

Decisive Ecological Warfare

by Aric McBay

There's a time when the operation of the machine becomes so odious, makes you so sick at heart, that you can't take part, you can't even passively take part, and you've got to put your bodies upon the gears and upon the wheels, upon the levers, upon all the apparatus, and you've got to make it stop!

—Mario Savio, Berkeley Free Speech Movement

To gain what is worth having, it may be necessary to lose everything else.”

—Bernadette Devlin, Irish activist and politician

BRINGING IT DOWN: COLLAPSE SCENARIOS

At this point in history, there are no good short-term outcomes for global human society. Some are better and some are worse, and in the long term some are very good, but in the short term we're in a bind. I'm not going to lie to you—the hour is too late for cheer mongering. The only way to find the best outcome is to confront our dire situation head on, and not to be diverted by false hopes.

Human society—because of civilization, specifically—has painted itself into a corner. As a species we're dependent on the draw down of finite supplies of oil, soil, and water. Industrial agriculture (and annual grain agriculture before that) has put us into a vicious pattern of population growth and overshoot. We long ago exceeded carrying capacity, and the workings of civilization are destroying that carrying capacity by the second. This is largely the fault of those in power, the wealthiest, the states and corporations. But the consequences—and the responsibility for dealing with it—fall to the rest of us, including nonhumans.

Physically, it's not too late for a crash program to limit births to reduce the population, cut fossil fuel consumption to nil, replace agricultural monocrops with perennial polycultures, end overfishing, and

cease industrial encroachment on (or destruction of) remaining **wild** areas. There's no physical reason we couldn't start all of these **things** tomorrow, stop global warming in its tracks, reverse overshoot, reverse erosion, reverse aquifer drawdown, and bring back all the species **and** biomes currently on the brink. There's no physical reason we couldn't get together and act like adults and fix these problems, in the sense that it isn't against the laws of physics.

But socially and politically, we know this is a pipe dream. There are material systems of power that make this impossible as long as those systems are still intact. Those in power get too much money and **privilege** from destroying the planet. We aren't going to save the planet—or our own future as a species—without a fight.

What's realistic? What options are actually available to us, and what are the consequences? What follows are three broad and illustrative scenarios: one in which there is no substantive or decisive resistance, one in which there is limited resistance and a relatively prolonged collapse, and one in which all-out resistance leads to the immediate collapse of civilization and global industrial infrastructure.

NO RESISTANCE

If there is no substantive resistance, likely there will be a few more years of business as usual, though with increasing economic disruption and upset. According to the best available data, the impacts of peak oil start to hit somewhere between 2011 and 2015, resulting in a rapid decline in global energy availability.¹ It's possible that this may happen slightly later if all-out attempts are made to extract remaining fossil fuels, but that would only prolong the inevitable, worsen global warming, and make the eventual decline that much steeper and more severe. Once peak oil sets in, the increasing cost and decreasing supply of energy undermines manufacturing and transportation, especially on a global scale.

The energy slide will cause economic turmoil, and a self-perpetuating cycle of economic contraction will take place. Businesses will be unable to pay their workers, workers will be unable to buy things, and more companies will shrink or go out of business (and will be unable to pay

their workers). Unable to pay their debts and mortgages, homeowners, companies, and even states will go bankrupt. (It's possible that this process has already begun.) International trade will nosedive because of a global depression and increasing transportation and manufacturing costs. Though it's likely that the price of oil will increase over time, there will be times when the contracting economy causes falling demand for oil, thus suppressing the price. The lower cost of oil may, ironically but beneficially, limit investment in new oil infrastructure.

At first the collapse will resemble a traditional recession or depression, with the poor being hit especially hard by the increasing costs of basic goods, particularly of electricity and heating in cold areas. After a few years, the financial limits will become physical ones; large-scale energy-intensive manufacturing will become not only uneconomical, but impossible.

A direct result of this will be the collapse of industrial agriculture. Dependent on vast amounts of energy for tractor fuel, synthesized pesticides and fertilizers, irrigation, greenhouse heating, packaging, and transportation, global industrial agriculture will run up against hard limits to production (driven at first by intense competition for energy from other sectors). This will be worsened by the depletion of groundwater and aquifers, a long history of soil erosion, and the early stages of climate change. At first this will cause a food and economic crisis mostly felt by the poor. Over time, the situation will worsen and industrial food production will fall below that required to sustain the population.

There will be three main responses to this global food shortage. In some areas people will return to growing their own food and build sustainable local food initiatives. This will be a positive sign, but public involvement will be belated and inadequate, as most people still won't have caught on to the permanency of collapse and won't want to have to grow their own food. It will also be made far more difficult by the massive urbanization that has occurred in the last century, by the destruction of the land, and by climate change. Furthermore, most subsistence cultures will have been destroyed or uprooted from their land—land inequalities will hamper people from growing their own food (just as they do now in the majority of the world). Without well-

organized resisters, land reform will not happen, and displaced people will not be able to access land. As a result, widespread hunger and starvation (worsening to famine in bad agricultural years) will become endemic in many parts of the world. The lack of energy for industrial agriculture will cause a resurgence in the institutions of slavery and serfdom.

Slavery does not occur in a political vacuum. Threatened by economic and energy collapse, some governments will fall entirely, turning into failed states. With no one to stop them, warlords will set up shop in the rubble. Others, desperate to maintain power against emboldened secessionists and civil unrest, will turn to authoritarian forms of government. In a world of diminishing but critical resources, governments will get leaner and meaner. We will see a resurgence of authoritarianism in modern forms: technofascism and corporation feudalism. The rich will increasingly move to private and well-defended enclaves. Their country estates will not look apocalyptic—they will look like eco-Edens, with well-tended organic gardens, clean private lakes, and wildlife refuges. In some cases these enclaves will be tiny, and in others they could fill entire countries.

Meanwhile, the poor will see their own condition worsen. The millions of refugees created by economic and energy collapse will be on the move, but no one will want them. In some brittle areas the influx of refugees will overwhelm basic services and cause a local collapse, resulting in cascading waves of refugees radiating from collapse and disaster epicenters. In some areas refugees will be turned back by force of arms. In other areas, racism and discrimination will come to the fore as an excuse for authoritarians to put marginalized people and dissidents in “special settlements,” leaving more resources for the privileged.² Desperate people will be the only candidates for the dangerous and dirty manual labor required to keep industrial manufacturing going once the energy supply dwindles. Hence, those in power will consider autonomous and self-sustaining communities a threat to their labor supply, and suppress or destroy them.

Despite all of this, technological “progress” will not yet stop. For a time it will continue in fits and starts, although humanity will be split into increasingly divergent groups. Those on the bottom will be unable

to meet their basic subsistence needs, while those on the top will attempt to live lives of privilege as they had in the past, even seeing some technological advancements, many of which will be intended to cement the superiority of those in power in an increasingly crowded and hostile world.

Technofascists will develop and perfect social control technologies (already currently in their early stages): autonomous drones for surveillance and assassination; microwave crowd-control devices; MRI-assisted brain scans that will allow for infallible lie detection, even mind reading and torture. There will be no substantive organized resistance in this scenario, but in each year that passes the technofascists will make themselves more and more able to destroy resistance even in its smallest expression. As time slips by, the window of opportunity for resistance will swiftly close. Technofascists of the early to mid-twenty-first century will have technology for coercion and surveillance that will make the most practiced of the Stasi or the SS look like rank amateurs. Their ability to debase humanity will make their predecessors appear saintly by comparison.

Not all governments will take this turn, of course. But the authoritarian governments—those that will continue ruthlessly exploiting people and resources regardless of the consequences—will have more sway and more muscle, and will take resources from their neighbors and failed states as they please. There will be no one to stop them. It won't matter if you are the most sustainable eco-village on the planet if you live next door to an eternally resource-hungry fascist state.

Meanwhile, with industrial powers increasingly desperate for energy, the tenuous remaining environmental and social regulations will be cast aside. The worst of the worst, practices like drilling offshore and in wildlife refuges, and mountaintop removal for coal will become commonplace. These will be merely the dregs of prehistoric energy reserves. The drilling will only prolong the endurance of industrial civilization for a matter of months or years, but ecological damage will be long-term or permanent (as is happening in the Arctic National Wildlife Refuge). Because in our scenario there is no substantive resistance, this will all proceed unobstructed.

Investment in renewable industrial energy will also take place,

although it will be belated and hampered by economic challenges, government bankruptcies, and budget cuts.³ Furthermore, long-distance power transmission lines will be insufficient and crumbling from age. Replacing and upgrading them will prove difficult and expensive. As a result, even once in place, electric renewables will only produce a tiny fraction of the energy produced by petroleum. That electric energy will not be suitable to run the vast majority of tractors, trucks, and other vehicles or similar infrastructure.

As a consequence, renewable energy will have only a minimal moderating affect on the energy cliff. In fact, the energy invested in the new infrastructure will take years to pay itself back with electricity generated. Massive infrastructure upgrades will actually *steepen* the energy cliff by decreasing the amount of energy available for daily activities. There will be a constant struggle to allocate limited supplies of energy under successive crises. There will be some rationing to prevent riots, but most energy (regardless of the source) will go to governments, the military, corporations, and the rich.

Energy constraints will make it impossible to even attempt any full-scale infrastructure overhauls like hydrogen economies (which wouldn't solve the problem anyway). Biofuels will take off in many areas, despite the fact that they mostly have a poor ratio of energy returned on energy invested (EROEI). The EROEI will be better in tropical countries, so remaining tropical forests will be massively logged to clear land for biofuel production. (Often, forests will be logged *en masse* simply to burn for fuel.) Heavy machinery will be too expensive for most plantations, so their labor will come from slavery and serfdom under authoritarian governments and corporate feudalism. (Slavery is currently used in Brazil to log forests and produce charcoal by hand for the steel industry, after all.)⁴ The global effects of biofuel production will be increases in the cost of food, increases in water and irrigation drawdown for agriculture, and worsening soil erosion. Regardless, its production will amount to only a small fraction of the liquid hydrocarbons available at the peak of civilization.

All of this will have immediate ecological consequences. The oceans, wracked by increased fishing (to compensate for food shortages) and warming-induced acidity and coral die-offs, will be mostly dead. The

expansion of biofuels will destroy many remaining wild areas and global biodiversity will plummet. Tropical forests like the Amazon produce the moist climate they require through their own vast transpiration, but expanded logging and agriculture will cut transpiration and tip the balance toward permanent drought. Even where the forest is not actually cut, the drying local climate will be enough to kill it. The Amazon will turn into a desert, and other tropical forests will follow suit.

Projections vary, but it's almost certain that if the majority of the remaining fossil fuels are extracted and burned, global warming would become self-perpetuating and catastrophic. However, the worst effects will not be felt until decades into the future, once most fossil fuels have already been exhausted. By then, there will be very little energy or industrial capacity left for humans to try to compensate for the effects of global warming.

Furthermore, as intense climate change takes over, ecological remediation through perennial polycultures and forest replanting will become impossible. The heat and drought will turn forests into net carbon emitters, as northern forests die from heat, pests, and disease, and then burn in continent-wide fires that will make early twenty-first century conflagrations look minor.⁵ Even intact pastures won't survive the temperature extremes as carbon is literally baked out of remaining agricultural soils.

Resource wars between nuclear states will break out. War between the US and Russia is less likely than it was in the Cold War, but ascending superpowers like China will want their piece of the global resource pie. Nuclear powers such as India and Pakistan will be densely populated and ecologically precarious; climate change will dry up major rivers previously fed by melting glaciers, and hundreds of millions of people in South Asia will live bare meters above sea level. With few resources to equip and field a mechanized army or air force, nuclear strikes will seem an increasingly effective action for desperate states.

If resource wars escalate to nuclear wars, the effects will be severe, even in the case of a "minor" nuclear war between countries like India and Pakistan. Even if each country uses only fifty Hiroshima-sized bombs as air bursts above urban centers, a nuclear winter will result.⁶ Although lethal levels of fallout last only a matter of weeks, the eco-

logical effects will be far more severe. The five megatons of smoke produced will darken the sky around the world. Stratospheric heating will destroy most of what remains of the ozone layer.⁷ In contrast to the overall warming trend, a “little ice age” will begin immediately and last for several years. During that period, temperatures in major agricultural regions will routinely drop below freezing in summer. Massive and immediate starvation will occur around the world.

That’s in the case of a small war. The explosive power of one hundred Hiroshima-sized bombs accounts for only 0.03 percent of the global arsenal. If a larger number of more powerful bombs are used—or if cobalt bombs are used to produce long-term irradiation and wipe out surface life—the effects will be even worse.⁸ There will be few human survivors. The nuclear winter effect will be temporary, but the bombing and subsequent fires will put large amounts of carbon into the atmosphere, kill plants, and impair photosynthesis. As a result, after the ash settles, global warming will be even more rapid and worse than before.

Nuclear war or not, the long-term prospects are dim. Global warming will continue to worsen long after fossil fuels are exhausted. For the planet, the time to ecological recovery is measured in tens of millions of years, if ever.⁹ As James Lovelock has pointed out, a major warming event could push the planet into a different equilibrium, one much warmer than the current one.¹⁰ It’s possible that large plants and animals might only be able to survive near the poles.¹¹ It’s also possible that the entire planet could become essentially uninhabitable to large plants and animals, with a climate more like Venus than Earth.

All that is required for this to occur is for current trends to continue without substantive and effective resistance. All that is required for evil to succeed is for good people to do nothing. But this future is not inevitable.

LIMITED RESISTANCE

What if some forms of limited resistance were undertaken? What if there was a serious aboveground resistance movement combined with a small group of underground networks working in tandem? (This still

would not be a majority movement—this is extrapolation, not fantasy.) What if those movements combined their grand strategy? The abovegrounders would work to build sustainable and just communities wherever they were, and would use both direct and indirect action to try to curb the worst excesses of those in power, to reduce the burning of fossil fuels, to struggle for social and ecological justice. Meanwhile, the undergrounders would engage in limited attacks on infrastructure (often in tandem with aboveground struggles), especially energy infrastructure, to try to reduce fossil fuel consumption and overall industrial activity. The overall thrust of this plan would be to use selective attacks to accelerate collapse in a deliberate way, like shoving a rickety building.

If this scenario occurred, the first years would play out similarly. It would take time to build up resistance and to ally existing resistance groups into a larger strategy. Furthermore, civilization at the peak of its power would be too strong to bring down with only partial resistance. The years around 2011 to 2015 would still see the impact of peak oil and the beginning of an economic tailspin, but in this case there would be surgical attacks on energy infrastructure that limited new fossil fuel extraction (with a focus on the nastier practices like mountain-top removal and tar sands). Some of these attacks would be conducted by existing resistance groups (like MEND) and some by newer groups, including groups in the minority world of the rich and powerful. The increasing shortage of oil would make pipeline and infrastructure attacks more popular with militant groups of all stripes. During this period, militant groups would organize, practice, and learn.

These attacks would not be symbolic attacks. They would be serious attacks designed to be effective but timed and targeted to minimize the amount of “collateral damage” on humans. They would mostly constitute forms of sabotage. They would be intended to cut fossil fuel consumption by some 30 percent within the first few years, and more after that. There would be similar attacks on energy infrastructure like power transmission lines. Because these attacks would cause a significant but incomplete reduction in the availability of energy in many places, a massive investment in local renewable energy (and other measures like passive solar heating or better insulation in some areas) would be provoked. This would set in motion a process of political and

infrastructural decentralization. It would also result in political repression and real violence targeting those resisters.

Meanwhile, aboveground groups would be making the most of the economic turmoil. There would be a growth in class consciousness and organization. Labor and poverty activists would increasingly turn to community sufficiency. Local food and self-sufficiency activists would reach out to people who have been pushed out of capitalism. The unemployed and underemployed—rapidly growing in number—would start to organize a subsistence and trade economy outside of capitalism. Mutual aid and skill sharing would be promoted. In the previous scenario, the development of these skills was hampered in part by a lack of access to land. In this scenario, however, aboveground organizers would learn from groups like the Landless Workers Movement in Latin America. Mass organization and occupation of lands would force governments to cede unused land for “victory garden”-style allotments, massive community gardens, and cooperative subsistence farms.

The situation in many third world countries could actually improve because of the global economic collapse. Minority world countries would no longer enforce crushing debt repayment and structural adjustment programs, nor would CIA goons be able to prop up “friendly” dictatorships. The decline of export-based economies would have serious consequences, yes, but it would also allow land now used for cash crops to return to subsistence farms.

Industrial agriculture would falter and begin to collapse. Synthetic fertilizers would become increasingly expensive and would be carefully conserved where they are used, limiting nutrient runoff and allowing oceanic dead zones to recover. Hunger would be reduced by subsistence farming and by the shift of small farms toward more traditional work by hand and by draft horse, but food would be more valuable and in shorter supply.

Even a 50 percent cut in fossil fuel consumption wouldn't stave off widespread hunger and die-off. As we have discussed, the vast majority of all energy used goes to nonessentials. In the US, the agricultural sector accounts for less than 2 percent of all energy use, including both direct consumption (like tractor fuel and electricity for barns and pumps) and indirect consumption (like synthetic fertilizers and pesti-

cides).¹² That's true even though industrial agriculture is incredibly inefficient and spends something like ten calories of fossil fuel energy for every food calorie produced. Residential energy consumption accounts for only 20 percent of US total usage, with industrial, commercial, and transportation consumption making up the majority of all consumption.¹³ And most of that residential energy goes into household appliances like dryers, air conditioning, and water heating for inefficiently used water. The energy used for lighting and space heating could be itself drastically reduced through trivial measures like lowering thermostats and heating the spaces people actually live in. (Most don't bother to do these now, but in a collapse situation they will do that and more.)

Only a small fraction of fossil fuel energy actually goes into basic subsistence, and even that is used inefficiently. A 50 percent decline in fossil fuel energy could be readily adapted to form a subsistence perspective (if not financial one). Remember that in North America, 40 percent of all food is simply wasted. Of course, poverty and hunger have much more to do with power over people than with the kind of power measured in watts. Even now at the peak of energy consumption, a billion people go hungry. So if people are hungry or cold because of selective militant attacks on infrastructure, that will be a direct result of the actions of those in power, not of the resisters.

In fact, even if you want humans to be able to use factories to build windmills and use tractors to help grow food over the next fifty years, forcing an immediate cut in fossil fuel consumption should be at the top of your to-do list. Right now most of the energy is being wasted on plastic junk, too-big houses for rich people, bunker buster bombs, and predator drones. The only way to ensure there is some oil left for basic survival transitions in twenty years is to ensure that it isn't being squandered now. The US military is the single biggest oil user in the world. Do you want to have to tell kids twenty years from now that they don't have enough to eat because all the energy was spent on pointless neo-colonial wars?

Back to the scenario. In some areas, increasingly abandoned suburbs (unlivable without cheap gas) would be taken over, as empty houses would become farmhouses, community centers, and clinics, or

would be simply dismantled and salvaged for material. Garages would be turned into barns—most people couldn't afford gasoline anyway—and goats would be grazed in parks. Many roads would be torn up and returned to pasture or forest. These reclaimed settlements would not be high-tech. The wealthy enclaves may have their solar panels and electric windmills, but most unemployed people wouldn't be able to afford such things. In some cases these communities would become relatively autonomous. Their social practices and equality would vary based on the presence of people willing to assert human rights and social justice. People would have to resist vigorously whenever racism and xenophobia are used as excuses for injustice and authoritarianism.

Attacks on energy infrastructure would become more common as oil supplies diminish. In some cases, these attacks would be politically motivated, and in others they would be intended to tap electricity or pipelines for poor people. These attacks would steepen the energy slide initially. This would have significant economic impacts, but it would also turn the tide on population growth. The world population would peak sooner, and peak population would be smaller (by perhaps a billion) than it was in the "no resistance" scenario. Because a sharp collapse would happen earlier than it otherwise would have, there would be more intact land in the world per person, and more people who still know how to do subsistence farming.

The presence of an organized militant resistance movement would provoke a reaction from those in power. Some of them would use resistance as an excuse to seize more power to institute martial law or overt fascism. Some of them would make use of the economic and social crises rippling across the globe. Others wouldn't need an excuse.

Authoritarians would seize power where they could, and try to in almost every country. However, they would be hampered by above-ground and underground resistance, and by decentralization and the emergence of autonomous communities. In some countries, mass mobilizations would stop potential dictators. In others, the upsurge in resistance would dissolve centralized state rule, resulting in the emergence of regional confederations in some places and in warlords in others. In unlucky countries, authoritarianism would take power. The good news is that people would have resistance infrastructure in place

to fight and limit the spread of authoritarians, and authoritarians would have not developed as much technology of control as they did in the “no resistance” scenario.

There would still be refugees flooding out of many areas (including urban areas). The reduction in greenhouse gas emissions caused by attacks on industrial infrastructures would reduce or delay climate catastrophe. Networks of autonomous subsistence communities would be able to accept and integrate some of these people. In the same way that rooted plants can prevent a landslide on a steep slope, the cascades of refugees would be reduced in some areas by willing communities. In other areas, the numbers of refugees would be too much to cope with effectively.¹⁴

The development of biofuels (and the fate of tropical forests) is uncertain. Remaining centralized states—though they may be smaller and less powerful—would still want to squeeze out energy from wherever they could. Serious militant resistance—in many cases insurgency and guerilla warfare—would be required to stop industrialists from turning tropical forests into plantations or extracting coal at any cost. In this scenario, resistance would still be limited, and it is questionable whether that level of militancy would be effectively mustered.

This means that the long-term impacts of the greenhouse effect would be uncertain. Fossil fuel burning would have to be kept to an absolute minimum to avoid a runaway greenhouse effect. That could prove very difficult.

But if a runaway greenhouse effect could be avoided, many areas could be able to recover rapidly. A return to perennial polycultures, implemented by autonomous communities, could help reverse the greenhouse effect. The oceans would look better quickly, aided by a reduction in industrial fishing and the end of the synthetic fertilizer runoff that creates so many dead zones now.

The likelihood of nuclear war would be much lower than in the “no resistance” scenario. Refugee cascades in South Asia would be diminished. Overall resource consumption would be lower, so resource wars would be less likely to occur. And militaristic states would be weaker and fewer in number. Nuclear war wouldn’t be impossible, but if it did happen, it could be less severe.

There are many ways in which this scenario is appealing. But it has problems as well, both in implementation and in plausibility. One problem is with the integration of aboveground and underground action. Most aboveground environmental organizations are currently opposed to any kind of militancy. This could hamper the possibility of strategic cooperation between underground militants and aboveground groups that could mobilize greater numbers. (It would also doom our aboveground groups to failure as their record so far demonstrates.)

It's also questionable whether the cut in fossil fuel consumption described here would be sufficient to avoid runaway global warming. If runaway global warming does take place, all of the beneficial work of the abovegrounders would be wiped out. The converse problem is that a steeper decline in fossil fuel consumption would very possibly result in significant human casualties and deprivation. It's also possible that the mobilization of large numbers of people to subsistence farming in a short time is unrealistic. By the time most people are willing to take that step, it could be too late.

So while in some ways this scenario represents an ideal compromise—a win-win situation for humans and the planet—it could just as easily be a lose-lose situation without serious and timely action. That brings us to our last scenario, one of all-out resistance and attacks on infrastructure intended to guarantee the survival of a livable planet.

ALL-OUT ATTACKS ON INFRASTRUCTURE

In this final scenario, militant resistance would have one primary goal: to reduce fossil fuel consumption (and hence, all ecological damage) as immediately and rapidly as possible. A 90 percent reduction would be the ballpark target. For militants in this scenario, impacts on civilized humans would be secondary.

Here's their rationale in a nutshell: Humans aren't going to do anything in time to prevent the planet from being destroyed wholesale. Poor people are too preoccupied by primary emergencies, rich people benefit from the status quo, and the middle class (rich people by global standards) are too obsessed with their own entitlement and the technological spectacle to do anything. The risk of runaway global warming

is immediate. A drop in the human population is inevitable, and fewer people will die if collapse happens sooner.

Think of it like this. We know we are in overshoot as a species. That means that a significant portion of the people now alive may have to die before we are back under carrying capacity. And that disparity is growing by the day. Every day carrying capacity is driven down by hundreds of thousands of humans, and every day the human population increases by more than 200,000.¹⁵ The people added to the overshoot each day are needless, pointless deaths. *Delaying* collapse, they argue, is itself a form of mass murder.

Furthermore, they would argue, humans are only one species of millions. To kill millions of species for the benefit of one is insane, just as killing millions of people for the benefit of one person would be insane. And since unimpeded ecological collapse would kill off humans anyway, those species will ultimately have died for nothing, and the planet will take millions of years to recover. Therefore, those of us who care about the future of the planet have to dismantle the industrial energy infrastructure as rapidly as possible. We'll all have to deal with the social consequences as best we can. Besides, rapid collapse is ultimately good for humans—even if there is a partial die-off—because at least some people survive. And remember, the people who need the system to come down the most are the rural poor in the majority of the world: the faster the actionists can bring down industrial civilization, the better the prospects for those people and their landbases. Regardless, without immediate action, everyone dies.

In this scenario, well-organized underground militants would make coordinated attacks on energy infrastructure around the world. These would take whatever tactical form militants could muster—actions against pipelines, power lines, tankers, and refineries, perhaps using electromagnetic pulses (EMPs) to do damage. Unlike in the previous scenario, no attempt would be made to keep pace with aboveground activists. The attacks would be as persistent as the militants could manage. Fossil fuel energy availability would decline by 90 percent. Greenhouse gas emissions would plummet.

The industrial economy would come apart. Manufacturing and transportation would halt because of frequent blackouts and tremen-

dously high prices for fossil fuels. Some, perhaps most, governments would institute martial law and rationing. Governments that took an authoritarian route would be especially targeted by militant resisters. Other states would simply fail and fall apart.

In theory, with a 90 percent reduction in fossil fuel availability, there would still be enough to aid basic survival activities like growing food, heating, and cooking. Governments and civil institutions could still attempt a rapid shift to subsistence activities for their populations, but instead, militaries and the very wealthy would attempt to suck up virtually all remaining supplies of energy. In some places, they would succeed in doing so and widespread hunger would result. In others, people would refuse the authority of those in power. Most existing large-scale institutions would simply collapse, and it would be up to local people to either make a stand for human rights and a better way of life or give in to authoritarian power. The death rate would increase, but as we have seen in examples from Cuba and Russia, civic order can still hold despite the hardships.

What happens next would depend on a number of factors. If the attacks could persist and oil extraction were kept minimal for a prolonged period, industrial civilization would be unlikely to reorganize itself. Well-guarded industrial enclaves would remain, escorting fuel and resources under arms. If martial law succeeded in stopping attacks after the first few waves (something it has been unable to do in, for example, Nigeria), the effects would be uncertain. In the twentieth century, industrial societies have recovered from disasters, as Europe did after World War II. But this would be a different situation. For most areas, there would be no outside aid. Populations would no longer be able to outrun the overshoot currently concealed by fossil fuels. That does not mean the effects would be the same everywhere; rural and traditional populations would be better placed to cope.

In most areas, reorganizing an energy-intense industrial civilization would be impossible. Even where existing political organizations persist, consumption would drop. Those in power would be unable to project force over long distances, and would have to mostly limit their activities to nearby areas. This means that, for example, tropical bio-fuel plantations would not be feasible. The same goes for tar sands and

mountain-top removal coal mining. The construction of new large-scale infrastructure would simply not be possible.

Though the human population would decline, things would look good for virtually every other species. The oceans would begin to recover rapidly. The same goes for damaged wilderness areas. Because greenhouse emissions would have been reduced to a tiny fraction of their previous levels, runaway global warming would likely be averted. In fact, returning forests and grasslands would sequester carbon, helping to maintain a livable climate.

Nuclear war would be unlikely. Diminished populations and industrial activities would reduce competition between remaining states. Resource limitations would be largely logistical in nature, so escalating resource wars over supplies and resource-rich areas would be pointless.

This scenario, too, has its implementation and plausibility caveats. It guarantees a future for both the planet and the human species. This scenario would save trillions upon trillions upon trillions of living creatures. Yes, it would create hardship for the urban wealthy and poor, though most others would be better off immediately. It would be an understatement to call such a concept unpopular (although the militants in this scenario would argue that fewer people will die than in the case of runaway global warming or business as usual).

There is also the question of plausibility. Could enough ecologically motivated militants mobilize to enact this scenario? No doubt for many people the second, more moderate scenario seems both more appealing and more likely.

There is of course an infinitude of possible futures we could describe. We will describe one more possible future, a combination of the previous two, in which a resistance movement embarks on a strategy of Decisive Ecological Warfare.

DECISIVE ECOLOGICAL WARFARE STRATEGY

Goals

The ultimate goal of the primary resistance movement in this scenario is simply a living planet—a planet not just living, but in recovery, growing more alive and more diverse year after year. A planet on which

humans live in equitable and sustainable communities without exploiting the planet or each other.

Given our current state of emergency, this translates into a more immediate goal, which is at the heart of this movement's grand strategy:

Goal 1: To disrupt and dismantle industrial civilization; to thereby remove the ability of the powerful to exploit the marginalized and destroy the planet.

This movement's second goal both depends on and assists the first:

Goal 2: To defend and rebuild just, sustainable, and autonomous human communities, and, as part of that, to assist in the recovery of the land.

To accomplish these goals requires several broad strategies involving large numbers of people in many different organizations, both above-ground and underground. The primary strategies needed in this theoretical scenario include the following:

Strategy A: Engage in direct militant actions against industrial infrastructure, especially energy infrastructure.

Strategy B: Aid and participate in ongoing social and ecological justice struggles; promote equality and undermine exploitation by those in power.

Strategy C: Defend the land and prevent the expansion of industrial logging, mining, construction, and so on, such that more intact land and species will remain when civilization does collapse.

Strategy D: Build and mobilize resistance organizations that will support the above activities, including decentralized training, recruitment, logistical support, and so on.

Strategy E: Rebuild a sustainable subsistence base for human

societies (including perennial polycultures for food) and localized, democratic communities that uphold human rights.

In describing this alternate future scenario, we should be clear about some shorthand phrases like “actions against industrial infrastructure.” Not all infrastructure is created equal, and not all actions against infrastructure are of equal priority, efficacy, or moral acceptability to the resistance movements in this scenario. As Derrick wrote in *Endgame*, you can’t make a moral argument for blowing up a children’s hospital. On the other hand, you can’t make a moral argument against taking out cell phone towers. Some infrastructure is easy, some is hard, and some is harder.

On the same theme, there are many different mechanisms driving collapse, and they are not all equal or equally desirable. In the Decisive Ecological Warfare scenario, some of the mechanisms are intentionally accelerated and encouraged, while others are slowed or reduced. For example, energy decline by decreasing consumption of fossil fuels is a mechanism of collapse highly beneficial to the planet and (especially in the medium to long term) humans, and that mechanism is encouraged. On the other hand, ecological collapse through habitat destruction and biodiversity crash is also a mechanism of collapse (albeit one that takes longer to affect humans), and that kind of collapse is slowed or stopped whenever and wherever possible.

Collapse, in the most general terms, is a rapid loss of complexity.¹⁶ It is a shift toward smaller and more decentralized structures—social, political, economic—with less social stratification, regulation, behavioral control and regimentation, and so on.¹⁷ Major mechanisms of collapse include (in no particular order):

- *Energy decline* as fossil fuel extraction peaks, and a growing, industrializing population drives down per capita availability.
- *Industrial collapse* as global economies of scale are ruined by increasing transport and manufacturing costs, and by economic decline.
- *Economic collapse* as global corporate capitalism is unable to maintain growth and basic operations.

- *Climate change* causing ecological collapse, agricultural failure, hunger, refugees, disease, and so on.
- *Ecological collapse* of many different kinds driven by resource extraction, destruction of habitat, crashing biodiversity, and climate change.
- *Disease*, including epidemics and pandemics, caused by crowded living conditions and poverty, along with bacteria diseases increasingly resistant to antibiotics.
- *Food crises* caused by the displacement of subsistence farmers and destruction of local food systems, competition for grains by factory farms and biofuels, poverty, and physical limits to food production because of drawdown.
- *Drawdown* as the accelerating consumption of finite supplies of water, soil, and oil leads to rapid exhaustion of accessible supplies.
- *Political collapse* as large political entities break into smaller groups, secessionists break away from larger states, and some states go bankrupt or simply fail.
- *Social collapse* as resource shortages and political upheaval break large, artificial group identities into smaller ones (sometimes based along class, ethnic, or regional affinities), often with competition between those groups.
- *War and armed conflict*, especially resource wars over remaining supplies of finite resources and internal conflicts between warlords and rival factions.
- *Crime and exploitation* caused by poverty and inequality, especially in crowded urban areas.
- *Refugee displacement* resulting from spontaneous disasters like earthquakes and hurricanes, but worsened by climate change, food shortages, and so on.

In this scenario, each negative aspect of the collapse of civilization has a reciprocal trend that the resistance movement encourages. The collapse of large authoritarian political structures has a countertrend of emerging small-scale participatory political structures. The collapse of global industrial capitalism has a countertrend of local systems of

exchange, cooperation, and mutual aid. And so on. Generally speaking, in this alternate future, a small number of underground people bring down the big bad structures, and a large number of aboveground people cultivate the little good structures.

In his book *The Collapse of Complex Societies*, Joseph Tainter argues that a major mechanism for collapse has to do with societal complexity. Complexity is a general term that includes the number of different jobs or roles in society (e.g., not just healers but epidemiologists, trauma surgeons, gerontologists, etc.), the size and complexity of political structures (e.g., not just popular assemblies but vast sprawling bureaucracies), the number and complexity of manufactured items and technology (e.g., not just spears, but many different calibers and types of bullets), and so on. Civilizations tend to try to use complexity to address problems, and as a result their complexity increases over time.

But complexity has a cost. The decline of a civilization begins when the costs of complexity begin to exceed the benefits—in other words, when increased complexity begins to offer declining returns. At that point, individual people, families, communities, and political and social subunits have a disincentive to participate in that civilization. The complexity keeps increasing, yes, but it keeps getting more expensive. Eventually the ballooning costs force that civilization to collapse, and people fall back on smaller and more local political organizations and social groups.

Part of the job of the resistance movement is to increase the cost and decrease the returns of empire-scale complexity. This doesn't require instantaneous collapse or global dramatic actions. Even small actions can increase the cost of complexity and accelerate the good parts of collapse while tempering the bad.

Part of Tainter's argument is that modern society won't collapse in the same way as old societies, because complexity (through, for example, large-scale agriculture and fossil fuel extraction) has become the physical underpinning of human life rather than a side benefit. Many historical societies collapsed when people returned to villages and less complex traditional life. They chose to do this. Modern people won't do that, at least not on a large scale, in part because the villages are gone, and traditional ways of life are no longer directly accessible

to them. This means that people in modern civilization are in a bind, and many will continue to struggle for industrial civilization even when continuing it is obviously counterproductive. Under a Decisive Ecological Warfare scenario, aboveground activists facilitate this aspect of collapse by developing alternatives that will ease the pressure and encourage people to leave industrial capitalism by choice.



There's something admirable about the concept of protracted popular warfare that was used in China and Vietnam. It's an elegant idea, if war can ever be described in such terms; the core idea is adaptable and applicable even in the face of major setbacks and twists of fate.

But protracted popular warfare as such doesn't apply to the particular future we are discussing. The people in that scenario will never have the numbers that protracted popular warfare requires. But they will also face a different kind of adversary, for which different tactics are applicable. So they will take the essential idea of protracted popular warfare and apply it to their own situation—that of needing to save their planet, to bring down industrial civilization and keep it down. And they will devise a new grand strategy based on a simple continuum of steps that flow logically one after the other.

In this alternate future scenario, Decisive Ecological Warfare has four phases that progress from the near future through the fall of industrial civilization. The first phase is *Networking & Mobilization*. The second phase is *Sabotage & Asymmetric Action*. The third phase is *Systems Disruption*. And the fourth and final phase is *Decisive Dismantling of Infrastructure*.

Each phase has its own objectives, operational approaches, and organizational requirements. There's no distinct dividing line between the phases, and different regions progress through the phases at different times. These phases emphasize the role of militant resistance networks. The aboveground building of alternatives and revitalization of human communities happen at the same time. But this does not require the same strategic rigor; rebuilding healthy human communities with a subsistence base must simply happen as fast as possible, everywhere, with timetables

and methods suited to the region. This scenario's militant resisters, on the other hand, need to share some grand strategy to succeed.

PHASE I: NETWORKING & MOBILIZATION

Preamble: In phase one, resisters focus on organizing themselves into networks and building cultures of resistance to sustain those networks. Many sympathizers or potential recruits are unfamiliar with serious resistance strategy and action, so efforts are taken to spread that information. But key in this phase is actually forming the above- and underground organizations (or at least nuclei) that will carry out organizational recruitment and decisive action. Security culture and resistance culture are not very well developed at this point, so extra efforts are made to avoid sloppy mistakes that would lead to arrests, and to dissuade informers from gathering or passing on information.

Training of activists is key in this phase, especially through low-risk (but effective) actions. New recruits will become the combatants, cadres, and leaders of later phases. New activists are enculturated into the resistance ethos, and existing activists drop bad or counterproductive habits. This is a time when the resistance movement gets organized and gets serious. People are putting their individual needs and conflicts aside in order to form a movement that can fight to win.

In this phase, isolated people come together to form a vision and strategy for the future, and to establish the nuclei of future organizations. Of course, networking occurs with resistance-oriented organizations that already exist, but most mainstream organizations are not willing to adopt positions of militancy or intransigence with regard to those in power or the crises they face. If possible, they should be encouraged to take positions more in line with the scale of the problems at hand.

This phase is already underway, but a great deal of work remains to be done.

Objectives:

- To build a culture of resistance, with all that entails.
- To build aboveground and underground resistance networks, and to ensure the survival of those networks.

Operations:

- Operations are generally lower-risk actions, so that people can be trained and screened, and support networks put in place. These will fall primarily into the sustaining and shaping categories.
- Maximal recruitment and training is very important at this point. The earlier people are recruited, the more likely they are to be trustworthy and the longer time is available to screen them for their competency for more serious action.
- Communications and propaganda operations are also required for outreach and to spread information about useful tactics and strategies, and on the necessity for organized action.

Organization:

- Most resistance organizations in this scenario are still diffuse networks, but they begin to extend and coalesce. This phase aims to build organization.

PHASE II: SABOTAGE & ASYMMETRIC ACTION

Preamble: In this phase, the resisters might attempt to disrupt or disable particular targets on an opportunistic basis. For the most part, the required underground networks and skills do not yet exist to take on multiple larger targets. Resisters may go after particularly egregious targets—coal-fired power plants or exploitative banks. At this phase, the resistance focus is on practice, probing enemy networks and security, and increasing support while building organizational networks. In this possible future, underground cells do not attempt to provoke overwhelming repression beyond the ability of what their nascent networks can cope with. Furthermore, when serious repression and setbacks do occur, they retreat toward the earlier phase with its emphasis on organization and survival. Indeed, major setbacks probably do happen at this phase, indicating a lack of basic rules and structure and signaling the need to fall back on some of the priorities of the first phase.

The resistance movement in this scenario understands the impor-

tance of decisive action. Their emphasis in the first two phases has not been on direct action, but not because they are holding back. It's because they are working as well as they damned well can, but doing so while putting one foot in front of the other. They know that the planet (and the future) need their action, but understand that it won't benefit from foolish and hasty action, or from creating problems for which they are not yet prepared. That only leads to a morale whiplash and disappointment. So their movement acts as seriously and swiftly and decisively as it can, but makes sure that it lays the foundation it needs to be truly effective.

The more people join that movement, the harder they work, and the more driven they are, the faster they can progress from one phase to the next.

In this alternate future, aboveground activists in particular take on several important tasks. They push for acceptance and normalization of more militant and radical tactics where appropriate. They vocally support sabotage when it occurs. More moderate advocacy groups use the occurrence of sabotage to criticize those in power for failing to take action on critical issues like climate change (rather than criticizing the saboteurs). They argue that sabotage would not be necessary if civil society would make a reasonable response to social and ecological problems, and use the opportunity and publicity to push solutions to the problems. They do not side with those in power against the saboteurs, but argue that the situation is serious enough to make such action legitimate, even though they have personally chosen a different course.

At this point in the scenario, more radical and grassroots groups continue to establish a community of resistance, but also establish discrete organizations and parallel institutions. These institutions establish themselves and their legitimacy, make community connections, and particularly take steps to found relationships outside of the traditional "activist bubble." These institutions also focus on emergency and disaster preparedness, and helping people cope with impending collapse.

Simultaneously, aboveground activists organize people for civil disobedience, mass confrontation, and other forms of direct action where appropriate.

Something else begins to happen: aboveground organizations establish coalitions, confederations, and regional networks, knowing that there will be greater obstacles to these later on. These confederations maximize the potential of aboveground organizing by sharing materials, knowledge, skills, learning curricula, and so on. They also plan strategically themselves, engaging in persistent planned campaigns instead of reactive or crisis-to-crisis organizing.

Objectives:

- Identify and engage high-priority individual targets. These targets are chosen by these resisters because they are especially attainable or for other reasons of target selection.
- Give training and real-world experience to cadres necessary to take on bigger targets and systems. Even decisive actions are limited in scope and impact at this phase, although good target selection and timing allows for significant gains.
- These operations also expose weak points in the system, demonstrate the feasibility of material resistance, and inspire other resisters.
- Publically establish the rationale for material resistance and confrontation with power.
- Establish concrete aboveground organizations and parallel institutions.

Operations:

- Limited but increasing decisive operations, combined with growing sustaining operations (to support larger and more logistically demanding organizations) and continued shaping operations.
- In decisive and supporting operations, these hypothetical resisters are cautious and smart. New and unseasoned cadres have a tendency to be overconfident, so to compensate they pick only operations with certain outcomes; they know that in this stage they are still building toward the bigger actions that are yet to come.

Organization:

- Requires underground cells, but benefits from larger underground networks. There is still an emphasis on recruitment at this point. Aboveground networks and movements are proliferating as much as they can, especially since the work to come requires significant lead time for developing skills, communities, and so on.

PHASE III: SYSTEMS DISRUPTION

Preamble: In this phase resisters step up from individual targets to address entire industrial, political, and economic systems. Industrial systems disruption requires underground networks organized in a hierarchal or paramilitary fashion. These larger networks emerge out of the previous phases with the ability to carry out multiple simultaneous actions.

Systems disruption is aimed at identifying key points and bottlenecks in the adversary's systems (electrical, transport, financial, and so on) and engaging them to collapse those systems or reduce their functionality. This is not a one-shot deal. Industrial systems are big and can be fragile, but they are sprawling rather than monolithic. Repairs are attempted. The resistance members understand that. Effective systems disruption requires planning for continued and coordinated actions over time.

In this scenario, the aboveground doesn't truly gain traction as long as there is business as usual. On the other hand, as global industrial and economic systems are increasingly disrupted (because of capitalist-induced economic collapse, global climate disasters, peak oil, peak soil, peak water, or for other reasons) support for resilient local communities increases. Failures in the delivery of electricity and manufactured goods increases interest in local food, energy, and the like. These disruptions also make it easier for people to cope with full collapse in the long term—short-term loss, long-term gain, even where humans are concerned.

Dimitry Orlov, a major analyst of the Soviet collapse, explains that the dysfunctional nature of the Soviet system prepared people for its

eventual disintegration. In contrast, a smoothly functioning industrial economy causes a false sense of security so that people are unprepared, worsening the impact. "After collapse, you regret not having an unreliable retail segment, with shortages and long bread lines, because then people would have been forced to learn to shift for themselves instead of standing around waiting for somebody to come and feed them."¹⁸

Aboveground organizations and institutions are well-established by this phase of this alternate scenario. They continue to push for reforms, focusing on the urgent need for justice, relocalization, and resilient communities, given that the dominant system is unfair, unreliable, and unstable.

Of course, in this scenario the militant actions that impact daily life provoke a backlash, sometimes from parts of the public, but especially from authoritarians on every level. The aboveground activists are the frontline fighters against authoritarianism. They are the only ones who can mobilize the popular groundswell needed to prevent fascism.

Furthermore, aboveground activists use the disrupted systems as an opportunity to strengthen local communities and parallel institutions. Mainstream people are encouraged to swing their support to participatory local alternatives in the economic, political, and social spheres. When economic turmoil causes unemployment and hyperinflation, people are employed locally for the benefit of their community and the land. In this scenario, as national governments around the world increasingly struggle with crises (like peak oil, food shortages, climate chaos, and so on) and increasingly fail to provide for people, local and directly democratic councils begin to take over administration of basic and emergency services, and people redirect their taxes to those local entities (perhaps as part of a campaign of general noncooperation against those in power). This happens in conjunction with the community emergency response and disaster preparedness measures already undertaken.

In this scenario, whenever those in power try to increase exploitation or authoritarianism, aboveground resisters call for people to withdraw support from those in power, and divert it to local, democratic political bodies. Those parallel institutions can do a better job than those in power. The cross demographic relationships established in pre-

vious phases help to keep those local political structures accountable, and to rally support from many communities.

Throughout this phase, strategic efforts are made to augment existing stresses on economic and industrial systems caused by peak oil, financial instability, and related factors. The resisters think of themselves as pushing on a rickety building that's already starting to lean. Indeed, in this scenario many systems disruptions come from within the system itself, rather than from resisters.

This phase accomplishes significant and decisive gains. Even if the main industrial and economic systems have not completely collapsed, prolonged disruption means a reduction in ecological impact; great news for the planet, and for humanity's future survival. Even a 50 percent decrease in industrial consumption or greenhouse gas emissions is a massive victory (especially considering that emissions have continued to rise in the face of all environmental activism so far), and that buys resisters—and everyone else—some time.

In the most optimistic parts of this hypothetical scenario, effective resistance induces those in power to negotiate or offer concessions. Once the resistance movement demonstrates the ability to use real strategy and force, it can't be ignored. Those in power begin to knock down the doors of mainstream activists, begging to negotiate changes that would co-opt the resistance movements' cause and reduce further actions.

In this version of the future, however, resistance groups truly begin to take the initiative. They understand that for most of the history of civilization, those in power have retained the initiative, forcing resistance groups or colonized people to stay on the defensive, to respond to attacks, to be constantly kept off balance. However, peak oil and systems disruption has caused a series of emergencies for those in power; some caused by organized resistance groups, some caused by civil unrest and shortages, and some caused by the social and ecological consequences of centuries—millennia—of exploitation. For perhaps the first time in history, those in power are globally off balance and occupied by worsening crisis after crisis. This provides a key opportunity for resistance groups, and autonomous cultures and communities, to seize and retain the initiative.

Objectives:

- Target key points of specific industrial and economic systems to disrupt and disable them.
- Effect a measurable decrease in industrial activity and industrial consumption.
- Enable concessions, negotiations, or social changes if applicable.
- Induce the collapse of particular companies, industries, or economic systems.

Operations:

- Mostly decisive and sustaining, but shaping where necessary for systems disruption. Cadres and combatants should be increasingly seasoned at this point, but the onset of decisive and serious action will mean a high attrition rate for resisters. There's no point in being vague; the members of the resistance in this alternate future who are committed to militant resistance go in expecting that they will either end up dead or in jail. They know that anything better than that was a gift to be won through skill and luck.

Organization:

- Heavy use of underground networks required; operational coordination is a prerequisite for effective systems disruption.
- Recruitment is ongoing at this point; especially to recruit auxiliaries and to cope with losses due to attrition. However, during this phase there are multiple serious attempts at infiltration. The infiltrations are not as successful as they might have been, because underground networks have recruited heavily in previous stages (before large-scale action) to ensure the presence of a trusted group of leaders and cadres who form the backbone of the networks.
- Aboveground organizations are able to mobilize extensively because of various social, political, and material crises.
- At this point, militant resisters become concerned about backlash from people who *should* be on their side, such as

many liberals, especially as those in power put pressure on aboveground activists.

PHASE IV: DECISIVE DISMANTLING OF INFRASTRUCTURE

Preamble: Decisive dismantling of infrastructure goes a step beyond systems disruption. The intent is to permanently dismantle as much of the fossil fuel-based industrial infrastructure as possible. This phase is the last resort; in the most optimistic projection, it would not be necessary: converging crises and infrastructure disruption would combine with vigorous aboveground movements to force those in power to accept social, political, and economic change; reductions in consumption would combine with a genuine and sincere attempt to transition to a sustainable culture.

But this optimistic projection is not probable. It is more likely that those in power (and many everyday people) will cling more to civilization even as it collapses. And likely, they will support authoritarianism if they think it will maintain their privilege and their entitlement.

The key issue—which we’ve come back to again and again—is time. We will soon reach (if we haven’t already reached) the trigger point of irreversible runaway global warming. The systems disruption phase of this hypothetical scenario offers selectivity. Disruptions in this scenario are engineered in a way that shifts the impact toward industry and attempts to minimize impacts on civilians. But industrial systems are heavily integrated with civilian infrastructure. If selective disruption doesn’t work soon enough, some resisters may conclude that all-out disruption is required to stop the planet from burning to a cinder.

The difference between phases III and IV of this scenario may appear subtle, since they both involve, on an operational level, coordinated actions to disrupt industrial systems on a large scale. But phase III requires some time to work—to weaken the system, to mobilize people and organizations, to build on a series of disruptive actions. Phase III also gives “fair warning” for regular people to prepare. Furthermore, phase III gives time for the resistance to develop itself logistically and organizationally, which is required to proceed to phase IV. The difference between the two phases is capacity and restraint. For resisters in

this scenario to proceed from phase III to phase IV, they need two things: the organizational capacity to take on the scope of action required under phase IV, and the certainty that there is no longer any point in waiting for societal reforms to succeed on their own timetable.

In this scenario, both of those phases save lives, human and non-human alike. But if large-scale aboveground mobilization does not happen once collapse is underway, phase IV becomes the most effective way to save lives.

Imagine that you are riding in a streetcar through a city crowded with pedestrians. Inside the streetcar are the civilized humans, and outside is all the nonhuman life on the planet, and the humans who are not civilized, or who do not benefit from civilization, or who have yet to be born. Needless to say, those outside far outnumber the few of you inside the streetcar. But the driver of the streetcar is in a hurry, and is accelerating as fast as he can, plowing through the crowds, maiming and killing pedestrians en masse. Most of your fellow passengers don't seem to particularly care; they've got somewhere to go, and they're glad to be making progress regardless of the cost.

Some of the passengers seem upset by the situation. If the driver keeps accelerating, they observe, it's possible that the streetcar will crash and the passengers will be injured. Not to worry, one man tells them. His calculations show that the bodies piling up in front of the streetcar will eventually slow the vehicle and cause it to safely come to a halt. Any intervention by the passengers would be reckless, and would surely provoke a reprimand from the driver. Worse, a troublesome passenger might be kicked off the streetcar and later run over by it.

You, unlike most passengers, are more concerned by the constant carnage outside than by the future safety of the streetcar passengers. And you know you have to do something. You could try to jump out the window and escape, but then the streetcar would plow on through the crowd, and you would lose any chance to intervene. So you decide to try to sabotage the streetcar from the inside, to cut the electrical wires, or pull up the flooring and activate the brakes by hand, or derail it, or do whatever you can.

As soon as the other passengers realize what you are doing, they'll try to stop you, and maybe kill you. You have to decide whether you are

going to stop the streetcar slowly or speedily. The streetcar is racing along so quickly now that if you stop it suddenly, it may fling the passengers against the seats in front of them or down the aisle. It may kill some of them. But if you stop it slowly, who knows how many innocent people will be struck by the streetcar while it is decelerating? And if you just slow it down, the driver may be able to repair the damage and get the streetcar going again.

So what do you do? If you choose to stop the streetcar as quickly as possible, then you have made the same choice as those who would implement phase IV. You've made the decision that stopping the destruction as rapidly as possible is more important than any particular program of reform. Of course, even in stopping the destruction as rapidly as possible, you can still take measures to reduce casualties on board the streetcar. You can tell people to sit down or buckle up or brace themselves for impact. Whether they will listen to you is another story, but that's their responsibility, not yours.

It's important to not misinterpret the point of phase IV of this alternate future scenario. The point is *not* to cause human casualties. The point is to stop the destruction of the planet. The enemy is not the civilian population—or any population at all—but a sociopathological sociopolitical and economic *system*. Ecological destruction on this planet is primarily caused by industry and capitalism; the issue of population is tertiary at best. The point of collapsing industrial infrastructure in this scenario is not to harm humans any more than the point of stopping the streetcar is to harm the passengers. The point is to reduce the damage as quickly as possible, and in doing so to account for the harm the dominant culture is doing to *all* living creatures, past and future.

This is not an easy phase for the abovegrounders. Part of their job in this scenario is also to help demolish infrastructure, but they are mostly demolishing exploitative political and economic infrastructure, not physical infrastructure. In general, they continue to do what they did in the previous phase, but on a larger scale and for the long term. Public support is directed to local, democratic, and just political and economic systems. Efforts are undertaken to deal with emergencies and cope with the nastier parts of collapse.

Objectives:

- Dismantle the critical physical infrastructure required for industrial civilization to function.
- Induce widespread industrial collapse, beyond any economic or political systems.
- Use continuing and coordinated actions to hamper repairs and replacement.

Operations:

- Focus almost exclusively on decisive and sustaining operations.

Organization:

- Requires well-developed militant underground networks.

IMPLEMENTING DECISIVE ECOLOGICAL WARFARE

It's important to note that, as in the case of protracted popular warfare, Decisive Ecological Warfare is not necessarily a linear progression. In this scenario resisters fall back on previous phases as necessary. After major setbacks, resistance organizations focus on survival and networking as they regroup and prepare for more serious action. Also, resistance movements progress through each of the phases, and then recede in reverse order. That is, if global industrial infrastructure has been successfully disrupted or fragmented (phase IV) resisters return to systems disruption on a local or regional scale (phase III). And if that is successful, resisters move back down to phase II, focusing their efforts on the worst remaining targets.

And provided that humans don't go extinct, even this scenario will require some people to stay at phase I indefinitely, maintaining a culture of resistance and passing on the basic knowledge and skills necessary to fight back for centuries and millennia.

The progression of Decisive Ecological Warfare could be compared to ecological succession. A few months ago I visited an abandoned quarry, where the topsoil and several layers of bedrock had been stripped and blasted away, leaving a cubic cavity several stories deep in

the limestone. But a little bit of gravel or dust had piled up in one corner, and some mosses had taken hold. The mosses were small, but they required very little in the way of water or nutrients (like many of the shoestring affinity groups I've worked with). Once the mosses had grown for a few seasons, they retained enough soil for grasses to grow.

Quick to establish, hardy grasses are often among the first species to reinhabit any disturbed land. In much the same way, early resistance organizations are generalists, not specialists. They are robust and rapidly spread and reproduce, either spreading their seeds aboveground or creating underground networks of rhizomes.

The grasses at the quarry built the soil quickly, and soon there was soil for wildflowers and more complex organisms. In much the same way, large numbers of simple resistance organizations help to establish communities of resistance, cultures of resistance, that can give rise to more complex and more effective resistance organizations.



The hypothetical actionists who put this strategy into place are able to intelligently move from one phase to the next: identifying when the correct elements are in place, when resistance networks are sufficiently mobilized and trained, and when external pressures dictate change. In the US Army's field manual on operations, General Eric Shinseki argues that the rules of strategy "require commanders to master transitions, to be adaptive. Transitions—deployments, the interval between initial operation and sequels, consolidation on the objective, forward passage of lines—sap operational momentum. Mastering transitions is the key to maintaining momentum and winning decisively."

This is particularly difficult to do when resistance does not have a central command. In this scenario, there is no central means of dispersing operational or tactical orders, or effectively gathering precise information about resistance forces and allies. Shinseki continues: "This places a high premium on readiness—well trained Soldiers; adaptive leaders who understand our doctrine; and versatile, agile, and lethal formations." People resisting civilization in this scenario are not concerned with "lethality" so much as effectiveness, but the general point stands.

Resistance to civilization is inherently decentralized. That goes double for underground groups which have minimal contact with others. To compensate for the lack of command structure, a general grand strategy in this scenario becomes widely known and accepted. Furthermore, loosely allied groups are ready to take action whenever the strategic situation called for it. These groups are prepared to take advantage of crises like economic collapses.

Under this alternate scenario, underground organizing in small cells has major implications for applying the principles of war. The ideal entity for taking on industrial civilization would have been a large, hierarchical paramilitary network. Such a network could have engaged in the training, discipline, and coordinated action required to implement decisive militant action on a continental scale. However, for practical reasons, a single such network never arises. Similar arrangements in the history of resistance struggle, such as the IRA or various territory-controlling insurgent groups, happened in the absence of the modern surveillance state and in the presence of a well-developed culture of resistance and extensive opposition to the occupier.

Although underground cells can still form out of trusted peers along kinship lines, larger paramilitary networks are more difficult to form in a contemporary anticivilization context. First of all, the proportion of potential recruits in the general population is smaller than in any anticolonial or antioccupation resistance movements in history. So it takes longer and is more difficult to expand existing underground networks. The option used by some resistance groups in Occupied France was to ally and connect existing cells. But this is inherently difficult and dangerous. Any underground group with proper cover would be invisible to another group looking for allies (there are plenty of stories from the end of the war of resisters living across the hall, from each other without having realized each other's affiliation). And in a panopticon, exposing yourself to unproven allies is a risky undertaking.

A more plausible underground arrangement in this scenario is for there to have been a composite of organizations of different sizes, a few larger networks with a number of smaller autonomous cells that aren't directly connected through command lines. There are indirect connections or communications via cutouts, but those methods are rarely

consistent or reliable enough to permit coordinated simultaneous actions on short notice.

Individual cells rarely have the numbers or logistics to engage in multiple simultaneous actions at different locations. That job falls to the paramilitary groups, with cells in multiple locations, who have the command structure and the discipline to properly carry out network disruption. However, autonomous cells maintain readiness to engage in opportunistic action by identifying in advance a selection of appropriate local targets and tactics. Then once a larger simultaneous action happened (causing, say, a blackout), autonomous cells take advantage of the opportunity to undertake their own actions, within a few hours. In this way unrelated cells engage in something close to simultaneous attacks, maximizing their effectiveness. Of course, if decentralized groups frequently stage attacks in the wake of larger “trigger actions,” the corporate media may stop broadcasting news of attacks to avoid triggering more. So, such an approach has its limits, although large-scale effects like national blackouts can’t be suppressed in the news (and in systems disruption, it doesn’t really matter what caused a blackout in the first place, because it’s still an opportunity for further action).



When we look at some struggle or war in history, we have the benefit of hindsight to identify flaws and successes. This is how we judge strategic decisions made in World War II, for example, or any of those who have tried (or not) to intervene in historical holocausts. Perhaps it would be beneficial to imagine some historians in the distant future—assuming humanity survives—looking back on the alternate future just described. Assuming it was generally successful, how might they analyze its strengths and weaknesses?

For these historians, phase IV is controversial, and they know it had been controversial among resisters at the time. Even resisters who agreed with militant actions against industrial infrastructure hesitated when contemplating actions with possible civilian consequences. That comes as no surprise, because members of this resistance were driven

by a deep respect and care for all life. The problem is, of course, that members of this group knew that if they failed to stop this culture from killing the planet, there would be far more gruesome civilian consequences.

A related moral conundrum confronted the Allies early in World War II, as discussed by Eric Markusen and David Kopf in their book *The Holocaust and Strategic Bombing: Genocide and Total War in the Twentieth Century*. Markusen and Kopf write that: “At the beginning of World War II, British bombing policy was rigorously discriminating—even to the point of putting British aircrews at great risk. Only obvious military targets removed from population centers were attacked, and bomber crews were instructed to jettison their bombs over water when weather conditions made target identification questionable. Several factors were cited to explain this policy, including a desire to avoid provoking Germany into retaliating against non-military targets in Britain with its then numerically superior air force.”¹⁹

Other factors included concerns about public support, moral considerations in avoiding civilian casualties, the practice of the “Phoney War” (a declared war on Germany with little real combat), and a small air force which required time to build up. The parallels between the actions of the British bombers and the actions of leftist militants from the Weather Underground to the ELF are obvious.

The problem with this British policy was that it simply didn’t work. Germany showed no such moral restraint, and British bombing crews were taking greater risks to attack less valuable targets. By February of 1942, bombing policy changed substantially. In fact, Bomber Command began to deliberately target enemy civilians and civilian morale—particularly that of industrial workers—especially by destroying homes around target factories in order to “dehouse” workers. British strategists believed that in doing so they could sap Germany’s will to fight. In fact, some of the attacks on civilians were intended to “punish” the German populace for supporting Hitler, and some strategists believed that, after sufficient punishment, the population would rise up and depose Hitler to save themselves. Of course, this did not work; it almost never does.

So, this was one of the dilemmas faced by resistance members in

this alternate future scenario: while the resistance abhorred the notion of actions affecting civilians—even more than the British did in early World War II—it was clear to them that in an industrial nation the “civilians” and the state are so deeply enmeshed that any impact on one will have some impact on the other.

Historians now believe that Allied reluctance to attack early in the war may have cost many millions of civilian lives. By failing to stop Germany early, they made a prolonged and bloody conflict inevitable. General Alfred Jodl, the German Chief of the Operations Staff of the Armed Forces High Command, said as much during his war crimes trial at Nuremberg: “[I]f we did not collapse already in the year 1939 that was due only to the fact that during the Polish campaign, the approximately 110 French and British divisions in the West were held completely inactive against the 23 German divisions.”²⁰

Many military strategists have warned against piecemeal or half measures when only total war will do the job. In his book *Grand Strategy: Principles and Practices*, John M. Collins argues that timid attacks may strengthen the resolve of the enemy, because they constitute a provocation but don’t significantly damage the physical capability or morale of the occupier. “Destroying the enemy’s resolution to resist is far more important than crippling his material capabilities . . . studies of cause and effect tend to confirm that violence short of total devastation may *amplify* rather than erode a people’s determination.”²¹ Consider, though, that in this 1973 book Collins may underestimate the importance of technological infrastructure and decisive strikes on them. (He advises elsewhere in the book that computers “are of limited utility.”²²)

Other strategists have prioritized the material destruction over the adversary’s “will to fight.” Robert Anthony Pape discusses the issue in *Bombing to Win*, in which he analyzes the effectiveness of strategic bombing in various wars. We can wonder in this alternate future scenario if the resisters attended to Pape’s analysis as they weighed the benefits of phase III (selective actions against particular networks and systems) vs. phase IV (attempting to destroy as much of the industrial infrastructure as possible).

Specifically, Pape argues that targeting an entire economy may be more effective than simply going after individual factories or facilities:

Strategic interdiction can undermine attrition strategies, either by attacking weapons plants or by smashing the industrial base as a whole, which in turn reduces military production. Of the two, attacking weapons plants is the less effective. Given the substitution capacities of modern industrial economies, “war” production is highly fungible over a period of months. Production can be maintained in the short term by running down stockpiles and in the medium term by conservation and substitution of alternative materials or processes. In addition to economic adjustment, states can often make doctrinal adjustments.²³

This analysis is poignant, but it also demonstrates a way in which the goals of this alternate scenario’s strategy differed from the goals of strategic bombing in historical conflicts. In the Allied bombing campaign (and in other wars where strategic bombing was used), the strategic bombing coincided with conventional ground, air, and naval battles. Bombing strategists were most concerned with choking off enemy supplies to the battlefield. Strategic bombing alone was not meant to win the war; it was meant to support conventional forces in battle. In contrast, in this alternate future, a significant decrease in industrial production would itself be a great success.

The hypothetical future historians perhaps ask, “Why not simply go after the worst factories, the worst industries, and leave the rest of the economy alone?” Earlier stages of Decisive Ecological Warfare did involve targeting particular factories or industries. However, the resisters knew that the modern industrial economy was so thoroughly integrated that anything short of general economic disruption was unlikely to have lasting effect.

This, too, is shown by historical attempts to disrupt economies. Pape continues, “Even when production of an important weapon system is seriously undermined, tactical and operational adjustments may allow other weapon systems to substitute for it. . . . As a result, efforts to remove the critical component in war production generally fail.” For example, Pape explains, the Allies carried out a bombing campaign on German aircraft engine plants. But this was not a decisive factor in the struggle for air superiority. Mostly, the Allies defeated

the *Luftwaffe* because they shot down and killed so many of Germany's best pilots.

Another example of compensation is the Allied bombing of German ball bearing plants. The Allies were able to reduce the German production of ball bearings by about 70 percent. But this did not force a corresponding decrease in German tank forces. The Germans were able to compensate in part by designing equipment that required fewer bearings. They also increased their production of infantry antitank weapons. Early in the war, Germany was able to compensate for the destruction of factories in part because many factories were running only one shift. They were not using their existing industrial capacity to its fullest. By switching to double or triple shifts, they were able to (temporarily) maintain production.

Hence, Pape argues that war economies have no particular point of collapse when faced with increasing attacks, but can adjust incrementally to decreasing supplies. "Modern war economies are not brittle. Although individual plants can be destroyed, the opponent can reduce the effects by dispersing production of important items and stockpiling key raw materials and machinery. Attackers never anticipate all the adjustments and work-arounds defenders can devise, partly because they often rely on analysis of peacetime economies and partly because intelligence of the detailed structure of the target economy is always incomplete."²⁴ This is a valid caution against overconfidence, but the resisters in this scenario recognized that his argument was not fully applicable to their situation, in part for the reasons we discussed earlier, and in part because of reasons that follow.

Military strategists studying economic and industrial disruption are usually concerned specifically with the production of war materiel and its distribution to enemy armed forces. Modern war economies are economies of *total war* in which all parts of society are mobilized and engaged in supporting war. So, of course, military leaders can compensate for significant disruption; they can divert materiel or rations from civilian use or enlist civilians and civilian infrastructure for military purposes as they please. This does not mean that overall production is unaffected (far from it), simply that military production does not decline as much as one might expect under a given onslaught.

Resisters in this scenario had a different perspective on compensation measures than military strategists. To understand the contrast, pretend that a military strategist and a militant ecological strategist both want to blow up a fuel pipeline that services a major industrial area. Let's say the pipeline is destroyed and the fuel supply to industry is drastically cut. Let's say that the industrial area undertakes a variety of typical measures to compensate—conservation, recycling, efficiency measures, and so on. Let's say they are able to keep on producing insulation or refrigerators or clothing or whatever it is they make, in diminished numbers and using less fuel. They also extend the lifespan of their existing refrigerators or clothing by repairing them. From the point of view of the military strategist, this attack has been a failure—it has a negligible effect on materiel availability for the military. But from the perspective of the militant ecologist, this is a victory. Ecological damage is reduced, and with very few negative effects on civilians. (Indeed, some effects would be directly beneficial.)

And modern economies in general *are* brittle. Military economies mobilize resources and production by any means necessary, whether that means printing money or commandeering factories. They are economies of crude necessity. Industrial economies, in contrast, are economies of luxury. They mostly produce things that people don't need. Industrial capitalism thrives on manufacturing desire as much as on manufacturing products, on selling people disposable plastic garbage, extra cars, and junk food. When capitalist economies hit hard times, as they did in the Great Depression, or as they did in Argentina a decade ago, or as they have in many places in many times, people fall back on necessities, and often on barter systems and webs of mutual aid. They fall back on community and household economies, economies of necessity that are far more resilient than industrial capitalism, and even more robust than war economies.

Nonetheless, Pape makes an important point when he argues, "Strategic interdiction is most effective when attacks are against the economy as a whole. The most effective plan is to destroy the transportation network that brings raw materials and primary goods to manufacturing centers and often redistributes subcomponents among various industries. Attacking national electric power grids is not effec-

tive because industrial facilities commonly have their own backup power generation. Attacking national oil refineries to reduce backup power generators typically ignores the ability of states to reduce consumption through conservation and rationing.” Pape’s analysis is insightful, but again it’s important to understand the differences between his premises and goals, and the premises and goals of Decisive Ecological Warfare.

The resisters in the DEW scenario had the goals of reducing consumption and reducing industrial activity, so it didn’t matter to them that some industrial facilities had backup generators or that states engaged in conservation and rationing. They believed it was a profound ecological victory to cause factories to run on reduced power or for nationwide oil conservation to have taken place. They remembered that in the whole of its history, the mainstream environmental movement was never even able to stop the *growth* of fossil fuel consumption. To actually reduce it was unprecedented.²⁵

No matter whether we are talking about some completely hypothetical future situation or the real world right now, the progress of peak oil will also have an effect on the relative importance of different transportation networks. In some areas, the importance of shipping imports will increase because of factors like the local exhaustion of oil. In others, declining international trade and reduced economic activity will make shipping less important. Highway systems may have reduced usage because of increasing fuel costs and decreasing trade. This reduced traffic will leave more spare capacity and make highways less vulnerable to disruption. Rail traffic—a very energy-efficient form of transport—is likely to increase in importance. Furthermore, in many areas, railroads have been removed over a period of several decades, so that remaining lines are even now very crowded and close to maximum capacity.

Back to the alternative future scenario: In most cases, transportation networks were not the best targets. Road transportation (by far the most important form in most countries) is highly redundant. Even rural parts of well-populated areas are crisscrossed by grids of county roads, which are slower than highways, but allow for detours.

In contrast, targeting energy networks was a higher priority to them

because the effect of disrupting them was greater. Many electrical grids were already operating near capacity, and were expensive to expand. They became more important as highly portable forms of energy like fossil fuels were partially replaced by less portable forms of energy, specifically electricity generated from coal-burning and nuclear plants, and to a lesser extent by wind and solar energy. This meant that electrical grids carried as much or more energy as they do now, and certainly a larger percentage of all energy consumed. Furthermore, they recognized that energy networks often depend on a few major continent-spanning trunks, which were very vulnerable to disruption.



There is one final argument that resisters in this scenario made for actions against the economy as a whole, rather than engaging in piecemeal or tentative actions: the element of surprise. They recognized that sporadic sabotage would sacrifice the element of surprise and allow their enemy to regroup and develop ways of coping with future actions. They recognized that sometimes those methods of coping would be desirable for the resistance (for example, a shift toward less intensive local supplies of energy) and sometimes they would be undesirable (for example, deployment of rapid repair teams, aerial monitoring by remotely piloted drones, martial law, etc.). Resisters recognized that they could compensate for exposing some of their tactics by carrying out a series of decisive surprise operations within a larger progressive struggle.

On the other hand, in this scenario resisters understand that DEW depended on relatively simple “appropriate technology” tactics (both aboveground and underground). It depended on small groups and was relatively simple rather than complex. There was not a lot of secret tactical information to give away. In fact, escalating actions with straightforward tactics were beneficial to their resistance movement. Analyst John Robb has discussed this point while studying insurgencies in countries like Iraq. Most insurgent tactics are not very complex, but resistance groups can continually learn from the examples, successes, and failures of other groups in the “bazaar” of insurgency.

Decentralized cells are able to see the successes of cells they have no direct communication with, and because the tactics are relatively simple, they can quickly mimic successful tactics and adapt them to their own resources and circumstances. In this way, successful tactics rapidly proliferate to new groups even with minimal underground communication.

Hypothetical historians looking back might note another potential shortcoming of DEW: that it required perhaps too many people involved in risky tactics, and that resistance organizations lacked the numbers and logistical persistence required for prolonged struggle. That was a valid concern, and was dealt with proactively by developing effective support networks early on. Of course, other suggested strategies—such as a mass movement of any kind—required far more people and far larger support networks engaging in resistance. Many underground networks operated on a small budget, and although they required more specialized equipment, they generally required far fewer resources than mass movements.



Continuing this scenario a bit further, historians asked: how well did Decisive Ecological Warfare rate on the checklist of strategic criteria we provided at the end of the Introduction to Strategy (Chapter 12, page 385).

Objective: This strategy had a clear, well-defined, and attainable objective.

Feasibility: This strategy had a clear A to B path from the then-current context to the desired objective, as well as contingencies to deal with setbacks and upsets. Many believed it was a more coherent and feasible strategy than any other they'd seen proposed to deal with these problems.

Resource Limitations: How many people are required for a serious and successful resistance movement? Can we get a ballpark number from historical resistance movements and insurgencies of all kinds?

- *The French Resistance. Success indeterminate.* As we noted in the “The Psychology of Resistance” chapter: The French Resistance at most comprised perhaps 1 percent of the adult

population, or about 200,000 people.²⁶ The postwar French government officially recognized 220,000 people²⁷ (though one historian estimates that the number of active resisters could have been as many as 400,000²⁸). In addition to active resisters, there were perhaps another 300,000 with substantial involvement.²⁹ If you include all of those people who were willing to take the risk of reading the underground newspapers, the pool of sympathizers grows to about 10 percent of the adult population, or two million people.³⁰ The total population of France in 1940 was about forty-two million, so recognized resisters made up one out of every 200 people.

- *The Irish Republican Army. Successful.* At the peak of Irish resistance to British rule, the Irish War of Independence (which built on 700 years of resistance culture), the IRA had about 100,000 members (or just over 2 percent of the population of 4.5 million), about 15,000 of whom participated in the guerrilla war, and 3,000 of whom were fighters at any one time. Some of the most critical and decisive militants were in the “Twelve Disciples,” a tiny number of people who swung the course of the war. The population of occupying England at the time was about twenty-five million, with another 7.5 million in Scotland and Wales. So the IRA membership comprised one out of every forty Irish people, and one out of every 365 people in the UK. Collins’s Twelve Disciples were one out of 300,000 in the Irish population.³¹
- *The antioccupation Iraqi insurgency. Indeterminate success.* How many insurgents are operating in Iraq? Estimates vary widely and are often politically motivated, either to make the occupation seem successful or to justify further military crackdowns, and so on. US military estimates circa 2006 claim 8,000–20,000 people.³¹ Iraqi intelligence estimates are higher. The total population is thirty-one million, with a land area about 438,000 square kilometers. If there are 20,000 insurgents, then that is one insurgent for every 1,550 people.

- | *The African National Congress. Successful.* How many ANC members were there? Circa 1979, the “formal political underground” consisted of 300 to 500 individuals, mostly in larger urban centers.³³ The South African population was about twenty-eight million at the time, but census data for the period is notoriously unreliable due to noncooperation. That means the number of formal underground ANC members in 1979 was one out of every 56,000.
- | *The Weather Underground. Unsuccessful.* Several hundred initially, gradually dwindling over time. In 1970 the US population was 179 million, so they were literally one in a million.
- | *The Black Panthers. Indeterminate success.* Peak membership was in late 1960s with over 2,000 members in multiple cities.³⁴ That’s about one in 100,000.
- | *North Vietnamese Communist alliance during Second Indochina War. Successful.* Strength of about half a million in 1968, versus 1.2 million anti-Communist soldiers. One figure puts the size of the Vietcong army in 1964 at 1 million.³⁵ It’s difficult to get a clear figure for total of combatants and noncombatants because of the widespread logistical support in many areas. Population in late 1960s was around forty million (both North and South), so in 1968, about one of every eighty Vietnamese people was fighting for the Communists.
- | *Spanish Revolutionaries in the Spanish Civil War. Both successful and unsuccessful.* The National Confederation of Labor (CNT) in Spain had a membership of about three million at its height. A major driving force within the CNT was the anarchist FAI, a loose alliance of militant affinity groups. The Iberian Anarchist Federation (FAI) had a membership of perhaps 5,000 to 30,000 just prior to revolution, a number which increased significantly with the onset of war. The CNT and FAI were successful in bringing about a revolution in part of Spain, but were later defeated on a national scale by the Fascists. The Spanish population was about 26 million. So about one in nine Spaniards were CNT members, and

- (assuming the higher figure) about one in 870 Spaniards was FAI members.
- *Poll tax resistance against Margaret Thatcher circa 1990. Successful.* About fourteen million people were mobilized. In a population of about fifty-seven million, that's about one in four (although most of those people participated mostly by refusing to pay a new tax).
 - *British suffragists. Successful.* It's hard to find absolute numbers for all suffragists. However, there were about 600 nonmilitant women's suffrage societies. There were also militants, of whom over a thousand went to jail. The militants made all suffrage groups—even the nonmilitant ones—swell in numbers. Based on the British population at the time, the militants were perhaps one in 15,000 women, and there was a nonmilitant suffrage society for every 25,000 women.³⁶
 - *Sobibór uprising. Successful.* Less than a dozen core organizers and conspirators. Majority of people broke out of the camp and the camp was shut down. Up to that point perhaps a quarter of a million people had been killed at the camp. The core organizers made up perhaps one in sixty of the Jewish occupants of the camp at the time, and perhaps one in 25,000 of those who had passed through the camp on the way to their deaths.

It's clear that a small group of intelligent, dedicated, and daring people can be extremely effective, even if they only number one in 1,000, or one in 10,000, or even one in 100,000. But they are effective in large part through an ability to mobilize larger forces, whether those forces are social movements (perhaps through noncooperation campaigns like the poll tax) or industrial bottlenecks.

Furthermore, it's clear that if that core group can be maintained, it's possible for it to eventually enlarge itself and become victorious.

All that said, future historians discussing this scenario will comment that DEW was designed to make maximum use of small numbers, rather than assuming that large numbers of people would materialize for timely action. If more people had been available, the strategy would have become even more effective. Furthermore, they might comment that this

strategy attempted to mobilize people from a wide variety of backgrounds in ways that were feasible for them; it didn't rely solely on militancy (which would have excluded large numbers of people) or on symbolic approaches (which would have provoked cynicism through failure).

Tactics: The tactics required for DEW were relatively simple and accessible, and many of them were low risk. They were appropriate to the scale and seriousness of the objective and the problem. Before the beginnings of DEW, the required tactics were not being implemented because of a lack of overall strategy and of organizational development both above- and underground. However, that strategy and organization were not technically difficult to develop—the main obstacles were ideological.

Risk: In evaluating risk, members of the resistance and future historians considered both the risks of acting and the risks of not acting: the risks of implementing a given strategy and the risks of not implementing it. In their case, the failure to carry out an effective strategy would have resulted in a destroyed planet and the loss of centuries of social justice efforts. The failure to carry out an effective strategy (or a failure to act at all) would have killed billions of humans and countless nonhumans. There were substantial risks for taking decisive action, risks that caused most people to stick to safer symbolic forms of action. But the risks of inaction were far greater and more permanent.

Timeliness: Properly implemented, Decisive Ecological Warfare was able to accomplish its objective within a suitable time frame, and in a reasonable sequence. Under DEW, decisive action was scaled up as rapidly as it could be based on the underlying support infrastructure. The exact point of no return for catastrophic climate change was unclear, but if there are historians or anyone else alive in the future, DEW and other measures were able to head off that level of climate change. Most other proposed measures in the beginning weren't even trying to do so.

Simplicity and Consistency: Although a fair amount of context and knowledge was required to carry out this strategy, at its core it was very simple and consistent. It was robust enough to deal with unexpected events, and it could be explained in a simple and clear manner without jargon. The strategy was adaptable enough to be employed in many different local contexts.

Consequences: Action and inaction both have serious consequences.

A serious collapse—which could involve large-scale human suffering—was frightening to many. Resisters in this alternate future believed first and foremost that a terrible outcome was not inevitable, and that they could make real changes to the way the future unfolded.

§ § §

Q: How can I be sure my actions won't hasten or cause the extinction of the very species I'm trying to save? How can I be sure my actions won't result in hungry people killing every last wild animal in the area for food or cutting down every last tree for fuel?

Derrick Jensen: We can't be absolutely certain of anything. The only thing we can be certain of is that if civilization continues, it will kill every last being on earth. But let's take a reasonable worst-case scenario for a cataclysmic event. Chernobyl was a horrible disaster. Yet it has had a spectacularly positive ecological outcome: humans have been kept out of the area and wildlife is returning. Do you know what that means? The day-to-day workings of civilization are worse than a nuclear catastrophe. It would be hard to do worse than Chernobyl.

Yes, be smart and attend to those questions. But if we fail to act there will be nothing left. What the world needs is to be left alone. What the world needs is to have this culture—that is continuously cutting it, torturing it, murdering it—stopped.