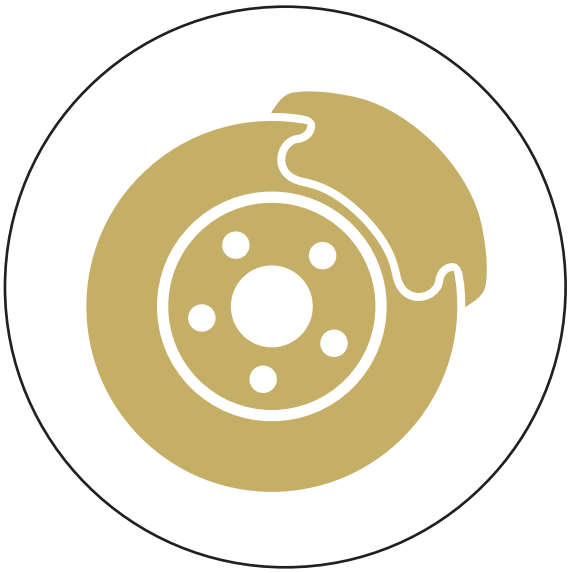

Six Theses on Saving the Planet

By Richard Smith

From the earliest days of the Industrial Revolution, workers, trade unionists, radicals, and socialists have fought against the worst depredations of capitalist development: intensifying exploitation, increasing social polarization, persistent racism and sexism, deteriorating workplace health and safety conditions, environmental ravages, and relentless efforts to suppress democratic political gains under the iron heel of capital. Yet, even as we fight to hold onto the few gains we've made, today, the engine of global capitalist development has thrown up a new and unprecedented threat, an existential threat to our very survival as a species. The engine of economic development that has brought unprecedented material gains, and revolutionized human life, now threatens to develop us to death, to drive us over the cliff to extinction, along with numberless other species. Excepting the threat of nuclear war, the runaway locomotive

of capitalist development is the greatest peril humanity has ever faced. This essay addresses this threat and contends that there is no possible solution to our existential crisis within the framework of any conceivable capitalism. It suggests that, impossible as this may seem at present, only a revolutionary overthrow of the existing social order, and the institution of a global eco-socialist democracy, has a chance of preventing global ecological collapse and perhaps even our own extinction. By "global eco-socialist democracy," I mean a world economy composed of communities and nations of self-governing, associated producer-consumers, cooperatively managing their mostly planned, mostly publicly-owned, and globally coordinated economies in the interests of the common good and future needs of humanity, while leaving aside ample resources for the other species with which we share this small blue planet to live out their own lives to the full.

Racing to extinction

There's a scene early on in Stanley Kramer's great post-apocalyptic sci-fi drama *On the Beach* (1959), where young men are hurtling their race cars around a course at faster and faster speeds seemingly oblivious to danger. Indeed, as one by one they crash and burn, the others just race on determined, apparently, to commit suicide by crashing their cars at top speed. Why? Because in Kramer's film, set in Australia, thermonuclear war has just obliterated the northern hemisphere. Clouds of nuclear radiation are drifting toward the southern hemisphere and soon radioactive fallout will rain down on Australia, dooming that population as well. The government is handing out suicide pills. So what the hell. If your thing is racing cars, why not die doing what you love instead of slowly succumbing to radiation poisoning?

To a stranger from another world, looking down on Earth today, our own situation might appear not so different. Despite ever-more-alarming reports by our top climate scientists, by the Intergovernmental Panel on Climate Change (IPCC), by credible authorities including the World Bank, major insurers and others, all of whom have told us in no uncertain terms that if we don't radically and immediately start cutting greenhouse gas (GHG) emissions, temperatures could soar by four or even six degrees Celsius by the end of this century. That would precipitate

global ecological collapse and the collapse of civilization: THE END. Nevertheless, we seem inexplicably hell-bent on racing to collective suicide, cooking the planet, and wiping out the ecological bases of human life on Earth.

It's not that we don't know what we have to do to save ourselves: a recent poll of forty countries found that large majorities of their peoples supported placing limits on GHG emissions–69 percent in the US, 71 percent in China.[1] And it's not that we lack the technical means to apply the brake on the race to collapse. We don't need any technical miracles. *Mostly what we have to do is just stop doing what we're doing.* And yet:

- Instead of suppressing fossil fuel production, producers are frantically pumping oil and gas from one end of the earth to the other. They are opening new fields and inventing new technologies to revive old fields, even as the world is glutted with oil, and prices have fallen to their lowest level in decades. Coal production is still climbing, not only in China and India but even in self-styled "green" Germany.[2]

- Instead of minimizing fossil fuel consumption, consumers seem bent on maximizing consumption: Global auto production is at an all-time high and the world auto fleet surpassed one billion in 2014. In the US, cheap fuel has only encouraged people to drive more, consume more gasoline, and spend their fuel savings on obese and overaccessorized gas-hog luxury trucks and SUVs that get worse mileage than trucks in the 1950s.[3] We're burning more fuel flying all over the world: As an ad for CheapOAir in the New York subway reads, "Cheap Flights Make it Easy to Say, Phuket . . . Let's Travel." Air travel is now the fastest-growing source of global carbon dioxide emissions. We're burning more fuels, especially coal, generating electricity to power the iPhones, iPads, electric cars, and the Internet of Things. As temperatures rise, we're burning still more fuel to cool off. Globally, we now

consume more fossil fuel to run air conditioners than to heat our homes. Scientists recently warned that based on present trends, before the end of the century, the Middle East "could be hit by waves of heat and humidity so severe that simply being outside for several hours could threaten human life."[4] That's great news for Carrier and Friedrich**,** at least in the near term, but do we really want our children to burn up in some kind of planetary auto-da-fé?

- Instead of responsibly imposing firm limits to emissions, governments carry on in denial just like their peoples: Since the Rio Summit in 1992, every annual Conference of the Parties (COP) has ended in acrimony and abject failure to adopt binding limits on CO_2 emissions. As George Bush Sr. notoriously put it in rejecting binding limits in his day: "The American way of life is not up for negotiation." And, if the Americans, cumulatively the biggest polluters by far, won't accept binding limits, why should anyone else? Today we face the prospects of emissions soaring to ever-higher levels and global temperatures breaking new records year after year, with 2015 smashing the previous year's record in the single biggest temperature increase in history. And yet, Paris COP21 copped out again, by ending with soaring rhetoric, more promises–but all completely meaningless without legally binding commitments to reduce GHG emissions.

- What's more, we're not just devouring fossil fuels. We're devouring every resource on earth, seemingly as fast as we can, with nary a thought for the needs of future generations, let alone other life forms. We seize pastures and forests, steal the fish from the mouths of seals and whales. Around the world, companies and nations are racing to plunder the last readily accessible resources on the planet and turn them all into "product."[5] We're mining the Arctic for minerals and oil, strip-mining ocean bottoms for

fish and more minerals, and, leveling tropical forests, from Indonesia to Congo to the Amazon, to make cheap flooring and grow biofuels to power those gas-hog GMC Sierras, Land Rovers and Mercedes Benzes. Serious people are even contemplating mining asteroids. From New York to Shanghai to Abu Dhabi, construction companies are in a nonstop, twenty-four hour, seven days a week frenzy, building airports, highways, useless vanity skyscrapers, ever-more luxurious condos and McMansions, gilded palaces and resorts finished with rare woods, exotic materials, sumptuous furnishings, climate control, and more. In China's current manic Great Leap Forward, Chinese construction companies poured 6.6 gigatons of cement in just three years, between 2011 and 2014, building superfluous dams, highways, and "ghost cities;" whereas, American construction companies poured just 4.5 gigatons over the entire twentieth century to build all of America's infrastructure and cities.[6]

- Instead of inventing ways to minimize resource consumption, our smartest companies work day and night to invent superfluous "needs": endless iThings, 3-D printers, smart watches, drones, hover boards, self-driving cars, virtual reality devices, the Internet of Things, GoPros to film your entire life, Google Glass to secretly film others, biometric shirts that track your heartbeat, toilet seats that wash your butt, pointless "apps" to waste your time, and on and on.[7] Incessant invention of "Thneeds" in the ceaseless quest for "the next big thing."[8] At the end of the day, of course, these are all just new ways to unnecessarily convert more of nature into products.

- Instead of making products that we actually need to be durable, long lasting, and recyclable, in order to conserve resources, top companies like Apple assign their best and brightest engineers, designers, and marketers to devise ways to make products wear

out, become obsolete, and dispose faster. We consume more, faster, more often, and without purpose. From fashions to furniture, cars to consumer electronics, most of our economy is geared to the production of waste: repetitive consumption by means of ever-faster cycles of designed and perceived obsolescence, with all of it ending up, eventually, in ever-bigger trash mountains. As an American retail analyst famously wrote in 1955: "Our enormously productive economy demands that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfactions, our ego satisfactions, in consumption… We need things consumed, burned up, worn out, replaced, and discarded at an ever increasing pace."[9] As I have often said, back in Adam Smith's day, when both factories and human populations were small, such a crazy economic logic did not matter. But today, when everything is produced in the millions and billions, then trashed and reproduced the next day, it matters. A lot. Giles Slade, thinking about the monuments the Egyptians left asks, after we collapse, "Will America's pyramids be pyramids of waste?"[10]

What's going on here?

Why are we cooking the climate, consuming the future? Why can't we slam on the brakes before we barrel off the cliff to collapse? In my work I've argued that the problem is rooted in the very nature of our economic system. Large corporations are destroying life on earth, but they can't help themselves, they can't change enough to save the planet. So long as we live under this system, we have little choice but to go along with destruction, to keep pouring on the gas instead of slamming on the brakes. The only alternative—impossible as this may seem—is to overthrow this global economic system and the governments of the one percent that prop it up. We should replace them with a global economic democracy, a radical bottom-up political democracy, an *eco-socialist civilization*. I'm going to restate my argument here in the form of six theses.

> *“The only alternative—impossible as this may seem—is to overthrow this global economic system and the governments of the one percent that prop it up.”*

1. Capitalism is overwhelmingly the main driver of planetary ecological collapse and it can’t be reformed enough to save the humans.

From the dawn of settled agriculture some ten millennia ago until the rise of capitalism beginning in the fifteenth and sixteenth centuries, most people lived in completely or largely self-sufficient village farm communities. Peasant families grew their own food, built their own houses, fabricated most of their own crude tools, made their own clothes, and made do with animal power for farm work and transportation. Productivity was low with little real change over centuries. They produced mainly for direct use, not for market.

Agrarian ruling classes, where these existed, extracted rents but spent them on military arms and fortifications, and on conspicuous consumption, instead of investing their rents back into improving production. They didn’t need to divert their surpluses to reinvestment in production because they produced most everything they needed on their estates. Cities were small, markets and trade limited, mostly to luxury goods and arms. Ruling classes competed militarily not economically. They fought wars against one another to capture territory with enserfed peasants. Wealth was counted in manors, farms, and rents—not money in the bank.

Before the rise of capitalism, consumption and global population remained low and grew slowly. The planet’s human population did not likely reach one billion until the nineteenth century. Given limited and fixed technology, as populations grew, subsistence often became precarious. Peasants divided their allotments of

land into smaller parcels for their children. Over centuries, agrarian societies suffered repeated cycles of slow growth to a point of dense population concentration, then collapse and famine, followed by revived growth as reduced populations found abandoned lands to farm again. Thus precapitalist economies were often characterized by cyclical crises of "underproduction." In some cases, relentless surplus extraction combined with stagnant productivity and unscientific farm management resulted in the permanent collapse of entire civilizations–Mesopotamia, the Mayans, and others.[11]

The transition to capitalism changed all that. From the mid-fifteenth century, English peasants were gradually cleared off the land in waves of enclosure movements and effectively proletarianized. In place of self-sufficiency, landlords and their new capitalist farmers with hired labor began specializing in single crops—like wheat, wool, or flax—that they sold on the market. Everyone sold their specialized commodity, be it wheat or labor power, and purchased their means of subsistence. This new economy, based on specialized production for the market, has shaped economic development up to today. Indeed, the rise of capitalism has been virtually synonymous with economic development. Producers were not free to sell their commodity at whatever price they liked in the market because they faced competition. Hell is other pig farmers. In order to compete, farmers needed to increase the productivity of their farms. This forced them to seek cheaper inputs and labor, to bring in new technology, crop patterns, and economies of scale, thus to *develop the forces of production.*

The tragedy of the commodity

Greater production called forth greater demand. In England, the capitalist agricultural revolution of the fifteenth through seventeenth centuries entrained the Industrial Revolution of the eighteenth and nineteenth centuries. Commercial farmers sought better tools, wool carders better machines, merchants better means of transport, and so on. In this way, competition became the "motor" of economic growth. This engine of capitalist competition gave rise to an economy of permanent change, of ceaseless technological revolution, of systematic application of science to production. The results include the cotton gin, coal power, railways, oil power, motor

vehicles, medical advances, electricity, radio and TV, nuclear energy, the transistor, computers, the smartphone, GMOs, and Google Glass.

Rising productivity and advances in medicine also propelled the "demographic revolution," as the human population surged from one billion in 1800 to two billion by 1927, and to three billion by 1960. In place of cycles of underproduction with the ensuing collapse and famine, the capitalist mode of production has been characterized by periodic crises of "overproduction." Booms culminate in crises, economic collapse, and the destruction of capital and labor, followed in turn by renewed growth based on cheaper labor and capital, propelling another growth cycle. Along the way, capitalist development has profoundly transformed our lives, for better and worse. The relentlessly growing engine of economic development has become a monstrous motor of ecological destruction—strip mining the planet, leveling the last forests, exhausting the last accessible minerals, wiping out fish stocks, drowning us in pollution, and suffocating us in clouds of exhaust fumes—producing commodities we don't really need and should not be wasting resources to create in the first place.

2. Solutions to our ecological crisis are blindingly obvious and ready at hand, but so long as we live under capitalism, we can't take the obvious steps to prevent ecological collapse tomorrow because to do so would precipitate economic collapse today.

What to do? In my book, *Green Capitalism: The God that Failed*, I noted that since the 1970s mainstream ecological economists have tried to deal with the problem of capitalist growth in one of two ways.[12] The first approach, inspired by Herman Daly's idea of a "steady state economy" and Serge Latouche's call for "degrowth," imagined that capitalism could be reconstructed so it would stop growing, or degrow, while continuing to *develop* internally.[13] The second approach, exemplified by Paul Hawken, Lester Brown, and other "sustainable development" proponents, conceived that capitalism could carry on growing more or less forever, but that this growth could be rendered benign for the environment. This approach proposes the forging of an eco-entrepreneur-led "green industrial revolution" and introduces green subsidies, carbon taxes, and penalties for polluters to bring the rest of industry on board.

Pro or antigrowth, both approaches assume that capitalism is sufficiently malleable so fundamentals can be "inverted" such that corporations can, in one way or another, be induced to subordinate profit making to "saving the earth." And regardless of their different approaches, what unites both schools of thought is their *a priori* rejection of alternatives to capitalism—their rejection of any kind of economic planning or socialism. That, I argued, is where the mainstream is wrong, because there is no possible solution to our crisis within the framework of any conceivable capitalism.

Why "steady state" and "degrowth" are incompatible with a viable capitalist economy

Against well-intentioned but misguided proponents of "steady state" and "degrowth," including Herman Daly, Tim Jackson, and others, I argued that while we certainly do need degrowth, the tendency toward growth would remain in any conceivable capitalist economy, "green" or otherwise.[14] I noted that there are some exceptions: private, family-owned or closely-held companies which don't have to answer to shareholders, or public utilities where profits are guaranteed. Such companies can carry on more or less in stasis, or even degrow, if they so choose. But in the US, most companies are investor-owned corporations, owned by mutual funds, investment banks, pension funds, and so on. For them, growth is an inescapable requirement of day-to-day reproduction.

Why? First, producers are dependent upon the market. They have to sell their commodities to buy their own means of subsistence, the means of production, and raw material inputs to stay in production. Second, competition drives economic development. Competition forces producers, on pain of market failure, to systematically cut costs, find cheaper inputs, innovate, bring in new technology, and to reinvest much of their surpluses back into production (instead of wasting it on warfare and conspicuous consumption like their feudal predecessors). Third, "grow or die" is a law of survival in the marketplace. Companies face irresistible and relentless pressure from shareholders to maximize profits. The company that fails to meet Wall Street's expectations and regularly grow profits quarter after quarter, risks seeing its shareholders sell their stock and go elsewhere as its stock price falls. So CEOs have no choice but to constantly seek to grow sales, grow the

market. Bigger is also safer because wealthier companies can better take advantage of economies of scale, dominate markets, and set market prices. In short, the growth imperative is virtually an iron law of successful capitalist competition. It is not "subjective." It is not optional. It is not dispensable.

Why "green capitalism" can't save the world

Against "green capitalism" theorists and proponents, I argued that companies can't prioritize people and planet over profits because CEOs and corporate boards are not responsible to society, they're responsible to private shareholders. Corporations may embrace environmentalism so long as this increases profits (by, for example, recycling, reducing waste, introducing "green" products and the like). But saving the world requires more than recycling and installing LED light bulbs. *It requires that the pursuit of profits be systematically subordinated to ecological concerns, and this they cannot do.*[15] No corporate board can sacrifice earnings let alone put itself out of business to save humans. As Milton Friedman wrote, "there is one and only one social responsibility of business—to use its resources and engage in activities to increase its profits."[16] Indeed, that's their one and only legal obligation.[17]

Climate scientists tell us that *if* we hope to contain global warming within two degrees Celsius above preindustrial levels, we are going to have to suppress fossil fuel burning by 7-10 percent per year *every year* from 2015 through 2050, by which time fossil fuels need to be nearly phased out.[18] But how could we ever do this in capitalism, in an economy based on huge investor-owned corporations? Imagine the CEO of ExxonMobil telling his investors: "Sorry, but to save the planet, we cannot grow profits next year. Instead, we have to cut production (and thus profits) by 7-10 percent next year and every year thereafter, for the next three and a half decades, by which time we will be basically out of business." How long would it take your retirement fund to dump that stock? Now imagine the impact cutting fossil fuel use by 7-10 percent every year for decades would have across the economy. This would rapidly bankrupt the auto industry, the aircraft and airlines industries, tourism, petrochemicals, agricultural chemicals and agribusiness, synthetic fibers, textiles, plastics of every sort, construction, and more.

> *This is the ultimate fatal choice of capitalism: we have to destroy our children's tomorrow to hang on to our jobs today.*

What company is going to commit economic suicide to save the planet? And, what unions would support degrowth, let alone massive layoffs?

And what government? Last summer, California's eco-governor Jerry Brown and the California Senate Democrats proposed legislation to cut the state's petroleum use by 50 percent by 2030, in line with IPCC's target of cutting emissions by 90 percent by 2050. Great. But the oil industry hollered bloody murder. The Western States Petroleum Association said that a 50 percent mandate would mean job losses, increased fuel and electricity costs. Advertisements by the oil industry asserted "that it could lead to fuel rationing and bans on sport utility vehicles," reported *The New York Times*.[19] Facing revolt in the State Assembly, erstwhile green Governor Brown dropped the plan, sacrificing the planet to economic growth like capitalist governments everywhere.[20]

In point of fact, the oil companies were right: If California cuts fossil fuel consumption by 50 percent, masses of workers in affected industries would have to be laid off, gasoline would have to be rationed, gas-hog SUVs and bloated pickup trucks would have to be banned, and more. Yet if we're going to save humans, *we have to do just that. At the end of the day, the only way to suppress fossil fuel consumption is to suppress fossil fuel consumption: mandate cuts, impose rationing, ban production of gas-hog vehicles, and so on.*

The problem is, under capitalism, these measures would mean economic collapse and mass unemployment. On this point, the Chamber of Commerce and National Association of Manufacturers are right, and progrowth, promarket environmentalists are wrong: cutting GHG emissions means cutting jobs. Given capitalism, there is just no way around this conundrum. That's why I contend that

to save humans, we need a different economic system. We need a system that can enable us to radically restructure the economy, save humans and whales, and create new employment for all those excessed workers in industries we need to retrench and close down.

We all know what we have to do. It's completely obvious. We need to radically suppress GHG emissions and production of fossil fuels, stop deforestation, overfishing, and pillaging the planet to make products we don't need. And we need to stop dumping all manner of pollution and toxics everywhere. None of these problems require any big technological breakthroughs. As I've said: mostly we just have to stop doing what we're doing. The problem is we can't seem to stop, or even slow down. While global warming will kill us in the long run, stopping overconsumption will kill us in the short run because it would precipitate economic collapse, mass unemployment, and starvation. This is the ultimate fatal choice of capitalism: we have to destroy our children's tomorrow to hang on to our jobs today. Ask your average six year-old what's wrong with this picture.

I claim that the only way to prevent overshoot and collapse is to enforce a massive economic contraction in the industrialized economies, to retrench production across a broad range of unnecessary, resource-hogging, wasteful, and polluting industries, even shutting down the worst.[21] Corporations aren't necessarily evil. They just can't help themselves—they're doing what they're supposed to do for the benefit of their owners. But this means that, so long as the global economy is based on capitalist private and corporate property, and competitive production for the market, we're doomed to collective social suicide. No amount of tinkering with the market can apply the brake to the drive to global ecological collapse. We can't shop our way to sustainability because the problems we face cannot be solved by individual choice in the marketplace. They require collective democratic control over the economy to prioritize the needs of society and the environment. And they require national and international economic planning to reorganize the economy and redeploy labor and resources to these ends. If humanity is to save itself, we have no choice but to overthrow capitalism and replace it with a democratically planned socialist economy.

3. If capitalism can't help but destroy the world, then what choice is there but to socialize most of the world's industrial economies and plan them directly for the common good?

For better or worse, we are well into the Anthropocene. Nature doesn't run the Earth anymore. We do. Humans are now the main drivers of climate change, land use changes, and species extinction. Our actions will determine whether our species survives beyond this century. We are, as some religious traditions say, "one people on one planet." If so, we better start acting like it. If we want to save humans, we need to make conscious and collective decisions about how we impact nature.

Since the rise of capitalism 300 years ago, more and more of the world has come to be run on the basis of market anarchy, on Adam Smith's maxim that every individual should just seek his/her own economic self-interest. "Look out for Number One" and the "public interest" and the "common good," Smith said, would take care of itself.[22] Well, that hasn't worked out so well.

The problems we face, the problems of "planet management," can't be solved by individual choice in the marketplace. *They require conscious rational planning, international cooperation, and collective democratic control over the economy–not market anarchy.* Climate scientists tell us we need a global plan to suppress fossil fuel emissions, and we need it NOW.[23] Ocean scientists tell us we need a global Five-Year Plan to save the oceans.[24] We need rational, comprehensive, legally binding plans to save the world's remaining forests, to protect and restore rivers, lakes, and fisheries, to save millions of imperiled species around the globe, and to conserve natural resources of all kinds.

And we need a plan to save humans. We need to prioritize the needs of humanity, the environment, other species, and future generations. Private, self-interested corporations can't do that. The only way to do this is with public control over planning at all levels, investment, and technological change. I don't pretend to have a roadmap to save the world. Besides, there are plenty of economists, scientists, engineers, and others out there who are far more qualified and better

placed than I am myself to work out the parameters and details of small-to-large-scale economic planning. Moreover, planning a world economy is hardly the task of a few people. This is going to require the creativity and input of a world of peoples. Yet we have to begin somewhere. Leaving aside for the moment the very large question of how such a planning process might actually work (see points four and five below), for what it's worth I would suggest any rational sustainable economic planning "to do" list would have to include at least the following:

1. We would have to radically suppress fossil fuel consumption in the industrialized nations across the economy from energy generation to transportation, manufacturing, agriculture, and services. Globally, on average, electricity generation and heating account for around 25 percent of GHG emissions; industry 21 percent; transportation 14 percent; and agriculture, forestry, and other land use (mainly deforestation) 24 percent.[25] This means we not only need to rapidly phase out fossil fuel-powered utilities and enforce a shift to renewables, but we also need to suppress manufacturing (by, for example, terminating production of nonessentials such as useless novelties, pointless luxuries, disposable products, and destructive military products, among other things). We would have to limit construction (to, say, socially necessary essentials instead of endless luxury condo towers). We would have to cashier fossil fuel-dependent industrial agriculture and replace it with organic farming. We would have to halt deforestation worldwide and implement programs of reforestation. We would have to sharply reduce motor vehicle use, air travel (currently the two fastest growing sources of CO_2 emissions), and other GHG emitting services.

If we don't have any technical miracles to enable us to grow our economies without consuming more resources including fossil fuels, then our only option is to bring economic growth to a halt in the industrialized economies. This would mean industrial closures and retrenchments across the economy.[26] Companies like ExxonMobil, General Motors, Boeing, Apple, Monsanto, United Airlines, and other producers of unsustainable and destructive products and services can hardly be expected to put themselves out of business and throw their workers on the streets. They would have to be nationalized or socialized, bought out or expropriated, so that they could

be decommissioned, retrenched, or repurposed. Their excessed employees could be reemployed in socially beneficial, ecologically sustainable (and hopefully more personally fulfilling) lines of work. I'm fully aware that to propose what amounts to substantial deindustrialization of the northern hemisphere sounds extreme. No doubt. But global heating of four to six degrees Celsius by the end of this century is more extreme—and impossible for us to reverse.[27] So which is it to be? We save General Motors and ExxonMobil for a few decades or we save humans? These are the sorts of questions we as a society need to be discussing.

2. We would have to "contract and converge" production around a globally sustainable and hopefully happy average that can provide a dignified living standard for all the world's peoples. To effect such a balance, we would have to slam the brakes on out-of-control growth in the Global North. We would need to retrench or shut down unnecessary, resource-hogging, wasteful, polluting industries like fossil fuels, autos, aircraft and airlines, shipping, chemicals, bottled water, processed foods, pharmaceuticals, and so on. We would have to discontinue harmful processes like industrial agriculture, fishing, and logging. We would have to close down many services–the banking industry, Wall Street, the credit card, retail, public relations, and advertising "industries"—built to underwrite and promote overconsumption. We would have to abolish the military-surveillance-police state industrial complex, and all its manufacturers, as this is just a total waste that's only purpose is global domination, state terrorism, destruction abroad, and repression at home. We can't build decent societies anywhere when so much of social surplus is squandered on such waste.

At the same time, we would be obliged to redirect considerable resources to ramping up sustainable development in the Global South. We, in the North, have a responsibility to help the South build basic infrastructure, electrification, sanitation systems, public schools, health care, and so on. We would help their citizens achieve a comfortable material standard of living without repeating all the disastrous wastes of capitalist consumerism in the North. After all, we owe them a huge debt: much of the poverty of the South is the result of decades and centuries of the industrialized North looting their resources. If we just stop this,

the South can use its natural resource wealth for its own sustainable development.

For example, China's stupendously wasteful overproduction and overconstruction since the 1990s has been heavily and, in recent years, almost entirely dependent upon importing vast quantities of iron ore, coal, oil, lumber, and other raw materials from Africa, Latin America, Asia, and Australia. The result is extensive ecological destruction from New Guinea to Congo to Peru. If China were to abandon this staggering waste, Africans, Asians, and Latin Americans could use those resources for themselves, instead of shipping them to China in exchange for disposable plastic junk and payoffs to dictators.[28] If Brazil were to stop leveling its forest to produce lumber and hamburgers for overconsuming Americans and Europeans, Brazilians could grow their own food and build quality housing for themselves, instead of living on pennies in shanties. But Brazilians also need and deserve aid from the industrialized North to offset the loss of income from those exports of hamburgers and lumber. Other countries face even tougher choices. Oil revenues provide about half of Venezuelan government revenue, and nearly one hundred percent of government revenue in the Oil Belt, from Libya to Saudi Arabia. If we have to suppress global oil production to save humans, then entire economies are going to have to be reconstructed. These are huge challenges, no doubt. But, again, what's the alternative?

3. We would have to revolutionize the production of the goods and services to minimize resource consumption and produce things to be durable, rebuildable, recyclable, and shareable, instead of disposable. We're seven going on nine or ten billion people on one small planet with depleted resources. We won't survive for much longer with a global economy geared to consuming more resources per capita. We need an economy geared to minimizing resource consumption per capita, while producing enough material goods and services for all of humanity to live a comfortable if not extravagant lifestyle, with enough left over for future generations and to support other life forms. This will require a socially and ecologically rational approach to production.

Instead of products designed to be used up, worn out, and tossed as quickly as possible, we need to produce shoes that can be re-soled, stylish but well-made and

long-lasting clothes, durable and repairable appliances, and upgradeable smartphones. We need to phase out the private car in favor of shared vehicles, bicycles, and public transportation.[29] And, we need to make basic cars that last decades and can be easily rebuilt (like those old VW Beetles). We need to erect buildings engineered to last centuries, like the old cities of Europe. We need to discontinue harmful processes like industrial agriculture, fishing, and logging. Here again, such deindustrialization and restructuring would cashier not just factories here and there, but in some cases entire industries. This would eliminate pointless luxuries (like the luxury handbag industrial complex), wasteful disposables ("fast fashion," iPhones 6, 7, 8), and others.

4. We need to steer investments into things society *does* need like renewable energy, organic farming, public transportation, public water systems, environmental remediation, public health, and quality schools. All these priorities would be commonsensical in an economy not distorted by the profit motive. Why would anyone want to waste money on bottled water if the municipal water supplies were better quality, as they used to be in New York and other American cities?[30] Why would anyone want to waste hours slogging through vehicular traffic to get to work or to the airport, if they had the option of convenient, comfortable, clean, and efficient public transport, as in so many European cities? And so on. We have more than enough social wealth to restructure our economies along these lines. It's just that it's wasted on wars, subsidies to undeserving oil companies, tax giveaways to the rich, and more. Just the trillions of dollars alone that the US government has thrown away on its criminal wars in the Middle East since 1991 could easily have paid for converting the entire country to renewable energy, to say nothing of the losses in lives and damage that bombing half-a-dozen countries over more than a decade has cost.[31]

5. We need to devise a rational and systematic approach to handling and eliminating waste and toxics as far as possible. The solution to waste is obvious: stop making it. We need to: abolish production of disposable products (save for critical uses, like medical) and most packaging, bring back refillable containers, generalize mandatory composting, recycling, and so on.[32] As for toxics, here too, we

need to stop making so many chemicals, most of which are produced for trivial purposes we can do without. Some of which, like pesticides, are deliberately toxic and should be banned altogether. In general, as I discussed in my book, society should enshrine and live by the precautionary principle already elaborated by scientists, doctors, and grassroots antitoxics organizations. Groups like the Safer Chemicals Healthy Families call for safer substitutes and solutions, a phase-out of persistent bioaccumulative or highly toxic chemicals, publication of full right-to-know ingredients, participation of workers and communities in decisions on chemicals, publication of comprehensive safety data on all chemicals, and insistence on the immediate priority protection of communities and workers in the event of any threat.[33] Again, such rational reorganization of the economy in the interests of public health requires the visible hand of planning, not the invisible hand of market anarchy.

6. If we have to shut down harmful industries then we have to provide equivalent jobs for all those displaced workers, not only because this is a moral imperative but also because, without guaranteed employment elsewhere, those workers can't support the huge structural changes we need to make to save the humans. Most environmentalists loathe mentioning the job implications that "getting off oil" really means. The reality is that, given capitalism, any retrenchment, let alone mass industrial closures would mean large-scale unemployment. That's why the environmental movement has such difficulty talking to workers who intuitively grasp the connection. And yet, if we don't close down masses of polluting industries, we're doomed. I contend that the only way to deal with this contradiction is to take it head on, to concede that radical restructuring will mean massive displacement. Only an eco-socialist economy can immediately and rationally provide alternative employment for excessed workers in unsustainable polluting industries.[34]

Furthermore, happily in my view, this is not "austerity." This is a huge *opportunity* to replace alienated commodification with worthwhile, interesting, and self-fulfilling work. The truth is that the vast majority of workers in this country are employed in alienating, often dangerous, and harmful work. The transition

to eco-socialism presents the opportunity to abolish all manner of idiotic jobs: banking and advertising, assembly line manufacturing, arms production, and more. Moreover, since most of our current production is preoccupied with the output of useless or harmful products, ceasing production of all this opens the way to a shortened workday and reduced workweek. In other words, managed deindustrialization opens the way to the emancipation of labor instead of austerity and mass unemployment as under capitalism.

To restate my thesis: We can't reorganize, reprioritize, and restructure the world industrial economy in a rational and sustainable manner, *unless we do so directly and deliberately.* An economy that is mostly planned and publicly owned can achieve this transition.

Planning can't work?

Of course, it has been a standard shibboleth of capitalist economists, from Milton Friedman to Paul Krugman, that economic planning "can't work." Business editors never tire of recalling the failures of Soviet central planning as proof of this thesis. I don't buy that. Planning for whom by whom? I have argued that the failures of Stalinist planning prove nothing about the potentials of planning per se because in the Stalinist states planning was *of, by, and for* the party-bureaucracy.[35] These were totalitarian states, not democracies. Central planners shut workers and everyone else completely out of the planning process, and dictated production targets and quotas from the top down. There were no ways for workers to input their knowledge and creativity to the planning process, and no incentive for them to want to do so. As Soviet workers used to say, "We pretend to work and they pretend to pay us." Given these contradictions, it's surprising if planning worked at all. Planning will only be rational and efficient when everyone who is affected has a say in planning decisions. That's democracy. I don't see why such a system can't be constructed.

Governments "can't pick winners"?

Likewise, for years after the 2011 bankruptcy of solar startup Solyndra

Corporation, bankrolled by the Obama administration, hardly a week passed that *Wall Street Journal* editors failed to remind their readers of this demonstrated proof that government can't pick winners.[36] But as I pointed out, Solyndra didn't fail because solar is a losing technology, it failed because, ironically, capitalist Solyndra could not compete against lower-cost, state-owned, state-directed, and state-subsidized competitors in *China*.[37]

Besides, since when do capitalists have a crystal ball? CEOs and corporate boards bet on "loser" technologies and products all the time. Look at the recent collapse of electric car startup Fisker Automotive and Better Place, the Israeli electric vehicle charging and battery swapping stations venture (both went bankrupt in 2013). These join a long list of misplaced private bets from Sony's Betamax to Ford's Edsel, Tucker Automobile to DeLorean Motor Company, and all the way back to White Star Lines' Titanic and the tulip mania. The floor of Silicon Valley is littered with failed startups. CEOs and boards not only pick losing technology and products, they also lose money for their shareholders and even drive perfectly viable companies into bankruptcy every day. Consider the misadventures of JP Morgan Chase, Lehman Brothers, Washington Mutual, Enron, WorldCom, Pan American Airways, and Swissair. Who knows if Twitter or Tesla Motors or Amazon or Zynga will ever make money?[38] Government-backed Solyndra lost $535 million. But when Jamie Dimon lost two *billion dollars* for JP Morgan Chase, I don't recall the *Wall Street Journal* howling that capitalists "can't pick winners." When Enron collapsed, I don't recall hearing any blanket condemnation of the "inevitable incompetence" of the private sector. When Royal Dutch Shell abandoned its fool's errand Arctic drilling adventure in September 2015, conceding it picked a massive loser and wasted seven billion dollars of shareholders' money in the process, the *Wall Street Journal* declined to blame Shell's CEO allowing that "backing away from the arctic is a step in the right direction." [39]

So much for the free market's unerring wisdom in "picking winners." Hypocrisy is the stock and trade of capitalists, lazy media, and fact-averse capitalist economists who want to make the facts fit their simpleminded model, no matter the truth. That's why it's entirely in character that *The Wall Street Journal* has never, to my

knowledge, bothered to applaud government when it picked *indisputable winners:* when government-funded and government-directed applied research produced nuclear weapons, nuclear energy, radar, rockets, the jet engine, the transistor, the microchip, the internet, GPS, and crucial breakthroughs in biotechnology; when government scientists and industries launched the Apollo spacecraft that put men on the moon; when government-developed and produced ballistic missiles terrorized the Soviets and government-designed and operated bombers bombed the Reds in Korea and Vietnam to "contain communism" and secure American dominance of the Free World for corporate subscribers of the *Wall Street Journal* to exploit–where then was the *cri de coeur* that "government can't pick winners?" (I certainly wouldn't support all those inventions or their uses but there's no doubt they were "winners" in the terms of those who ordered them produced.) And when, after an *eight-year long,* mind-bogglingly difficult, complex, and risky 150 million-mile journey, NASA's government-built *Curiosity* space ship landed a (government-built) state of the art science lab the size of a Mini Cooper within a mile and a half of its target on the surface of *Mars*, and then immediately set off to explore its new neighborhood, even the Ayn-Rand-loving, government-hating Republicans in Congress were awed into silence. As David Sirota's headline in *Salon.com* read on August 13, 2012 just after *Curiosity* set down on the red planet: "Lesson from Mars: Government works!"

Capitalist planning sure works

On the other hand, I point out that *within their own enterprises*, capitalists hardly dispute the potentials of rational planning at all. Just the opposite. Today, the revenues of the world's largest corporations are bigger than many national economies. According to the Institute for Policy Studies, fifty-one of the world's one hundred largest economic entities are corporations, the rest countries.[40] Aside from banks, which don't produce anything, most of the top companies are oil and auto companies. ExxonMobil, SinoPec (China), and BP have revenues greater than all but the top twenty-nine nations. Large multinational companies operate in dozens of countries with hundreds of thousands of employees. Walmart has 2.2 million employees.[41]

> *“We can’t reorganize, reprioritize, and re-structure the world industrial economy in a rational and sustainable manner, unless we do so directly and deliberately.”*

Consider this one: Boeing Aircraft arguably represents the pinnacle of high-tech manufacturing technology today. The 787 Dreamliner is the most technologically sophisticated, manufactured product in the world. As many as fifty big companies contribute to producing its main components–the fuselage, engine, airframe, bulkhead, and tires. Subcontractors send components from Japan, Italy, Korea, Germany, China, the UK, Sweden, France, and other countries. Airplane production is systematically planned, coordinated, tightly sequenced, and choreographed. Every minute and dollar is counted. Waste and inefficiency is fanatically rooted out. Production is rigorously precise, disciplined, and efficient. Besides production, Boeing manages crew training, maintenance, repair, and upgrading of thousands of aircrafts around the world. Then, there are offices for product development, sales, personnel and government regulation management, and more. Boeing’s ultra high tech and far-flung operations are all “centrally planned,” coordinated, and managed from its corporate head offices, as with every large company. If companies with revenues greater than the GDPs of most countries can rationally and efficiently plan their economies, why can’t nations? Why can’t we rationally plan the world industrial economy for the needs of the world’s peoples? Of course, planning a national economy and coordinating global economies is rather more difficult than planning production, sale, and maintenance of airplanes. But I don’t see any technological barrier to this. Besides, we don’t have a choice. It’s plan or die. If we don’t rationally plan our major industrial economies for the needs of people and planet, if, instead, we continue to let market anarchy and profit maximization guide our global economic life, the result will be collective human suicide.

Saving small producers

In arguing for large-scale industrial planning as the only feasible alternative to unplanned market anarchy, I am not at all saying that we should nationalize family farms, farmers' markets, artisans, groceries, bakeries, local restaurants, repair shops, worker cooperatives, and similar small businesses. Small producers aren't destroying the world. But large-scale corporations *are* destroying the world. If we want to save humans, the corporations would have to be nationalized, socialized, completely reorganized. Many must be closed down, others scaled back, and still others repurposed. But I don't see any reason why small-scale, local, independent producers cannot carry on more or less as they are, within the framework of a larger planned economy. They would have to work within the limits of what's sustainable, obey pollution limits, and resource conservation mandates. They would also be forbidden to grow beyond reasonable, agreed upon maximum sizes. But other than that, I don't see a problem with letting small owner-operators and cooperatives remain. We don't need to plan the entire economy and we have bigger problems to worry about.

4. Rational planning requires democracy.

I contend that the only way to plan the economy for the common good is if we do it ourselves, democratically. Solar or coal? Frack the planet or work our way off fossil fuels? Drench the world's farms in toxic pesticides or return to organic agriculture? Public transportation or private cars as the mainstay? Let's put such questions up for a vote. *Shouldn't everyone have a say in decisions that affect us all?* Isn't that the essential idea of democracy? The problem with capitalism is that the economy isn't up for a vote, but it needs to be. Huge decisions that affect all of us, and millions of other species–even the fate of life on earth—are *private* decisions, made by corporate boards on behalf of self-interested investors. Polls show that 93 percent of Americans want GMO labeling on foods and 57 percent think that such foods are unsafe to eat.[42] But they don't get to vote on whether we get GMOs in our food or whether GMOS are labeled. Well, why not? The House of Representatives, which claims to represent and express the views of the electorate, passed a bill to prevent mandatory labeling so that food companies don't

have to disclose if GMOs are in their products.[43] This is capitalist "democracy." In capitalist democracies, politicians more often than not represent the interests of the companies and the rich, who fund their campaigns, bribe and gift them with fancy vacations and whatnot, instead of the wishes of the electorate who contribute little to campaign finance. This is the corruption of capitalist democracy. Polls show that 69 percent of Americans, 71 percent of Chinese, 77 percent of Nigerians, and 88 percent of Brazilians want binding limits imposed on CO_2 emissions.[44] But corporations don't want binding limits so they bribe or browbeat "our" politicians to get what they want. What kind of democracy is this? Why don't we get to vote on these questions? Why can't we have national referenda on such questions? We don't have to be experts to make such decisions. Corporate boards aren't composed of experts. They're composed of major investors and prominent, often politically-connected VIPs. Corporate boards decide and vote on what they want to do, then hire experts to figure out how to get it done. Why can't society do the same, but in the interest of the common good instead of Wall Street investors?

How do we know people would vote for the common good?

We don't. After all, people vote against their own interests in elections all the time. Yet, on closer inspection, it's not so surprising given the limited choices they're offered in capitalist democracy. What we see is that *in the abstract*, people would vote their conscience on environmental issues: 69 percent of Americans favor binding limits on CO_2 emissions and 93 percent want GMO labeling. This shows, I believe, that people have pretty good instincts about the environment. But when the issue is framed as a choice between environment versus jobs and other pocketbook issues, people very often vote for the economy and against the environment. For example, in 2012 Californians voted on Proposition 37, which would have required labeling of GMO content in foods and, if passed, California would have been the first state to require such labeling. Despite polls showing that huge majorities favored labeling, it was narrowly defeated, with pro-labeling voters garnering only 48.6 percent of the vote. Why was it defeated? Initiatives can win or lose for a variety of reasons. But in this case it is probably not irrelevant

that opponents, including Monsanto, E.I. Dupont, BASF Plant Science, and other industries, outspent the pro-labeling forces by more than five to one: $46 million versus $9.2 million. The opponents spent massively on disingenuous propaganda ads claiming the bill would increase family grocery costs by as much as $400 per year. This is a common pattern with a long history.[45] Yet, even so, it was only barely defeated.[46] The initiative process is direct democracy in action. But when corporate interests are free to spend unlimited money to influence voting, and especially when jobs or living standards are threatened, democracy is sabotaged. If we want democracy to work, we would have to have exclusively public funding of elections and referenda balloting, free and open debate on issues, and zero tolerance for Fox News and similar propaganda machines–*and* we need an economy in which workers in industries that need to be cashiered to save the planet are guaranteed other comparable jobs.

Planet Democracy: Creating institutions of economic democracy

We would have to establish democratic institutions to plan and manage our social economy: planning boards at local, regional, national, continental, and international levels. Those would have to include not just workers, the direct producers, but entire communities, consumers, farmers, peasants—everyone. As a rule, the more direct the democracy, the closer it reflects the will of the citizenry. And direct democracy need not be limited to local economies or issues. Many referenda can and must be national, even global, because they deal with universal, planet-wide issues. We need a global vote on the very biggest questions: Should we build more coal-fired power plants or close them down and shift to renewable power? Should we abolish large gas-hog luxury cars and, to the extent that we need cars at all, revive the equivalent of 1960s VW Beetles, Citroen 2CVs, and Fiat 500s? Should we fish the oceans to extinction or stop this plunder and manage them sustainably? Should we cut down the Amazon forest to grow soybeans or conserve and restore it? And if we choose to preserve the forest, how will we reemploy the farmers who currently grow soy beans and cattle there? These sorts of questions need to be addressed at the global as well as local levels. We have computers and the Internet. Google's Larry Schmidt said the entire world will

be online by 2020. We have plenty of models: the Paris Commune, the Russian soviets (workers councils) of 1917-19, Poland's Solidarity trade union in 1980-81, Brazil's participatory planning, La Via Campesina, and others.[47] Direct democracy at the base and delegated authority with right of recall for higher level planning boards. What's so difficult about that? Surprisingly, we even have a working example of something like a proto-socialist planning model right here in the US.

The example of public regulation of utilities

As Greg Palast, Jarrold Oppenheim, and Theo MacGregor described in *Democracy and Regulation: How the Public Can Govern Essential Services*, it is a curious and ironic fact that the US may be the world's leading champion of the free market, but it nonetheless possesses a large and indispensable sector of the economy that is not governed by the free market, but, instead, democratically, by public oversight–and that is utilities, the provision of electricity, heating fuel, water and sewerage, and local telephone service. Not only that, but these are the most efficient and cheapest utility systems in the world. The authors write:

> Unique in the world (with the exception of Canada), every aspect of US regulation is wide open to the public. There are no secret meetings, no secret documents. Any and all citizens and groups are invited to take part: individuals, industrial customers, government agencies, consumer groups, trade unions, the utility itself, even its competitors. *Everyone affected by the outcome has a right to make their case openly, to ask questions of government and utilities, to read all financial and operating records in detail.* In public forums, with all information open to all citizens, the principles of social dialogue and transparency come to life. It is an extraordinary exercise in democracy–and it works... Another little known fact is that, despite the recent experiments with markets in electricity [the authors published this book in 2003, just three years after the Enron privatization debacle], the US holds to the strictest, most elaborate and detailed system of regulation anywhere: private utilities' profits are capped, investments directed or vetoed by public agencies. Privately owned utilities are directed to reduce prices for the poor, fund environmentally friendly investments, protect community employ-

> ment, and open themselves to physical and financial inspection... Americans, while strongly attached to private property and ownership, demand stern and exacting government control over vital utility services.[48]

The authors are careful to note that this is "no regulatory Garden of Eden." It has many failings: regulation is constantly under attack by promoters of market pricing, and the public interest and the profit motive of investor-owned utilities often conflict with negative consequences for the public. But even so, this long-established and indisputably successful example of democratic public regulation of large-scale industries offers us a real-world practical example of something like a "proto-socialism." I see no obvious reason something like this model of democracy and transparency could not be scaled up to encompass the entire industrial economy.

Of course, we would have to do much more than just regulate industries. We would have to completely reorganize and reprioritize the whole economy, indeed the whole global industrial economy. This means not just regulating but restructuring: retrenching and closing down resource consuming and polluting industries, shifting resources out of them, and starting up new industries. Those are huge tasks, beyond the scope of even the biggest corporations. So who else could do this but self-organized masses of citizens, the whole society acting in concert, democratically? Obviously, many issues can be decided at local levels. Others, like closing down the coal industry or repurposing the auto industry, require large-scale planning at regional, national, or international levels. Some, like global warming, ocean acidification, and deforestation, would require extensive international coordination, virtually global planning. I don't see why that's not doable–absent the profit motive. We have the United Nations Climate Convention that meets annually and is charged with regulating GHG emissions. It fails to do so every year, not because it lacks knowledge of what to do, but only because it lacks enforcement powers. We need to give it enforcement powers.

5. Democracy requires rough socioeconomic equality.

When in the midst of the Great Depression that great "People's Lawyer," Supreme Court Justice Louis Brandeis, said *"We can either have democracy in this country or we can have great wealth concentrated in the hands of a few, but we can't have both,"*

he was more right than he knew. Today we have by far the greatest concentration of wealth in history. Not just the 1 percent. Worldwide, Oxfam found that just 80 individuals own as much wealth as the bottom half, 3.6 billion, of the world's population.[49] So it's hardly surprising that today we have the weakest and most corrupt democracies since the Gilded Age.

I contend that if we want a real democracy, we would have to abolish "the great wealth concentrated in the hands of the few." That means we would have to abolish not just capitalist private property in the means of production, but also extremes of income, exorbitant salaries, accumulated wealth, great property, and inheritance. The only way to prevent the corruption of democracy is to make it impossible to materially gain, by creating a society with neither rich nor poor. If it's illegal to be rich, then there's little or no incentive to be corrupt. Brandeis was right: we will never have a real democracy until we establish a reasonable socio-economic equality as the foundation. And if we can't replace capitalism with a real economic democracy, I don't see how we can avoid ecological collapse.

Does that mean we would all have to dress in blue Mao suits and dine in communal mess halls? Hardly. Lots of studies, notably Wilkinson and Pickett's *Spirit Level,* have shown that people are happier, life is better, there's less crime and violence, and fewer mental health problems in societies that are more equal, where income differences are small and concentrated wealth is limited.[50] Gandhi was right in saying that "the world has enough for everyone's needs, but not everyone's greed." We don't have five planets to provide the resources for the whole world to live the kind of wasteful consumerist lifestyle that middle and upper class Americans enjoy. But we have more than enough wealth to provide every human being on the planet with safe water and sanitation, quality food, housing, public transportation, great schools and healthcare, all the *authentic* necessities. These should all be guaranteed *as a matter of right*. Indeed, most of these were already declared as such in the United Nations' Universal Declaration of Human Rights of 1948:

> **Article 22** Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of

each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

Article 23 (1) Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment. (2) Everyone, without any discrimination, has the right to equal pay for equal work. (3) Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection. (4) Everyone has the right to form and to join trade unions for the protection of his interests.

Article 24 Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

Article 25 (1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

The promise of eco-socialism

Freeing ourselves from the toil of producing unnecessary and harmful commodities would free us to shorten the workday, to enjoy the leisure promised but never delivered by capitalism, to *redefine the meaning of the standard of living to connote a way of life that is actually richer, while consuming less.* In a society in which we can all easily secure our basic necessities and live comfortably, in which we are all guaranteed employment and a basic income, we can, all of us, realize our fullest potential instead of wasting our lives in mindless drudgery and shopping. Artists can do art instead of advertising. Carpenters like myself can build beautiful, substantial, and aesthetically pleasing housing for people who need it, instead of for the vanity of those who already have too much. Scientists and inventors can build

a better world instead of the next iThing or killer drone. Wall Street bankers can abandon their lives of crime and find socially worthwhile work, so they no longer have to be afraid to tell their children what they do all day. We can all build a beautiful world to pass on to our children, while leaving space and resources for the wonderful life forms with which we share this amazing blue planet. This is the potential of eco-socialism.

6. Impossible? Perhaps, but what's the alternative?

The "planetary emergency" we face is no joke. As Jared Diamond reminds us in his book *Collapse,* in the past civilizations collapsed individually whereas today we face the prospect of planet-wide ecological collapse, the collapse of civilization, and perhaps even our own extinction.[51] What gives us an edge here is that capitalism has no solution whatsoever to this crisis. Capitalism's answer to every problem is more of the same growth and overconsumption that has wrecked the planet and the climate in the first place. There can never be a market solution to our crisis because every "solution" has to be subordinated to maximizing growth, or companies can't stay in business. What difference does it make if Germany gets almost 30 percent of its electricity from solar and wind, when German industry uses this power to manufacture millions of global warmers, and gratuitously filthy diesels to boot? Automobiles are Germany's leading export, the bigger the better. What does it matter if Apple powers all of its operations in China with "100 percent renewable energy" when what it manufactures in China is ecologically disastrously costly disposable products–billions of iPhones, iPads, and the rest? If Apple really wanted to save the world, it would stop producing disposable products and produce durable phones and computers that could last for decades, that could be easily rebuilt, upgraded, and be totally recyclable. But of course, that would put them out of business in a hurry. This is why green capitalism can only go so far. As one-by-one all the pro-market stratagems—the cap and trades, carbon taxes, the REDDs, and the "green growth" delusions of perpetual growth without perpetually growing resource consumption—are all revealed to be counterproductive or, at best, too feeble to effect the radical suppression of resource consumption and pollution we need to make, I believe people will be more open to radical alternatives.

We're living in one of those pivotal world-changing moments in history. Indeed, it's no exaggeration to say that this is *the* most critical moment in human history. Capitalism has had a good 300-year run. But economic systems come and go, as do governments. There is no gainsaying the magnitude of the changes we are going to have to make to save ourselves. There is no doubt that closing the book on capitalism and moving on to a higher stage of civilization–eco-socialism–by replacing the culture of "possessive individualism" with a culture of sharing, community and love, is the greatest challenge humanity has ever faced. We may very well fail. But what other choice do we have but to try? The Australians in Stanley Kramer's dystopian film had no alternative. They were doomed no matter what they did. But we still have a chance, indeed a huge opportunity to make a better world. Difficult as it may be to think of completely reordering our economic lives, I just cannot believe that humanity is going to commit collective eco-suicide just to save capitalism.

October 2016

Notes:

1 Sewell Chan, "Poll finds Global Consensus on the Need to Curb Emissions," *New York Times*, November 6, 2015.

2 Germany shut down its nuclear power plants, but replaced their electricity generation mainly with coal-fired power plants to power its industries. Auto manufacturing is the country's leading export. And, with car companies, it's "big car big profit, small car small profit." So the Germans burn coal to produce gas guzzlers. Brilliant! Indeed, Germany's government is even demolishing actual solar-, wind-, and biogas-powered ancient (not to mention beautifully restored and upgraded) medieval villages, to unearth the filthy brown lignite coal buried beneath them, in their drive to replace nuclear power with coal. Stunningly brilliant! See: Tony Paterson, "Green Village to be Bulldozed and Mined for Lignite in Germany's Quest for Non-nuclear Fuel," *The Independent*, September 29, 2014, http://www.independent.co.uk/environment/green-living/green-village-to-be-bulldozed-and-mined-for-lignite-in-germanys-quest-for-non-nuclear-fuel-9760091.html.

3 Trucks in 1950 got 8.4mpg whereas in 2010 they got 6.4mpg. See: http://www.eia.gov/totalenergy/data/annual/showtext.cfm?t=ptb0208. Demand for fuel-efficient cars is falling; sales of GM's plug-in hybrid Volt fell 35 percent in the first half of 2015. The top three selling vehicles in 2014 were the GMC Sierra, the Dodge Ram, and Ford's F-Series truck–fuel economy disasters. What's more, hybrid/electric powered cars like the Prius and Leaf account for an infinitesimal and falling percentage of new car sales, barely 2.8 percent in the US in the first half of 2015, down almost a full percentage point from 3.6 percent in 2014. See: Mike Ramsey and Christina Rogers, "Surging Demand for Pickups Tests new EPA Rules," *Wall Street Journal*, August 4, 2015.

It hardly matters anyway since electric cars are really mostly coal-oil-gas powered as fossil fuels dominate electricity production and are expected to do so for many decades. In the US in 2014, 67 percent of electricity was produced by fossil fuels and another 19 percent by nuclear. See: "What is US Electricity Generation by Energy Source," last modified March 31, 2015, https://www.eia.gov/tools/faqs/faq.cfm?id=427&t=3. In China, which is the world's largest car market, virtually all cars are fossil fuel-powered. Same in India.

4 John Schwartz, "Deadly Heat is Forecast in Persian Gulf by 2100," *New York Times*, October 26, 2015, based on a report by Jeremy S. Pal and Elfatih A. B. Eltahir, "Future Temperature in Southwest Asia Projected to Exceed a Threshold for Human Adaptability," *Nature Climate Change* 6 (October 26, 2015): 1-4.

5 Michael T. Klare, *The Race for What's Left: The Global Scramble for the World's Last Resources* (New York: Picador, 2012); Ugo Bardi, *Extracted: How the Quest for Mineral Wealth is Plundering the Planet* (White River Junction: Chelsea Green, 2014); Craig Simons, *Devouring Dragon: How China's Rise Threatens Our Natural World* (New York: St. Martins, 2013); Elizabeth C. Economy and Michael Levi, *By All Means Necessary: How China's Resource Quest is Changing the World* (New York: Oxford, 2015); Simon Romero, "Countries Rush for Upper Hand in Antartica," *New York Times*, December 29, 2015.

6 China's astounding resource overconsumption is in a class by itself. To understand why, see my "China's Communist-Capitalist Ecological Apocalypse," *Real-World Economics Review* 71 (June 2015): 19-63, http://www.paecon.net/PAEReview/issue71/Smith71.pdf.

7 Helen Lewis, "Never Mind the Pointless Apps–Our Best Minds Should be Solving Real Problems," *Guardian*, November 11, 2015, http://www.theguardian.com/commentisfree/2015/nov/11/laundry-ninjas-free-market-science; Hu Yongqi, "As Phone Sales Cool, HTC Bets on VR Devices," *China Daily*, January 5, 2016, http://www.chinadaily.com.cn/business/tech/2016-01/05/content_22932829.htm; Gao Yuan, "Virtual Reality, the Next Big Thing for Future-minded Tech Firms," *China Daily*, January 5, 2016, http://usa.chinadaily.com.cn/epaper/2016-01/05/content_22941357.htm.

8 Yuan, "Virtual Reality, the Next Big Thing for Future-minded Tech Firms;" Yongqi, "As Phone Sales Cool, HTC bet on VR devices;" "Thneeds" is from Dr. Seuss's *The Lorax* (New York: Random House, 1971), which, remains, in my humble opinion, the greatest environmental book ever written.

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