

WELCOME *to the* FUTURE

essays on climate change
by Peter Gelderloos



BEFORE
THE BIG
CHANGE

IT IS A TESTAMENT TO THE HORROR, THE BOUNDLESS HORROR OF CAPITALISM, that after decades of its triumph, of changelessness, of the end of history, of a famine of other possible futures even in the minds of children, that those of us alive today who will see this world change forever cannot count ourselves lucky. We stand at the brink, and all the petty squabbles, all political programs and narrow affinities fall into insignificance.

The estimates vary as to exactly when we reach the point of no return, it could be 2015, it could be 2020, but climate scientists have reached a consensus that since the Industrial Revolution humans (I would be more direct and say capitalists) have caused global surface temperatures to raise 0.7 degrees Celsius, and that at a certain point not so far off, additional global warming will trigger a number of feedback loops that will cause the global temperatures to rise even more.

Tested climate models suggest that within six to ten years, we will have released enough greenhouse gases into the atmosphere to cause 2 C of warming, and at that point the melting of the polar ice caps (which currently reflect large amounts of solar radiation), the release of methane currently stored beneath the Siberian permafrost (methane is a more potent greenhouse gas than CO₂), the increase in atmospheric water vapor (which also acts to trap heat from the sun), and the additional release of CO₂ currently stored in the oceans as their absorption rate decreases with warming, all will have a cumulative effect to raise global temperatures by 5 to 6 degrees by the end of the century. Few species alive today have survived such a hot world in the past, and we will all have to adapt or go extinct, as the oceans acidify, desert regions expand, and coastal areas flood.

This is not an environmental issue in any traditional, narrow sense of the word. This will affect everything we do.

There are a number of possibilities: the very best is that within the next six to ten years, waves of revolt overthrow the State, which is the chief defender and administrator of the structures of fossil fuel-based capitalism; all coal power plants are shut down; all cars are taken off the road excepting perhaps a small number that can run on vegetable oil; airline travel is abolished;

electricity is abandoned or produced locally with small scale renewables; agriculture transitions from the current industrial petroleum-driven variety to traditional methods or permaculture, meaning a huge portion of the human population will have to concern themselves once again with growing their community's food; and a massive amount of carbon dioxide is removed from the atmosphere through the reforestation of abandoned highways, commercial areas, golf courses, and other spaces, and through the rewilding of the planet's extensive commercial tree plantations (the greatest amount of carbon stored by a forest is in the layer of leaves and other organic debris on the ground, which is part and parcel with a biodiversity that does not exist in tree plantations).

This is also what needs to happen if we pass the point of no return, but in that case it will be much less pleasant for all of us.

We are not faced with a collapse, but with a deepening of the misery beyond what any of us can imagine.

The climate crisis will not destroy capitalism. As blind and insanely idiotic as the powerful are, they are also looking towards the future. At the recent NATO summit in Strasbourg, the world government discussed its solution to the impending disaster: militarized borders and stricter internal security measures like biometric IDs and surveillance. I don't see these as naively unrealistic non sequiters so much as codewords for the full realization of the New World Order. The powerful are well informed that a sharp decrease in agricultural productivity caused by global warming will coincide with a projected peaking of the human population at 9 billion, resulting in mass starvation that is predicted to claim between 3 and 6 billion lives. Already 300,000 people die every year, nearly all of them in the Global South, due to the results of climate change: desertification, droughts, more violent storms, greater spread of tropical diseases, crop failure. Human populations are already beginning to migrate on an enormous scale in search of survival.

The NATO solution is to close the border, to seal the door of the gas chamber that now encompasses the greater part of three continents. This is the new jewel in their crown — they are planning the greatest mass murder in

human history. There are already confirmed reports of killings in the desert between the US and Mexico and eerie rumours of naval boats sinking rafts full of Africans in the Mediterranean when the press aren't there to get some humanitarian photos of dramatic rescues at sea — in fact just the reported deaths on the borders of Fortress Europe between 1988 and 2006 total to 14,000. This will become policy. This will become open war. Of course, the border will not be hermetically sealed. NATO will probably maintain military colonies in key fuel- and food-producing regions, especially in areas of low population density like Saudi Arabia where control will be easier.

Domestically too their answer is already becoming visible: totalitarianism. Unintegrated immigrant populations and youth who have not yet consented to the murder of our futures present a constant internal threat to this order that has manifested in numerous revolts and insurrections, as well as countless quieter negations and the creation and diffusion of new social models — I mean our protests, our social centers, our permaculture farms, hacklabs, counterinformation groups, diy health collectives, bicycle workshops, and other self-organized projects. When coupled with a will to destroy the existing system and an attempt to overcome the separations imposed by government and media to create real solidarity, these movements evidence a superhuman optimism that may be the only hope for the future.

And it is apparent that the State feels threatened. Under the rubric of anti-terrorism, the constellation of leading governments have begun instituting systems of total control. Infiltration and provocation in anarchist groups and Muslim communities throughout the US, as well as the curtailing of gun rights and the imprisonment for up to 22 years of activists trying conscientiously to save the planet; biometric IDs across Europe; in France mandatory DNA sampling as a consequence for over a hundred criminal offenses including graffiti and illegal protest, and psychological tracking and databasing of delinquent, potentially criminal characteristics of all children from as young as three; in the UK thousands of surveillance cameras with facial recognition and automatic license plate-scanning technology deployed across the whole of public space as well as most bars; in Germany the criminalization of self-defense from surveillance by wearing masks in demonstrations, and the government prerogative to declare any radical political group a criminal

organization and imprison anyone said to be associated with it; in Spain the extension of the torture and high security isolation prisons long used against the Basques to anarchists and squatters; in the Netherlands the installation of a new system requiring one to use a personal ID/bank card to get on or off the bus, rendering one's movements through the city trackable; and everywhere the use of cellphones to listen to people's conversations and log people's movements.

The world governments may also try to mitigate the disaster by proliferating nuclear power plants and deploying particles in the atmosphere or orbital shields to reflect some of the sun's energy, with unknown consequences for the future, as usual.

Capital and the white supremacist states are preparing to manage the apocalypse they have brought down on all of us. We need to develop our ability to survive, undermine, and destroy them. We cannot do this alone; in fact we must overcome the isolation they impose on those who resist. Non-integrated immigrant communities and anti-authoritarians who have been privileged with citizenship must increase communication and build networks of solidarity that overcome racism, national boundaries, and otherification, and all active people must engage in a Herculean campaign of communication with everyone outside the movement to challenge the legitimacy of the State.

There is a need to remind people that the politicians and capitalists created this problem, for years they worked hard to silence it, and they have been repressing those of us trying to do something about it. The problems of the future will be much easier if everyone feels as we do — that as the lifeboat starts to sink, those responsible should be the first to go overboard. A vital task is to intervene publicly in the discourse on terrorism, to show that we are the people being persecuted as terrorists and the war on terror is actually a war of social control, that the state is crying wolf and none of its security measures make us feel safe. People need to be comfortable with resistance, not with surveillance. If we can achieve this, we will have deprived the State of a tool it desperately needs to survive the coming storm.

The end result of this communication must be a consciousness that the State and capitalism are suicidally insane and a complementary desire to organize our own lives free of their management; an acknowledgement of the central role racism and colonialism and their attendant genocides have long played in this insanity; and an understanding that the earth is not a mechanical, dead agglomeration of materials and processes that exist for us to exploit but rather a living, sacred thing that gives us life and meaning, of which we are a small and dependent part. No future with the mentality of control and exploitation is possible: this mentality is responsible for enslavement, genocide, and the destruction of the planet. No peace with the State and capitalism is desirable: we are reclaiming our power to create the world we want to live in.

This is the change we face: total revolution or a new totalitarianism installed to preside over mass extinction, the murder of billions of people, and the deepening enslavement of those who by citizenship or skin color are marked for survival.

MORE
WOOD
FOR THE
FIRE
*CAPITALIST
SOLUTIONS TO
GLOBAL WARMING*

WHILE SOME PEOPLE WERE SHOCKED WHEN OBAMA REVEALED HIMSELF TO be an energy policy rightwinger in his State of the Union address, advocating more oil drilling, more nuclear power, and uttering that egregious Bush-era term, “clean coal,” I think the most remarkable aspect of this portion of his speech was that a politician had uttered the plain and obvious truth about the future.

While progressives typically wear the mask of green capitalism and conservatives the mask of the free market, the difference in the results of policies either camp would enact really only comes down to how fast renewable energy production would develop in comparison to conventional energy production. If the conservatives have their way, renewables will develop slowly, as government subsidies, what they unironically call the free market, all favor nuclear, coal, and oil. On the other hand, the progressives would speed up development by subsidizing renewables and taxing non-renewables.

The conservative strategy would inarguably doom most of the planet’s species and many millions of its people to extinction, as they are mistaking carbon reduction for energy independence, and treating the problem as some conflict or competition between nation-states. Obama, evidently, has joined their ranks, advocating nothing more than that America become a global leader in energy production and innovation.

Progressives who advocate solutions to climate change within the framework of the existing system seek to establish renewable energy production as a replacement for, not an addition to, existing fossil fuel-based energy production. They point out, not incorrectly, that enough solar energy falls on the planet earth to power our behemoth global economy into the future. Their equations all seem to be correct and uncontested, regarding the total amount of solar radiation, the efficiency of affordable solar cells, the cost and land space required to produce US electricity needs. There’s one little thing they are forgetting.

Because of the way capitalism works and the way ecosystems work, there are no supply-based solutions to climate change.

To understand this, let's take a step back and plumb the depths of the abyss our political and business leaders have brought us to the brink of. First of all, climate change is not a danger of the future. It is already happening. Storms, droughts, floods, and desertification are already becoming more intense, malaria and other tropical diseases are already extending north and south, species and habitats are already dying out at an alarming rate. Even according to such establishment figures as Kofi Annan, former Secretary General of the UN, 300,000 people are dying every year, right now, due to the more easily measured effects of climate change—heat waves, floods, and forest fires. Many more deaths are caused by the greater spread of tropical diseases, crop failure caused by multiple factors, and food shortages as Global South grains go to biofuel production for cars in the Global North.

If the proportion of greenhouse gases in the atmosphere continues to rise, warming will trigger a number of natural feedback loops that will cause the average global temperature to jump to at least 5C of warming by the end of the century. These feedback loops include the diminishing of the polar icecaps, which currently reflect a large amount of solar radiation, the warming of the oceans, causing carbon dioxide currently dissolved in sea water to be released into the atmosphere, and the release of massive methane deposits trapped beneath permafrost in the northern hemisphere.

Also around the end of the century, the world population is projected to peak at 9 billion. The grains that currently feed the world are nearly all cultivated in temperate climates. As the world warms, global agricultural productivity drops, and large swaths of land are rendered unsuitable for cultivation. The result would be mass starvation—scientists predict that between 3 and 6 billion could die. Meanwhile, there would be a bigger wave of global extinctions than when the dinosaurs died out. And this isn't even the worst case scenario.

To stop this from happening, we need to halt the increase in greenhouse gases as soon as possible. Scientists have not reached a consensus on how many parts per million of atmospheric carbon dioxide is safe: those closer to industry and governments, of course, suggest a higher number, whereas more independent scientists suggest a lower number. Seeing as how people

and species are already dying from climate change, what does that say about those who are talking of a safe limit as something we have not yet exceeded?

Establishment scientists suggest a cost-benefit analysis for dealing with climate change. Those government-funded humanitarians at UCSD say that finding an appropriate solution “depends on how we judge, as a global community... the economic costs compared to the risks,” and this kind of thinking is pretty standard. After all, those 3 to 6 billion people who might starve to death nearly all live in the Global South, in the (neo)colonized regions of the world, so the technocrats are in true form to speak of “acceptable costs.”

This is nothing less than climate brinkmanship. The world’s powerful and their labcoat-wearing lackeys are engaged in an old, old war with Mother Earth and they want to see how far they can push her before she pushes back, how close to this safe limit of greenhouse gases they can tread. If they go too far, they will not be the ones to bear the gravest consequences.

And can we really expect any less of them? After all, we’re talking about the same institutions, run by the direct successors of the same people who toyed with the fate of the world in the same way during the Cold War, knowing full well that they had their nuclear bunkers to run off to. It was only by good luck that they did not annihilate all of us in a nuclear holocaust. They won that little game, so now they are up for another spin of the wheel.

But this time no one has to press their finger down on a little button to begin the apocalypse. What is required, rather, is that we all keep punching our time clocks and allowing this unstoppable machine to move forward. Inertia itself will seal our fate.

Capitalism will develop new and better forms of renewable energy production, I have no doubt about that. But it doesn’t matter. What is required to stave off mass extinction is to stop greenhouse gas emissions before it is too late. However, because of the short-term feedbacks inherent to capitalism and its inability to appreciate non-monetary costs to the environment, alternative energy sources will be just that—alternatives, not replacements. Solar-produced electricity would require massive government subsidies to be cost-

competitive with coal on a national or international scale, yet what we need is not more solar, but less coal. As much as possible of the fossil fuels that are still in the ground need to stay there, forever.

But capitalism simply has no mechanism for barring profitable forms of production or upholding any kind of taboo that prevents anything under the sun from being converted into a resource and a commodity. And it brooks no such mechanism either. Take the most abhorrent business practice you can imagine. Is it slavery? There are more slaves involved in the production of primary commodities today than there were during the height of the Triangular Trade. For the most part, the compelled labor simply has to take place in countries with weaker regulations, while institutions based in the wealthy countries, such as the International Monetary Fund (IMF) and World Trade Organization (WTO), work to ensure that regulations in those countries remain weak. Or maybe animal testing is the most gruesome, in your eyes? One doesn't even need to go to the Global South to find companies making a pretty penny off that practice.

What Obama outlined in his State of the Union address is exactly what is going to happen—continued extraction of oil, coal, and nuclear fuels, alongside increased use of renewables. In other words, wind and solar power will contribute to an expansion of total energy production, followed by an increase in energy consumption. A similar thing happened in the 80s, when reformist environmentalists were advocating greater energy efficiency to save the planet from the problems of energy production. What they did not count on was that under capitalism, greater energy efficiency can lead to lower energy costs, which leads to a net increase in energy consumption. In other words, those environmentalists who hoped to find a solution within the confines of the system are partially responsible for the mess we're in now, and the fact that we have less time to deal with it.

The few people who were talking about pollution, ecological collapse, and related issues thirty years ago—generally radical ecologists, anarchists, and indigenous communities—were ignored or dismissed as crazy. Nowadays, they have no time to say “I told you so,” because members of those three groups are investigated as terrorists and locked up in prison. The biggest FBI

domestic anti-terror investigation in the US in 2003, measured by the number of wiretaps used, was against an aboveground animal rights group that ran a website to publicize direct actions against an animal testing company. I myself was named in Virginia's 2009 Terrorism Threat Assessment, just for writing a book against reformism and pacifism in social struggles, and for being an anarchist activist. Other anarchists have been sentenced to up to 22 years in prison for environmental direct actions that harmed no one. The post 9-11 farce of National Security has been used as a pretext to increase policing and forced relocations against Native American nations that straddle the U.S.-Mexico and U.S.-Canada borders. And whose lands do we suppose will be taken for the millions of acres of solar panels that need to be built to supply domestic electricity needs? And then there's all the mining that will be required for making so many photovoltaic cells. Whom do we suppose will be worst affected by the pollution?

It would be unconscionable to allow the world leaders who just five and ten years ago were denying the reality of climate change to be entrusted with solving the problem today, especially when they are the ones who profit from the current social and industrial arrangements, while the many people who forced the world to acknowledge the problem, sometimes giving their own lives in the struggle, continue to be silenced and repressed.

I was actually happy that the COP15 climate talks in Denmark last December resulted in such a hollow and insufficient proposal, because it may help people realize that world leaders are not the ones who will protect us from climate change. For me, the greatest failing in Copenhagen was that the temporary police state erected to ensure security during the talks successfully utilized mass arrests to prevent the thousands of protestors from causing havoc and disrupting the summit, as previous summits have been partially or fully disrupted in Heiligendamm, Seattle, and elsewhere.

This is an important defeat because part of the true solution to climate change lies in throwing a wrench in the gears of the global institutions that currently monopolize the solving of this problem. A riot in the streets impedes the ability of the world leaders to discuss, to hobnob, and to present their plans to a passive public, and it makes social conflicts visible, it shows that the elite monopoly on decision-making is hotly contested and only exists by being

forcefully imposed. In this context, disruption is above all a constructive act. Anthropologist David Graeber (<http://theanarchistlibrary.org/shock-victory>) showed how the decentralized networks of the antiglobalization movement succeeded in their mid-range goals, sabotaging neoliberal institutions like the IMF and WTO, by disrupting their summits, delegitimizing their policies, and building horizontal, prefigurative networks of global communication. Once their legitimacy and monopoly on decision-making were challenged, internal contradictions between rich and poor member states came to the surface, and these institutions became largely unworkable. The WTO failed to overcome internal divisions, and the IMF, once an important global creditor, itself had to be bailed out.

The high degree of regulations, taxes, and subsidies that will necessarily be part of elite responses to climate change bring the governments of nation-states back into a central role that they often did not have amidst the deregulations of Bretton Woods neoliberalism. Yet governments cannot prevent ecological collapse, and no current government of any influence is even trying. The progressive states of Europe proposed a mere 20-30% reduction in greenhouse gas emissions, to be accomplished primarily by the cheap disappearing act of carbon offset trading. The lack of governmental solutions only makes sense, because governments exist first and foremost to build and maintain the infrastructure necessary for commerce, to secure new markets for producers, and to protect the haves from the have-nots. Lately, new technologies have allowed them to approach their age-old dream of total social control, and this project makes them even less amenable to the idea of listening to activists or the idea of a natural environment that must be respected rather than controlled.

Governments rule, however, not by monopolizing force, but by monopolizing decision-making, by seizing the central ground of society and making themselves the arbiter of social conflicts and the implementer of solutions. Rejecting the solutions of world leaders, refusing to dialogue with powerful institutions, in fact trying to disrupt them, is a crucial part of our fight to save our place on this planet.

Those who think world leaders can be persuaded to adopt adequate responses to climate change, the environmental NGOs that sit down at the table in

these climate summits, are mistaken. Other writers have amply demonstrated how the reformist climate justice movement is generating false solutions that will only make things worse (e.g. Tim Simons and Ali Tonak, “The Dead End of Climate Justice,” <http://www.counterpunch.org/simons01082010.html>). And environmental activists at the frontlines of the struggle against coal mining in Appalachia or deforestation in the Pacific Northwest remember how the big NGOs, standing on the backs of their sacrifices, betrayed the grassroots and rushed to Congress at the first chance to endorse and take credit for big legislation that only slowed the devastation.

Just as the earth is a holistic, interconnected system, piecemeal approaches to climate change are doomed to failure. Relevant factors that will determine the survival or extinction of species and peoples include forestation, soil health, fertilizer-caused dead zones in the ocean, integrity of habitats, population growth, forms of agriculture, and a hundred other things that are not being addressed by world leaders. Greatly boosting solar energy production would indeed require government subsidies and corporate investments, but this will not avert the ecological catastrophe that has already begun. To keep fossil fuels in the ground, check overpopulation, and protect and restore habitats, we will need to do nothing short of changing who holds power in our society, and how decisions are made; to change the way our culture views the planet, from seeing it as a dead thing that can be exploited and toyed with, to understanding it as an interconnected, living system on which we are dependent for our survival.

A popular solution to climate change will require a decentralization of economy and decision-making, the same decentralization prefigured by the global horizontal networks currently fighting back against those who are responsible for climate change. Our standard of living must be based on available local resources and not what can be purchased on the world market. Forms of food production like permaculture and local, organic gardening, developments that are already gaining global steam at the grassroots, can feed the world without the unacceptable human and environmental costs of industrial agribusiness. As for population, anthropologists have shown that local, pre-colonial forms of fertility control lost their effectiveness as decision-making, society, and identity went from the local to the national scale. We can and must reverse this process.

In 2009, Elinor Olstrom won the Nobel Prize in Economics for proving what anarchist scientist Peter Kropotkin demonstrated in his 1902 book, *Mutual Aid: a Factor of Evolution*, that common resources can be horizontally managed by the people who use them, without government regulation or privatization. In other words, the commons, which have been progressively stolen from us over the last 500 years by the very institutional predecessors of those who govern us now, are ours for the taking.

Climate change is already killing people and driving entire species to extinction every day. We can accept more of the same by trusting in the solutions of world leaders we know are lying to us, or we can take things into our own hands, and build solutions at the grassroots level while networking with other communities in resistance at the global level, and sabotaging the efforts of the powerful to manage and prolong the disaster they have created.

AN
ANARCHIST
SOLUTION
TO GLOBAL
WARMING

IF THE GREEN CAPITALIST RESPONSE TO CLIMATE CHANGE WILL ONLY ADD more fuel to the fire, and if government at a global scale is incapable of solving the problem, as I argue in previous articles*, how would anarchists suggest we reorganize society in order to decrease the amount of greenhouse gases in the atmosphere and to survive an already changed world?

There is no single anarchist position, and many anarchists refuse to offer any proposal at all, arguing that if society liberates itself from State and capitalism, it will change organically, not on the lines of any blueprint. Besides, the attitude of *policy*, seeing the world from above and imposing changes, is inextricable from the culture that is responsible for destroying the planet and oppressing its inhabitants.

Nonetheless, I want to outline one possible way we could organize our lives, not to make a concrete proposal, but because visions make us stronger, and we all need the courage to break once and for all with the existing institutions and the false solutions they offer. For the purposes of this text I'm not going to enter into any of the important debates regarding *ideals*—appropriate levels of technology, scale, organization, coordination, and formalization. I'm going to describe how an ecological, anti-authoritarian society could manifest itself, as it flows from the un-ideal complexity of the present moment. Also for simplicity's sake, I won't enter into the scientific debate around what is and isn't sustainable. Those debates and the information they present are widely available, for those who want to do their own research.

I base the description of this future possible world both on what is physically necessary and what is ethically desirable, in accordance with the following premises.

Fossil fuel extraction and consumption need to come to a full stop.

Industrial food production must be replaced with the sustainable growing of food at the local level.

Centralizing power structures are inherently exploitative of the environment and oppressive towards people.

The mentality of quantitative value, accumulation, production, and consumption—that is to say, the mentality of the market—is inherently

exploitative of the environment and oppressive towards people.

Medical science is infused with a hatred of the body, and though it has perfected effective response to symptoms, it is damaging to our health as currently practiced. Decentralization, voluntary association, self-organization, mutual aid, and non-coercion are fully practical and have worked, both within and outside of Western Civilization, time and time again.

Welcome to the future. No one ever knew global society would look like this. Its defining feature is heterogeneity. Some cities have been abandoned, trees are growing up through their avenues, rivers rush where asphalt had once covered the ground, and skyscrapers crumble while deer forage at their foundations.

Other cities are thriving, but they have changed beyond recognition. Rooftops, vacant lots, and sidewalks have turned into gardens. Fruit- and nut-bearing trees line every block. Roosters welcome every dawn. About a tenth of the streets—the major thoroughfares—remain paved or gravelled, and buses running on biofuels traverse them regularly. Other streets have been consumed largely by the gardens and orchards, though bike paths run down the middle. The only buildings that have electricity twenty-four hours a day are the the water works, hospitals, and the radio stations. Theaters and community buildings get power until late on a rotating basis, so they can stay open for film nights or other events. Everyone has candles and wind-up lamps, though, so there's a light on in many a window until late. But it's nothing like how it used to be; at night you can see stars in the sky, and the children gape in disbelief when the old-timers tell how people had given that up.

Electricity is produced through a network of neighborhood-based power stations that burn agricultural waste (like corn cobs) and biofuels, and through a small number of wind turbines and solar panels. But the city works on just a fraction of what it used to. People heat and cool their homes through passive solar and efficient design, without any electricity. In the colder regions, people supplement this in the winter with the burning of renewable fuels, but houses are well insulated and ovens are designed with the greatest efficiency, so not much is needed. People also cook with fuel-

burning ovens, or in sunnier climates solar ovens. Some cities that put more energy into manufacturing and maintaining renewable forms of electricity generation (solar, tidal, and wind) also cook with electricity. Many buildings have a shared washing machine, but all clothes drying is done the old-fashioned way: on a line.

No one has a refrigerator though every building or floor has a communal freezer. People store perishables like yogurt, eggs, and vegetables in a cool box or in a cellar, and they eat their food fresh or they can it. People grow half of their own produce in gardens on their block. Nearly all their food is grown within twenty miles of where they live. None of the food is genetically modified or produced with chemicals, and it is bred for taste and nutrition, not longevity and durability for transport. In other words, all the food tastes better, and people are far healthier. Heart disease, diabetes, and cancer, among the greatest killers in capitalist society, have all but disappeared. The super viruses created under capitalism, that killed millions of people throughout the collapse, have largely disappeared, as the use of antibiotics has almost stopped, people live in healthier conditions globally and have stronger immune systems, and global travel is not so frequent or fast-paced. People also have a much greater environmental consciousness and personal connection with their bioregion because they eat what's in season and what grows locally, and they help grow it themselves.

Every house has a compost toilet and running water, but no sewage. It's become sort of an unwritten rule around the world that every community must remediate its own waste. Sending pollution downstream is the greatest taboo. The relatively few remaining factories use fungi and microbes, on great forested plots around the factory compound, to remediate whatever pollutants they produce. Neighborhoods turn all their waste into compost or fuel. The amount of available water is limited, so buildings are equipped with rainwater catchments for the gardens. Households that greatly exceed the recommended quota for water usage are publicly shamed. The recommended quota is not enforced; it is simply a suggestion distributed by those who work in the water syndicate, based on how much water the city is allowed to divert from the water source, as agreed upon by all the communities that share the watershed.

In most cities, people hold periodic or ad hoc neighborhood assemblies to maintain the gardens, paths, streets, and buildings, to organize daycare, and to mediate disputes. People also participate in meetings with whatever syndicate or infrastrucutral project they may dedicate some of their time to. These might include the water syndicate, the transportation syndicate, the electricity syndicate, a hospital, a builders' union, a healers' union (the vast majority of health care is done by herbalists, naturopaths, homeopaths, acupuncturists, massage therapists, midwives, and other specialists who make home visits), or a factory. Most of these are decentralized as much as possible, with individuals and small working groups trusted to know how to do their job, though when necessary they coordinate through meetings that usually run as open assemblies using consensus, with a preference for sharing perspectives and information over making decisions wherever possible. Sometimes, interregional meetings (such as for the communities of a watershed) are organized with a delegate structure, though meetings are always open to all, and always seek to reach decisions that satisfy everyone since there are no coercive institutions and coercion of any sort is widely frowned upon as "bringing back the old days."

Because power is always localized to the greatest possible degree, the vast majority of decision-making is carried out by individuals or small groups that share affinity and regularly work together. Once there is no longer an emphasis, for purposes of control and accumulating power, on imposing homogeneity or singularity of outcomes, people have found that much coordination can simply take place organically, with different people making different decisions and figuring out for themselves how to reconcile these with the decisions of others.

Although today's societies are structured to create feelings of community and mutuality, there is also a great amount of space for privacy and solitude. Many neighborhoods have communal kitchens and dining rooms, but people can and often do cook on their own and eat by themselves, when the mood strikes them. Some societies have public baths, while others do not, depending on cultural preference. The forced communalization of past experiments in socialist utopias is absent from this world. Private property has been abolished in the classical sense of the means of production that

other people rely on for their survival, but anyone can have as many personal belongings as they can get—clothing, toys, a stash of candy or other goodies, a bicycle, etc.

The smaller or more intimate the community, the more likely it is to operate a gift economy—anything that you're not using, you give away as a gift, strengthening your social ties and increasing the amount of goods in circulation—which is perhaps the longest lasting and most common economy in the history of the human species. Beyond the neighborhood level, or for items that are rare or not locally produced, people may trade. The syndicates of some cities may use a system of coupons for the distribution of things that are scarce or limited. If you work in the electricity syndicate, for example, you get a certain number of coupons that you can use to get things from the bicycle factory or from an out-of-town farmer.

The most common items produced in factories are bicycles, metal tools, cloth, paper, medical equipment, biofuels, and glass. More common than the factory is the workshop, in which people craft any number of things at a higher quality and slower, more dignified (and healthy) pace. Workshops usually use recycled material (after all, there are many old shopping malls filled with junk and scrap) and make things like toys, musical instruments, clothes, books, radios, electricity generation systems, bicycle and automobile parts.

Work is not compulsory, but nearly everyone does it. When they can be their own bosses, and make things that are useful, people tend to enjoy working. Those who don't contribute by working in any way are often looked down on or excluded from the nicer aspects of living in society, but it is not considered acceptable to ever deny someone food or medical treatment. Because they don't help others, they are unlikely to get fine foods, and healers are unlikely to give them consultations, massages, or acupuncture unless they have a specific problem, but they won't be left to starve or die. It's a small drain on the resources of the community, but nothing when compared to the parasitism of the bosses, politicians, and police forces of yesteryear.

There are no police anymore. Generally people are armed and trained in self-defense, and everyone's daily life includes activities that foster a collective or communal sense of self-interest. People depend on cooperation and mutual aid for survival and happiness, so those who damage their social ties are above all harming and isolating themselves. People fought to overthrow their oppressors. They defeated the police and military forces of the ruling class, and they remember this victory. The imperative to never again be ruled forms a major part of their identity today. They are not about to be intimidated by the occasional psychopath or roving gang of protection racketeers.

In short, the city has a negligible environmental footprint. A high density of people live in an area that nonetheless has an impressive biodiversity, with many plant and animal species cohabiting the city. They don't produce pollution that they don't remediate themselves. They take some water from the watershed, but far less than a capitalist city, and in agreement with the other communities that use the watershed. They release some greenhouse gases through fuel burning, but it is less than the amount they take out of the atmosphere through their own agriculture (since all their fuels are agricultural, and the carbon they're releasing is the same carbon those plants removed from the atmosphere as they grew). Nearly all their food is local and sustainably grown. They carry out a small amount of factory production, but most of it uses recycled materials.

Outside the city, the world is even more transformed. Deserts, jungles, mountainous regions, swamps, tundras, and other areas that cannot sustainably support high population densities have rewilded. No government programs were necessary to create nature preserves; it simply wasn't worth the effort to remain there once fossil fuel production ended. Many of these areas have been reclaimed by their prior indigenous inhabitants. In many of them, people are again existing as hunter-gatherers, enacting the most intelligent form of economy possible in that bioregion and turning the conventional notion of what is futuristic on its head.

Some rural communities are self-sufficient, supporting themselves with garden agriculture and animal husbandry, or more intentionally with permaculture. Many people who moved out of the cities during the collapse set up these

communes, and they're happier and healthier than they'd ever been under capitalism. Some of the permaculture communities are composed of more traditional households, with each family tending an acre or two of land, spread out with a fairly homogenous distribution over a wide expanse of territory. Others comprise of a densely populated communal nucleus with several hundred inhabitants living on a dozen acres of intensively cultivated gardens, surrounded by orchards and pastures for fruit, nuts, and livestock, with an outer ring of natural forest as an ecological buffer and a place for occasional woodcutting, hunting, and wildcrafting. These rural communities are almost entirely self-sufficient, have a sustainable relationship with their landbase, encourage a high biodiversity, and produce no net release of greenhouse gases.

Rural communities in a tight radius around the cities carry out intensive agriculture aided by certain manufactured goods, in a symbiotic relationship with their urban neighbors. Every week, using horsecarts or biodiesel pickup trucks, they bring food and biofuels to a specific neighborhood in the city, and cart away compost (largely from the toilets, as food scraps go to feeding the urban chickens). With this rich compost, glass for greenhouses, metal tools, and the occasional tractor or mechanical plow shared among several farmsteads, they can produce high yields year round without destroying their soil or relying on chemicals and fossil fuels. They use intercropping and other permaculture methods to preserve soil health and discourage pests. These farms are dotted by orchards and small forests so there is a high biodiversity, including plenty of birds that eat the insects. Because they do not grow their plants in massive monocrop fields, pests and diseases don't spread as uncontrollably as in capitalist agriculture. The use of local plants, multiple breeds, the protection of the soil and the preservation of forests also mitigate the impacts of drought and other extreme weather caused by climate change.

There is still a fair amount of transportation between bioregions. Cities are linked by trains running on biofuel, and people regularly cross the oceans on boats powered primarily by the wind. A certain amount of interregional trade happens this way, but above all interregional transportation allows for the movement of people, ideas, and identities. People are less mobile than they were in the final days of capitalism, but on the other hand people are not

compelled to follow the vagaries of the economy, to be uprooted in search of work. Bioregions are almost entirely self-sufficient economically, and people can support themselves. If they move, it's because they want to travel, to see the world, and they are free to do so because there are no more borders.

Longer distance communication happens primarily through the radio. Most urban or semi-urban communities have telephone and internet. Highly toxic computer production has mostly ended, but a few cities use new, slower but cleaner methods to continue manufacturing computers at a minimal scale. However enough old parts are in circulation that most neighborhoods that want to can keep a few computers running. Many rural people live close enough to a city to access these forms of communication from time to time. People still get news from around the world, and they continue to cultivate an identity that is partly global.

The economic basis for society has greatly diversified within any linguistic community. In other words, someone may live on an agricultural commune with a technological level most similar to that of Western society in the 19th century, but next to them is a forest inhabited by hunter-gatherers, and a few times a year they go to a city organized by syndicates and neighborhood assemblies, where there is electricity, buses, a train station or a harbor, where they can watch movies or read the blog of someone on the other side of the world. Pictures and news from around the world pass through their commune on a fairly regular basis. They speak the same language and share a similar culture and history with these communities that are otherwise so different. An effect of this is that a clannish, insular identity that could lead to a number of problems, among them the potential regeneration of domineering and imperialistic behaviors, is constantly offset by the cultivation of a global identity and a mixing with highly different members of a broader community. In fact, because most linguistic communities extend far beyond a single bioregion and because people enjoy an unprecedented amount of social mobility, there is an unending circulation of people between these different communities, as every individual decides, when they come of age, whether they want to live in the city, the countryside, or the forest. Not only do borders no longer exist between artificially constructed nations; social borders no longer prevent movement between different identities and cultural categories.

For the older people, this way of living feels like paradise, mixed with the gritty details of reality—conflict, hard work, heartbreak, and petty drama. For the younger people, it just feels like common sense.

And every year, the world heals a little more from the ravages of industrial capitalism. The amount of real forest and wetlands have increased as some areas rewild, while heavily inhabited areas become healthy ecosystems thanks to gardening, permaculture, and the elimination of cars. Greenhouse gas levels in the atmosphere are actually declining, albeit slowly, for the first time in ages, as carbon is returned to the soil, to forests and wetlands, to the newly green urban areas, and the burning of fossil fuels has stopped. Over a third of the species on the planet went extinct before people finally changed their ways, but now that habitat loss is being reversed, many species are coming back from the brink. As long as humanity doesn't forget the hardest lesson it ever learned, in a few million years the biodiversity of planet earth will be as great as ever.

Dignified living has replaced profit as the new social yardstick, but in a coup against all the engineers of social planning, everyone is allowed to make their own measurements, to determine for themselves how to achieve this. People have regained the ability to feed and house themselves, and individual communities have proven that they are the best situated to craft a mode of sustenance that is best adapted to local conditions and the varied changes brought about by global warming. In the end it's a no-brainer. The one solution that all those who were profiting off of climate change would never discuss was the only one that had a hope of working.

For the longest time, people didn't give credence to those who were warning about climate change, about ecological collapse, about other problems created by government and capitalism; those who were calling for radical solutions. In the end they saw that the best decision they ever made was to stop trusting those in power, those responsible for all these problems, and instead to trust themselves, and take a plunge.

Those readers who doubt the possibility of this vision can check out Peter Kropotkin's Field, Factories, and Workshops of Tomorrow, which scientifically lays out a similar proposition, over one hundred years ago. They can also look into how the native land they live on was organized before colonization. Where I'm from, the Powhatan Confederacy kept the peace and coordinated trade between several nations in the southern part of the Chesapeake Bay watershed. To the north, the Haudensaunne kept the peace among five, and later six nations, for hundreds of years. Both of these groups supported high population densities through intensive horticulture and fishing without degrading their environments.

Where I live now, in Barcelona, the workers took over the city and factories and ran everything themselves in 1936. And where I happen to be as I write this article, in Seattle, there was a monthlong general strike in 1919, and the workers there also proved themselves capable of organizing themselves and keeping the peace. This isn't a dream. It's an imminent possibility, but only if we have the courage to believe in it.

