. But political leaders in the U.S. continued to assure Americans that these problems could be dealt with through piecemeal, reformist solutions, measures that would have to be paid for, by and large, by other people. And by this point consumption had become a kind of profane religion, one of the sole satisfactions in an otherwise alarmingly vacuous moral universe.[11] When the nations of the world tried to unite to address some of the more alarming threats to the planet's environment, American leaders insisted that the U.S. could not afford to sacrifice economic growth in the name of a luxury like environmental reform.[12] What was more pressing, after all, putting food in your kids' stomachs or worrying about spotted owls? Americans spent two decades in this feel-good reverie, gradually returning to the worst excesses of the period before the scare of the 1970s by buying elephantine SUVs, constructing increasingly mammoth suburban homes, and bingeing on fast food engineered to choke them in their own fat.[13] During these two decades, world population grew by 35 percent, energy use by 40 percent, and automobile production by 45 percent.

Of course, all of this was unsustainable, but who cares about the future when you live in a culture intent on seizing the day? Recently, however, reports have begun to appear in the margins of what passes for a public culture in the U.S. that suggest Americans are fast approaching a day of reckoning.[14] Despite the complacency of policy makers, business leaders, and mainstream economists about energy supplies, predictions by a group of leading geologists suggest that we are quickly approaching the global peak in oil reserves. And they're not talking about decades in these predictions. While the exact date is a matter of extremely heated dispute, there is an emerging consensus among geologists that the peak will occur close to 2010. Like the peak in U.S. reserves, this does not mean that wells in Saudi Arabia, Angola, and other oil-rich countries are nearly empty of oil. Instead, the bell curve pattern described by M. King Hubbert, who accurately predicted the U.S.'s own oil peak in 1970, indicates that we will soon be extracting the greatest amount of crude that will ever be extracted. From this point on, reserves will begin to diminish and the oil that remains in the ground will be both far more difficult to extract and of inferior quality to the oil already extracted. Since the American economy is based on constant expansion and because once predominantly pre-industrial countries like China and India are modernizing at a hectic tilt, the economics of supply and demand suggest that this increasingly scarce resource will very quickly become dramatically more expensive. It is not so much the age of oil that is over, then, but rather the era of cheap crude.

As Reagan's dismantling of the White House solar panels in the early 1980s suggests, most American political leaders took the oil crisis of the 1970s as a kind of false alarm. In retrospect it may come to seem a wake up call that was foolishly ignored. Because there have been no new discoveries of substantial oil fields since the 1960s, the U.S. and other countries that depend on oil imports will not be able to repeat their strategy following the 1970s oil crisis. We have developed all the remaining major oil fields and will have to subsist on those that already exist. By far the greatest

remaining oil reserves of course lie in the Middle East, in Saudi Arabia and Iraq, to be specific. As other sources of oil become scarcer, the U.S. will become increasingly dependent on this politically volatile part of the world for the fuel that powers its economy. American political leaders are, of course, aware of this fact, and the current conflict in Iraq, despite the many bloody lies we have been fed as legitimation for the U.S. invasion, is clearly of a piece with longstanding U.S. policy. Even Jimmy Carter, that paragon of conservation, threatened to use military force if anyone tried to monkey with U.S. access to oil reserves after the Iranian Revolution took out one of the most important client states in the region.[15] Few Americans today remember that it was this Carter Doctrine, rather than the hollow rhetoric of democratization that we hear today, that was used to justify the first Gulf War after Iraq's invasion of Kuwait.[16] Although the U.S. once felt itself impervious to the animosity generated by its many foreign interventions, the danger of blowback from such actions has become all too clear since 9/11.[17]

While the current hawkish attitude among American policymakers may be relatively aberrant, there is clearly a new "great game" afoot in the Middle East and other oil-rich regions such as the Caspian basin that is unlikely to end even if regime change takes place at home. Moves by both the current administration and by the Clinton White House suggest that the U.S. is seeking to cement its geo- political hegemony in these areas through a combination of military aid, propping up surrogate rulers such as the Saudi royalty, and, in some cases, direct intervention.[18] The problem with the increasingly naked assertion of unilateral U.S. control over the world's oil resources is that America is not, of course, the only economy dependent on cheap crude. Erstwhile allies such as the E.U. and Japan, as well as rising industrial competitors such as China and India, are just as if not more dependent on the region's resources.[19] They are not likely to stand by idly while the U.S. establishes itself as the sole arbiter of global economic development.[20] While none of these countries possesses the military muscle or even the political will to confront the U.S. on the battlefield, their combined economic might is a real threat, particularly as the U.S. is hobbled by classic imperial military over-extension.[21] European analysts such as Emmanuel Todd have already seen which way the wind is blowing and are calling for strategic alliances between the E.U. and Russia, whose oil reserves and nuclear arsenal will make it a serious counter-force in the future despite its currently miserable economic plight.[22] Similarly, European reluctance to join the "coalition of the willing" was surely dictated not simply by respect for international law but also by careful calculation concerning the dangers of alienating the Arab populations of the Middle East. Although geo-political crystal ball gazing is always tempting, it's impossible to tell how these increasing global tensions will resolve themselves. One thing is clear, however: as oil reserves dwindle, we are going to witness the inexorable return of the great power politics that disfigured the first half of the twentieth century.[23] The stakes this time, however, are infinitely higher.

Two Examples of the American Predicament

AS CHILLING AS THIS SCENARIO of a return to inter- imperial rivalry of the sort anatomized by Lenin nearly a century ago may be, the end of the era of cheap oil will have a far more immediate impact on the average American. Indeed, as the greatest power of the fossil fuel-based industrial age, the U.S. is singularly ill prepared for the challenges that resource depletion pose. Virtually every facet of American life will be thrown into crisis by the end of cheap oil. It is, ironically, the very strength of the U.S. in the world as it exists today that threatens to be its undoing in the world that is to come.

Take the American suburbs, for instance. Over half of the U.S. population currently lives in suburbs that remorselessly gobble up more and more rural land each year in a form of development that has come to be known as "sprawl." The roots of the suburb lie deep in the American psyche, which, embodied in prominent figures from Thomas Jefferson to Henry Ford, has harbored perennial antipathy towards cities.[24] After World War II, the U.S. used a significant percentage of its industrial wealth to realize the dreams of visionaries such as Ebenezer Howard, who sought to

create a harmonious blend of city and countryside while eliminating the less felicitous characteristics of each. Private developers and public agencies cooperated to build the suburbs and the massive system of highways and other infrastructure necessary to support them. Although the growth of suburbs during the postwar period offered a windfall for developers and automobile manufacturers, they largely failed to satisfy the craving for rural tranquility and community felt by those who snapped up suburban lots with the help of government mortgage programs. Basically functioning as dormitories for workers forced into arduous commutes by their distance from the workplace, suburbs offered urban propinquity without rural fellowship.[25] Although suburbs have developed considerably since the 1950s and are now no longer as homogeneous and monotonous as they once were, the underlying ethos has changed little. Whether or not they know it, American suburbanites live in gigantic machines whose primary purpose is consumption.[26] Typical suburbs therefore feature few facilities for socialization other than shopping malls. They are designed to facilitate movement by cars rather than by people, and as a result tend to isolate people in their individual homes. While suburbs obviously are not the sole cause of the fragmentation, alienation, and racial segregation of contemporary life in the U.S., they have been powerful catalysts for these trends in post-war American society.[27]

The American suburb is also an ecologist's nightmare. Although Western Europeans enjoy a similar standard of living to Americans today, they consume on average half the resources of the typical American as a result of the greater density of European cities.[28] The concentrated cities of Europe are not only far more energy efficient, but they also help facilitate vibrant social exchanges.[29] Indeed, few American suburbs offer the pedestrian delights that cities like Amsterdam, Vienna, or Florence do. Even making such a comparison seems absurd. The suburban streets of newly built U.S. cities like Phoenix are typically as empty as those of a ghost town, enlivened in the evenings solely by the eerie glow of cathode rays emerging from the otherwise inscrutable facades of isolated houses. The low density of suburban development in the U.S. also largely precludes public transportation, ensuring that the automobile is the primary if not the exclusive form of mobility available to the denizens of American suburbia. The impact of sprawl on those unable for reasons of age or income to drive are seldom discussed in public. Such low density also ensures that travel by car is necessary whenever any tasks outside the family domicile are at hand. The suburb is, in other words, tailored to stimulate the maximum amount of fossil fuel-based consumption possible, and its form reflects and magnifies the short sighted and wasteful attitudes that underlie the consumerist ethos. Although there has been recognition of the suburban cul-de-sac on an intellectual plane in the U.S., such recognition has not translated into significant transformation of the America landscape.[30] Predicated on the eternal availability of cheap gas, suburbs will leave their affluent residents stranded in the wreckage of the American dream as gas shortages become increasingly serious a decade or so from now. Residents of remote, car-dependent, and generally working class regions of the country are already feeling the bite of higher gas prices, creating ghost towns out of once booming rural hamlets.[31]

Suburban development typically displaces farmers, who give up their increasingly unprofitable family farms to the blandishments of real estate developers. This happens because the American agricultural system is just as unsustainable as the suburbs that so frequently grow over farms like toxic kudzu. Despite the fact that U.S. farms produce more food than Americans are capable of eating, hunger has been spreading in the U.S. for the last quarter century and farmers are being pushed off their land in increasing numbers. Behind this paradox lies the seldom-discussed trend towards monopoly in the U.S. agricultural sector.[32] Despite the relatively late beginning of this trend, since the 1970s agribusiness corporations have been engaging in mergers and acquisitions with startling gusto. This process of consolidation has led to virtually complete vertical integration, meaning that large corporations such as Con Agra and Monsanto now are the sole suppliers of grain, fertilizer, pesticide and all other agricultural inputs, and also happen to be the lone buyers and

processors of the agricultural goods the farmers grow. Since these big firms constantly seek to inflate the cost of inputs and depress the price paid for goods, farmers are caught on a treadmill. In order to survive financially, they must constantly seek to grow more crops, but the more crops they produce the more prices are depressed by a flooded market. This treadmill leads inexorably towards economies of scale in which only farmers who can produce massive amounts of food can break even. When they are not forced to sell their farms, American farmers become serfs working their own land for huge corporations who assume none of the risks of farming while reaping all of the profits.[33]

American agriculture has become just as homogeneous and profit driven as the suburbs that all too often replace family farms. Diverse crops suited to local climates and tastes are driven out by single crops that can be grown on the massive scale necessary to turn a profit. The huge industrial operations that have replaced family farms are often owned by absentee landlords — insurance companies that have inherited the land after farming families go belly up — who have little incentive to adopt the ethic of land stewardship that has traditionally defined farming. The recent introduction of genetically modified crops has only exacerbated the tendency towards monopoly in farming. Despite the promises of agribusiness companies that GM crops would save money and hence increase farmers' profits, they simply triggered another wave of overproduction that threatens to overwhelm the few remaining small independent farmers.[34] Finally, just as the suburbs were produced by a lethal synergy between private developers and the public authorities who built vital infrastructure, so the trend towards monopoly in U.S. agriculture has been significantly hastened by pork-barrel government spending that disproportionately benefits large agribusiness interests.

Underlying the intensification of agricultural production over the last half century is one key shift: the replacement of human labor by fossil fuel-powered machines such as tractors, combines, and center-pivot irrigation systems.[35] Every element of the American agricultural system is now dependent on fossil fuels, including the petroleum-derived pesticides and fertilizers that help make the specialized hybrid seeds developed over the last half-century viable. Although agricultural production around the world has kept up with population growth by exploiting fossil fuels, the "green revolution" has all sorts of costs that are seldom calculated when we buy our groceries. In fact, if U.S. agricultural production were to be measured based on the ratio between energy input and production, it would be one of the most *inefficient* forms of farming ever developed by human beings.[36] Yet this is the least of the problems that beset modern agriculture. Contemporary farmers treat the soil as if it were nothing but an inert substrate designed by engineers to hold crops in place while they are doused with the chemicals necessary to make them grow and to kill pests. The human beings who work this land and eat the crops grown there are of course adversely affected by the chemicals that saturate it. We pump water out of underground aquifers in order to irrigate these crops using diesel engines without thinking much about whether these reservoirs are being replenished.[37] We eat hamburgers whose production requires mammoth quantities of grain, which in turn of course also consumes millions of gallons of petroleum.[38] And, of course, we never, ever stop to think about what is likely to happen when there is no more gas for the tractors, no more petroleum from which to synthesize fertilizer, and no more electricity to power our irrigation systems.

The Myth of Progress

AMERICAN SUBURBANITES AND FARMERS are not the only ones who believe that more growth offers the solution to their problems. Progress is a fundamental dogma of modern, secular societies, one that is lodged particularly deeply in the collective psyche of Americans. As a settler society confronted by relatively sparse resistance from the indigenous peoples, Americans framed their national story as one of boundless space and endless expansion. It was, American leaders proclaimed, the nation's manifest destiny to spread from sea to shining sea. Moreover, Americans staked their claim to the land through its development from what appeared to European settler eyes to be barren wilderness

into productive farmland. As John Locke formulated it, this transformation gave settlers license to dispossess the Native Americans and to enslave the pagans of Africa. The settlers' ideology of improvement held that people acquired a right to property through their capacity to give it value, which, for influential writers of the time like Locke, meant exchange value.[39] Americans were thus enacting god's plan for the New World. When the frontier eventually closed, the U.S. transferred much of its sense of boundless expansion to technology. For example, in an influential essay of 1910, Frederick Jackson Turner equated the pioneer ideals that had driven relentless westward expansion with the aims of the rapidly developing industrial techno-science of the period.[40] This fervent belief in progress helps explain Americans' seemingly purblind creation of an industrial landscape through suburbanization and factory farming. Bigger cars outside bigger houses with bigger yards must be a sign that all is well in America and that god is smiling on this most fortunate of nations, no? New genetically engineered crops designed to withstand greater doses of pesticide and fertilizer will surely lead to greater yield that will help save the family farm, right?

Wrong. Growth disproportionately benefits those who control the institutions that help generate expansion, not those who do the actual work that creates such expansion. Take what has come to be known as globalization. This was a strategy for accumulation developed by U.S. elites in response to the economic crises of the 1970s.[41] In tandem with the recession created by the OPEC oil embargo, the U.S. was confronted during this period with a glut of commodities as a result of competition from Germany and Japan, whose spectacular redevelopment after World War II now presented problems for a saturated world economy. American corporations and the government policy makers who supported them adopted two major strategies to reinvigorate growth in these apparently dire conditions: automation and outsourcing. While these tactics were very successful when measured in terms of the revival of America's Gross National Product, their effects have been nothing short of cataclysmic for the average American.

Capitalist production methods have always sought to transfer skills from workers and embed them in machines or mechanized processes such as the production line. The automation of the 1980s and 1990s has, however, been significantly different from previous waves of de-skilling: for the first time, machines were taking over not simply the physical tasks performed by human bodies but also the tasks we perform with our minds.[42] Driven by the need to make more profit, companies replaced expensive workers, whose unions demanded high wages and benefits for their members, with computerized robots on the assembly lines. Automation also decimated the managerial class, who were originally tasked with getting rid of superfluous workers, when it became possible to program many managers' supervisory functions into computers. The new watchwords of corporate management became leanness and meanness. Employees who were "downsized" were typically offered poorly paying jobs in the service sector.[43] But even ill paying service work was not secure since corporations were also automating these jobs as quickly as possible in order to boost profits and resist hostile takeover bids. While the "new economy" did produce some fresh work, these opportunities were limited to a numerically small sector of elite knowledge workers such as computer programmers, scientists, and technicians.[44] The ugly truth that few public figures are willing to acknowledge is that technological development has helped make permanent, structural unemployment a routine experience for more and more Americans.[45] These losers of the casino economy also help drive down the wages of those who manage to hold on to their jobs by providing a pool of desperate supplicants who will accept any job on virtually any terms.

Automation has also helped facilitate outsourcing, the spinning off of basic steps in the production process to independent contractors. As a result of the amazing levels of long-distance communication and coordination created by new technology, companies like General Motors no longer need to produce spark plugs for their cars in one of their own factories. Instead, big corporations can use computer technology to predict exactly how many parts they will need at any

particularly moment and order those parts from factories located in parts of the world where labor is cheap and environmental regulation lax. As a result of these policies, commodity chains now extend across the planet. The clothes we buy in stores such as the Gap and Niketown are put together in distant locations such as China, the Dominican Republic, and Vietnam by workers who toil in dismal conditions of which we are seldom aware.[46] Politicians have recently begun to attack government policies that promote outsourcing, but the nationalistic rhetoric they use on such occasions obscures a fundamental fact: government-supported outsourcing has helped U.S. corporations rack up record profits over the last two decades. In addition, it has also provided a sea of extremely cheap commodities to American consumers. In the name of expanding production and consumption, the U.S. has transformed itself into a largely post-industrial society. Americans have been so busy getting and spending that there has been virtually no public discussion about the wisdom of this strategy.

The globalized consumer economy is riddled with contradictions. Automation has transformed the U.S. into the most unequal society among the developed industrial nations. While CEOs have made out like bandits in the new lean, mean economy, workers' wages have remained stagnant.[47] The American dream has only been kept afloat over the last twenty years by the full-scale entrance of women into the workforce. Despite dual- earner incomes, most American families have barely kept up with inflation. At the same time as average Americans struggle to keep their heads above water, peasants around the world are pushed off their land as international lending agencies such as the International Monetary Fund force governments to withdraw subsidies for food production.[48] While significant numbers of these peasants have found employment in the factories produced by outsourcing, they too are confronting the replacement of their labor by technological automation. Every year, approximately 40 million of these members of a global surplus humanity migrate to the squalid slums that surround the mega-cities of the South, hoping to survive off the detritus of unregulated industrial growth, casting about for some belief system that can explain their wretched lot, and nursing smoldering anger towards those they believe responsible for their fate.[49]

There are relatively few signs of concern in America's public culture about these trends. Instead, our society blames the victims of this structural trend towards unemployment through the rhetoric of a "culture of poverty." The poor are responsible for their poverty, this ideology argues, because of their collapsing families and lack of a work ethic. New Deal social justice programs simply exacerbate these problems by making the poor dependent on the state. Consequently, eliminating such programs actually does the poor a favor: once they are stripped of the meager state charity that prevents them from starving, they will learn to pull themselves up by their own bootstraps or, as Malthus would have it, simply die and thereby ameliorate the problem of overpopulation. American policy makers seldom contemplate job creation initiatives because they operate on the condescending and paternalistic assumption that the problem is not a lack of decent jobs but rather the unsuitability of those who might fill the jobs that exist.[50] Instead of confronting structural unemployment, the U.S. has dealt with the inevitable rise of crime that accompanies increasing inequality and unemployment by developing the world's largest prison-industrial complex.[51] The U.S. response to "terrorism," which is actually asymmetrical violence carried out by those on the losing end of globalization, has been conditioned by this punitive mindset. Americans should have learned long ago that this approach is economically and socially dysfunctional. As Henry Ford, father of the Model T, recognized, workers who are not paid enough cannot afford to buy the goods they manufacture. As the downward spiral of automation, unemployment, and declining wages gradually erodes American affluence, workers will eventually have to cut back their profligate, debt-driven spending. American hyper-consumerism is currently funded to a significant extent by countries like China and Japan, who must lend the U.S. billions of dollars every day in order to make up for our country's ballooning trade deficit. Every day, the U.S. loses more control of its own financial affairs as a greater percentage of the national debt is owned by foreigners.

Will countries like China and India eventually pull our financial plug as they develop their own markets and thereby become less dependent on consumers in the U.S.? Although it's impossible to say exactly how the endgame of U.S. global hegemony will play itself out, it is clear that the U.S. has chosen a path of economic growth that is completely unsustainable. Americans depend on foreign countries for everything from their underpants to their most sophisticated electronics. These supply lines are menaced by many factors, including trade conflicts, resource wars, terrorists, and, if analysts who cite Hubbert's curve are correct, escalating petroleum prices. What will happen to a corporation such as Walmart when oil prices rise to the point where it is no longer profitable to raise cotton in Egypt, ship it to China to be sewn into t-shirts, and then transport those t-shirts to the U.S. for sale at prices attractive to people working in the service industries? What will happen to McDonalds employees when their employer can no longer obtain cheap beef from Central America, when they can't afford the gas needed to commute to work, when the cost of corn skyrockets because farmers have to pass on the costs of powering their combines? In the name of growth, the U.S. has constructed an economy that not only generates spiraling inequality and social antagonism, but that is likely to prove ecologically unsustainable in the very near future.

What is to Be Done?

IF GROWTH IS THE MODERN SECULAR RELIGION, then economists and politicians are its bishops and cardinals and the corporate media are its priests. The former pontificate ceaselessly about the benefits of ongoing expansion and the latter faithfully transmit these messages to the flock. Most of this priesthood of progress no doubt believes firmly in the dogma they spout. But it is also in their interest to do so since they are the ones who, along with corporate CEOs and wealthy stockholders, benefit from the ideology of growth. There are tremendous institutional and social disincentives for such people to challenge notions that growth will solve our problems. Even mainstream environmentalist organizations are caught up in the religion of expansion. Thus important groups like the Environmental Defense Fund typically prescribe steps like planting trees, recycling newspapers, and engaging in green consumerism to those who are concerned about the fate of the Earth.[52] While there's nothing inherently wrong with such measures, they suggest that environmental reform is primarily the responsibility of the individual and that such reform can be accomplished within the framework of expanded consumption. They offer little sense that expanded production and consumption, particularly in the overdeveloped countries of the North, is at the heart of environmental crises. Indeed, by making the system more efficient, measures such as recycling and green consumerism can actually intensify growth.

So the first step in preparing for a zero-growth civilization is to spread awareness of the contradictions discussed above. While there are already some groups attempting to create alternative ways of life based on awareness of resource depletion, they remain relatively marginal in hyper-consumerist societies like the U.S. A powerful resource in expanding awareness of the contradictions of growth beyond such marginal groups will be the global movement for peace and social justice. This movement had its greatest successes in demonstrating against undemocratic global institutions such as the World Trade Organization.[53] Organizations like the WTO were perceived as engaging in a new round of enclosure of the global commons by ramming through privatization laws that stripped people around the world of access to land, drinking water, food, education, and other human rights.[54] Consequently, activists in the peace and justice movement tend to be highly aware of the dramatic inequalities associated with globalization and have begun articulating alternatives to the status quo through the Social Forums held around the world over the last few years. Moreover, the creation of autonomous, decentered international media networks such as Indymedia has been a key component of movement activism, offering an important alternative to the increasingly monopolistic corporate media.

The attacks of 9/11/01 and the U.S. war on Iraq initially threw the peace and justice movement

off balance by making it far harder to criticize government policies without being tarred as unpatriotic. But these events also offer the movement an important opportunity. The movement for justice and peace must engage not simply with transnational corporate power but with the state institutions whose support is vital to the mobility of capital and industry around the planet. Many involved with the movement are opposed to state power per se, and seek to construct vibrant locally based, self-managed alternatives to the nation-state. These ideals seem very forward thinking in light of recent predictions concerning petroleum depletion; however they do run the risk of missing an important opportunity. As David Harvey has argued, not all contemporary struggles take place over enclosure of the global commons; more traditional conflict over the accumulation of capital remains important, particularly as increasing numbers of humanity lose their autonomous existence as subsistence farmers and join the industrial workforce.[55] Consequently, the movement for justice and peace must advance a set of alternative prescriptions for a zero-growth world that place pressure on both state organizations and corporations to transform current practices radically. Failure to do so also threatens to limit the movement's appeal to an affluent minority fortunate enough to be able to ignore the state.

This alternative program should be framed as a new New Deal.[56] Instead of developing the country's industrial infrastructure as FDR's original New Deal did, however, this alternative program should begin preparation for an economy based on minimal consumption of nonrenewable energy and natural resources. With the impending peak of oil production in mind, the U.S. should begin retrofitting its infrastructure in a number of specific ways. First of all, U.S. cities need to be redesigned to be more compact. This means that suburbs either need to be dismantled or revamped until they achieve a density that makes public transportation infrastructure viable.[57] The tax system needs to be overhauled to reward public transportation and other forms of energy savings and discourage state spending on highways and other infrastructure that promotes excessive fossil fuel use. The U.S. also needs to dismantle its more than 700 military bases around the world and use the capital that is thereby freed up to initiate a massive research and development program for renewable energy forms such as solar, wind, and geothermal power.

The unsustainable U.S. agricultural system also needs to be utterly transformed. America should strive to redesign its current national economy so that particular bio-regions become self-sufficient, with as little long-distance transportation of agricultural goods and commodities as necessary. Small organic farms have been shown to be just as productive as large industrial ones when energy input is measured, and obviously they don't pollute the earth the way fossil fuel-dependent agriculture does.[58] Of course, such farming is far more labor intensive. But this and other aspects of the new New Deal could be implemented with an eye to rectifying the structural unemployment generated by technological development over the last century. We need to revive the slogan of the workers' movement for a shorter working day and for better work.[59] We also need to engage in our spatial transmogrification of the U.S. with a clear eye to dismantling the endemic forms of spatial apartheid and gender inequality that have characterized our country throughout its history.[60]

There are obviously many other changes that should be part of a set of basic proposals for a new New Deal. The point is that we need to begin drafting such proposals and advancing them and their underlying rationale with all possible speed. For if recent analysis of the peak of petroleum is accurate, we have very little time left. Discussing the feasibility of constructing a renewable energy infrastructure, Robert Heinberg argues that the odds are long indeed. Simply to harvest a third of the nation's potential wind power, for example, we would have to deploy 20,000 turbines every year from now until 2030.[61] Our odds, Heinberg says, do not look very good given the fact that we're going to have to make difficult choices about whether to use dwindling energy reserves to maintain essential current energy infrastructure or to construct new renewable generating supplies. His

grimly realistic take is certainly sobering. Whether or not such dire predictions are fulfilled, Americans and other residents of industrialized nations are likely to continue acting as if they are the authors of their own future. Yet if we truly wish to play a conscious role in constructing a new society, we must awaken from the optimistic trance that currently enthralls us. If we do not, we are fated to allow the dissolution of our naïve belief in progress and unending growth to shape the new world that unfolds around us as we discover our proximity to the limits of growth.

Footnotes

1. A typical example of such hubris is Francis Fukuyama's *The End of History and the Last Man* (New York: Free Press, 1992).

2. For a discussion of the return of resource wars following the hiatus of ideologically-driven conflict that characterized the Cold War, see Michael T. Klare, *Resource Wars: the New Landscape of Global Conflict* (New York: Metropolitan Books, 2001).

3. The list of muckraking accounts of the Bush administration's deceptive tactics and hidden motives during the drive to war with Iraq is now long. A few representative examples from what is now virtually a sub-genre to itself are Anonymous, *Imperial Hubris: Why the West is Losing the War on Terror* (New York: Brassey's, 2004); James Bamford, *The Pretext for War: 9/11, Iraq, and the Abuse of America's Intelligence Services* (New York: Random House, 2004); Richard Clarke, *Against All Enemies: Inside America's War on Terror* (New York: Free Press, 2004); John W. Dean, *Worse Than Watergate: The Secret Presidency of George W. Bush* (New York: Little, Brown, & Co., 2004); Michael T. Klare, *Blood and Oil: The Dangers and Consequences of America's Growing Petroleum Dependency* (New York: Holt, 2004); Rahul Mahajan, *Full Spectrum Dominance* (New York: Seven Stories, 2004).

4. David Harvey, *The New Imperialism* (New York: Oxford University Press, 2003), 19.

5. Emmanuel Todd*, After the Empire: The Breakdown of the American Order* (New York: Columbia University Press, 2003), 20.

6. Stalwarts of the Reagan-Bush I-Bush II era such as Dick Cheney have been pushing for the military ousting of Saddam Hussein since the end of the first Gulf War. For an overview of Defense Department documents that clearly reveal this trend, see David Armstrong, "Dick CheneyÆs Song of America: Drafting a Plan for Global Dominance," *HarperÆs Magazine* (October 2002): 76-83.

7. For a discussion of the ecological aspects of this settler colonial ideology, see Annette Kolodny, *The Lay of the Land: Metaphor As Experience in American Life and Letters* (Charlotte, NC: University of North Carolina Press, 1990). For a postcolonial take on representations of land, see Anne McClintock, *Imperial Leather: Race, Gender, and Sexuality in the Colonial Conquest* (New York: Routledge, 1995) and Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (New York: Routledge, 1992).

8. Todd, 177.

9. Donella H. Meadows et. al., *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (New York: Universe Books, 1972).

10. For a discussion of the U.S.'s oil-driven support for the brutal reign of the Shah of Iran, see Klare, 60-61.

11. A groundbreaking critique of transnational chains of consumption can be found in Thomas Princen, Michael Maniates, and Ken Conca, eds., *Confronting Consumption* (Boston, MA: MIT Press, 2002).

12. For a stinging critique of the U.S.'s failure to exert global leadership for environmental reform, see James Gustave Speth, *Red Sky at Morning: America and the Crisis of the Global Environment* (New Haven, CT: Yale University Press, 2004).

13. Eric Schlosser, *Fast Food Nation: The Dark Side of the All- American Meal* (New York: HarperCollins, 2002).

14. See Robert Heinberg, *The Party's Over: Oil, War, and the Fate of Industrial Society* (Gabriola Island, Canada: New Society, 2003); David Goodstein, *Out of Gas: All You Need to Know About the End of the Age of Oil* (New York: Norton, 2004); Jeremy Rifkin, *The Hydrogen Economy: The Creation of the World-Wide Energy Web and the Redistribution of Power on Earth* (New York: Putnam, 2002); Paul Roberts, *The End of Oil: On the Edge of a Perilous New World* (New York: Houghton Mifflin, 2004).

15. Klare, 4.

16. It is quite likely that the U.S. tacitly encouraged Saddam Hussein to invade Kuwait in order to have a justification for overthrowing his regime, having concluded after the overthrow of the Shah of Iran that the Kissinger-era "surrogate strategy" was no longer dependable. See Heinberg, 76.

17. For discussion of the many different forms taken by blowback, see Chalmers Johnson, *Blowback: The Costs and Consequences of American Empire* (New York: Holt, 2000).

18. Harvey, 85.

19. Although developing countries consume far less petroleum, their consumption per capita is actually far higher than the core capitalist nations because of the relative inefficiency of their economies.

20. An indication of the potential for global resource wars is the prescription by investment consultants to buy ædefense' stocks. See Stephen Leeb and Donna Leeb, *The Oil Factor: Protect Yourself – AND PROFIT – From the Coming Energy Crisis* (New York: Warner, 2004).

21. Over a decade ago, Paul Kennedy was already warning of the perils of such over-extension in *The Rise and Fall of the Great Powers: Economic Change and Military Conflict* (New York: Random House, 1987).

22. Todd, 184.

23. Michael Klare, "The New Geopolitics," *Monthly Review* 55.3 (July-Aug 2003).

24. For a discussion of the inveterate American hostility to cities and its effects, see Daniel Lazare, *America's Undeclared War: What's Killing Our Cities and How We Can Stop It* (New York: Harcourt, 2001).

25. Maf Smith, John Whitelegg, and Nick Williams, *Greening the Built Environment* (London: Earthscan, 1998), 168.

26. For a potent critique of contemporary suburbs, see Andres Duany, Elizabeth Plater-Zyberk, and

Jeff Speck, *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream* (New York: Farrar, Straus, and Giroux, 2001).

27. Smith, 164.

28. This is based on an ecological footprint calculation carried out by the World Wildlife Fund that is available in their *Living Planet Report 2002*. 28 July 2004.

29. For a strong articulation of the concentrated city ideal, see Richard Rogers, *Cities for a Small Planet* (Boulder, CO: Westview Press, 1997).

30. I'm thinking here of the New Urbanist movement of the 1990s. See Peter Katz, ed., *The New Urbanism: Toward An Architecture of Community* (New York: McGraw-Hill, 1994). For a withering critique of a New Urbanist community constructed by the Disney Corporation, see Andrew Ross, *The Celebration Chronicles: Life, Liberty, and the Pursuit of Property Values in Disney's New Town* (New York: Random House, 2000).

31. Sasha Abramsky, "Running on Fumes," *The Nation* v. 281, n. 12 (October 17, 2005): 15-19.

32. Fred Magdoff, John Bellamy Foster, and Frederick H. Buttel, "An Overview," in Fred Magdoff, John Bellamy Foster, and Frederick H. Buttel, eds., *Hungry for Profit: The Agribusiness Threat to Farmers, Food, and the Environment* (New York: Monthly Review, 2000), 10.

33. This situation has led to the rise of rural poverty and periodic waves of farmer suicides that seldom get reported in the national news. For a particularly comprehensive discussion of the farm crisis of the last two decades and its deep roots in U.S. history, see Osha Gray Davidson, *Broken Heartland: The Rise of America's Rural Ghetto* (Iowa City, IA: University of Iowa Press, 1996).

34. William Greider, "The Last Farm Crisis," *The Nation* (2 Nov 2000). 29 July 2004.

35. Davidson, 41.

36. Heinberg, 175.

37. For a discussion of the depletion of ground water supplies in the world's major agricultural countries, see Lester Brown, *Plan B: Rescuing a Planet Under Stress and a*

38. Frances Moore Lappe's *Diet for a Small Planet* (New York: Random House, 1971) was the first book to systematically explain the economic, political, and ecological costs of meat consumption. More recently, Eric Schlosser's *Fast Food Nation: The Dark Side of the All-American Meal* (New York: HarperCollins, 2002) has offered a devastating update.

39. Ellen Meiksins Wood, *The Origin of Capitalism: A Longer View* (New York: Verso, 2002), 157.

40. Frederick Jackson Turner, *The Frontier in American History* (New York: Henry Holt, 1920).

41. While many commentators agree on the fundamental lineaments of the transition from Fordism to post-Fordism, one of the most insightful discussions of this shift remains David Harvey's *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (New York: Blackwell, 1989).

42. Jeremy Rifkin, *The End of Work: The Decline of the Global Labor Force and the Dawn of a Post-Market Era* (New York: Putnam, 1995), 5.

43. Plugging his recent autobiography, Bill Clinton talks about having creating 22 million jobs in the U.S. during the boom of the 1990s. He neglects to mention that the majority of these jobs were in low-wage sectors such as the service industry.

44. Rifkin, xvi.

45. Stanley Aronowitz and William DiFazio, *The Jobless Future: Sci- Tech and the Dogma of Work* (Minneapolis, MN: University of Minneapolis Press, 1994), 305.

46. One of the major strategies of the so-called anti-globalization movement has been to draw attention to these conditions. See Naomi Klein, *No Logo: Taking Aim at the Brand Bullies* (New York: Picador, 2000).

47. Kevin P. Phillips, *Wealth and Democracy: A Political History of the American Rich* (New York: Broadway, 2003).

48. John Walton and David Seddon*, Free Markets and Food Riots: The Politics of Global Adjustment* (Cambridge, MA: Blackwell, 1994).

49. Mike Davis, "Planet of Slums," *New Left Review* 26 (Mar-Apr 2004). 30 July 2004.

50. Aronowitz, 309.

51. Christian Parenti, *Lockdown American: Police and Prisons in the Age of Crisis* (New York: Verso, 1999).

52. Michael Maniates, "Individualization: Plant a Tree, Buy a Bike, Save the World?" in Princen, Thomas, Michael Maniates, and Ken Conca, eds. *Confronting Consumption* (Cambrige, MA: MIT Press, 2002), 48.

53. For a series of probing analyses of the famous æBattle of Seattle,' in which the global social justice movement took on the WTO, see Eddie Yuen, Daniel Burton Rose, and George Katsiaficas, eds*., The Battle of Seattle: The New Challenge to Capitalist Globalization* (New York: Soft Skull, 2001).

54. On this new round of enclosure or "accumulation by dispossession," see David Harvey*, The New Imperialism* (New York: Oxford University Press, 2003).

55. Harvey, 176.

56. Although the specifics are mine, the idea of a new New Deal is David Harvey's. For his discussion of how such a program might counter the current contradictions of the capitalist world-system, see Harvey, 76.

57. The experience of the New Urbanists in transforming urban planning will be useful in this regard. See James H. Kunstler, *Home from Nowhere: Remaking Our Everyday World for the 21st Century* (New York: Simon and Schuster, 1998).

58. Jack Manno, "Commoditization: Consumption Efficiency and an Economy of Care and Connection," in Princen, Maniates, and Conca, 83-93.

59. For a discussion of the movement for less work, see Aronowitz, 342- 358.

60. Douglas Massey and Nancy Denton, *American Apartheid: Segregation and the Making of the*

Underclass (Cambridge, MA: Harvard University Press, 1993).

61. Heinberg, 141.