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1. The Meaning of Copenhagen

It was the pivotal international conference of the new century. Tens of thousands showed up, including heads of state, officials at all levels of government, representatives of environmental organizations, and ordinary citizens from nearly 200 countries. Scientists had warned that, without a strong agreement to reduce carbon emissions, the consequences for civilization and the world's ecosystems would be cataclysmic.

On the sidelines sat powerful forces (including pro-growth business interests and fossil fuel companies) that preferred a weak agreement or none at all. Their strategic public relations efforts ("by far and away the biggest public relations campaign that I've ever seen," according to PR veteran James Hoggan, cofounder of DeSmogBlog.com and author of *Climate Cover-Up: The Crusade to Deny Global Warming*) paid off when, only days before the meeting, thousands of private emails between climate scientists were hacked and released to the public; during the next few days, prominent right-wing commentators assured one and all that "climategate" completely undercut any scientific basis for thinking that human actions cause global warming. While nothing in the emails did in fact call established climate science into question, the desired and actual effect of the exercise was to destabilize public support for a strong agreement in Copenhagen.

On the streets were tens of thousands of mostly young activists and NGO campaigners, and even a few scientists, who were prepared to raise hell if world leaders didn't act boldly to reduce carbon emissions.

So, on the whole, heads of state still felt obliged to come up with some results—but nothing too radical.

U.S. President Barack Obama's role in the proceedings seems to have been pivotal. He jetted in on the final day of negotiations and gave a tepid speech stating his country's modest bargaining position. This was greeted coolly (some accounts mention choruses of boos). Then, later in the day, he apparently burst in on a meeting including heads of state or high-level negotiators from China, India, Brazil, and South Africa, insisting that an agreement be reached (up to this point, according to most accounts, the Chinese had been obstructing any deal). Obama managed to persuade the other leaders to sign onto a

three-page, non-binding Accord, which, at a midnight press conference, he presented to the other 189 nations attending the conference for their acceptance (no changes to the text were to be permitted). The full text of the document can be found at [\[UNFCC Framework Convention on Climate Change\]](#).

Environmental activists and representatives of poor nations most vulnerable to rising sea levels or desertification were unhappy with these results. Bill McKibben of the organization 350.org called it "an end far worse than most [climate activists] had imagined." Ian Fry of the drowning island nation of Tuvalu likened it to "being offered 30 pieces of silver to betray our people and our future." Kumi Naidoo, the head of Greenpeace International, called Copenhagen simply "a crime scene."

On the other hand, U.N. secretary-general Ban Ki-moon told a press conference that he welcomed the Accord as "an important beginning," and Sierra Club executive director Carl Pope released a statement calling it "an historic, if incomplete, agreement."

What was agreed—and what wasn't

The main points of the Copenhagen Accord are easy to summarize:

- Industrial countries must list their individual emissions reductions targets, and less-industrialized countries must list the actions they will take to cut emissions by specific amounts.
- All countries must accept a transparent system for monitoring their emissions.
- Poor countries will be paid to prevent deforestation.
- Wealthy nations will establish a fund (growing from 30 billion dollars per year to \$100 billion per year by 2020) to help poor and vulnerable nations adapt to climate change.
- Signatory nations accept a goal of limiting global warming to 2 degrees Celsius by 2050.
- The Accord creates a Technology Mechanism to accelerate development of low-carbon technology, but supplies no details.

It is important to emphasize that this is not a binding legal or political agreement. The Accord is not a U.N.-sanctioned document, though the U.N. has officially moved to "take note" of it, which essentially means it may be considered in future climate gatherings as the framework for a legally binding agreement. The U.S. delegation made it clear that the U.N. cannot modify the Accord. While it was negotiated effectively in secret by five countries, many other nations have now signed on to it, and the signing countries together account for over 80 percent of total global emissions. Some countries, including the island nation of Tuvalu, have strongly repudiated the document.

Criticisms of the Accord's substance (leaving aside complaints about the exclusion of most nations from negotiations, its abandonment of the U.N. framework, and so on) include the following:

- The limit of **2 degrees C is too high**. A limit of 1.5 degrees

was already supported by over 100 countries and is necessary to avert catastrophic climate impacts.

- The Accord offers **no cap for CO2 concentrations**. The scientific consensus a few years ago was that an atmospheric CO2 level of 450 parts per million would translate to a temperature increase of 2 degrees over pre-industrial levels. But that conclusion has been called into question due to the likelihood of feedbacks (e.g., as arctic ice melts, it reflects less sunlight back into space, causing even more global warming). This is one of the reasons most scientists now support a 350 ppm cap on atmospheric CO2. By setting a limit of 2 degrees temperature increase without specifying a CO2 cap, the Accord may implicitly be adhering to the older scientific consensus, which would mean a 450 ppm cap and 3 degrees or more of real temperature increase. Any scientific assessment of temperature and CO2 targets is delayed until 2015.
- There is **no target date for peaking of emissions** mentioned in the Accord, just a vague suggestion that emissions should "peak as soon as possible."
- There are **no global emissions** targets for 2020 or 2050. Instead, the Accord merely proposes listing the voluntary targets of developed and developing countries. Based on current assessments of country promises, these 2020 targets will put the world on a track toward 3.5 to 4 degrees of warming.
- The Accord makes general statements about need for adaptation and an end to deforestation, but there is **no concrete deal on reducing emissions from deforestation and forest degradation** (although this may be a relatively good thing, as the negotiations were veering toward offset loopholes).
- The **promised finances for poor nations are too small**. For example, African countries had sought \$400 billion in short-term financing for climate change adaptation, with an immediate amount of \$150 billion needed. In the longer term they say 5 percent of the industrial world's GDP is needed (about \$2 trillion). Not only were much smaller amounts offered, but U.S. negotiators including Hillary Clinton implied that poor nations needed to "associate" themselves with the Accord in order to be eligible for funds.

On the bright side: the Clean Development Mechanism negotiated in Copenhagen seems to have excluded carbon capture and storage, thus reducing the incentive for wasting money on this dead-end technology. Expect pushback from the coal industry on that.

Why agreeing was hard (and will continue to be)

The battle to rescue the planet from climate calamity has been waged uphill from the start. That's essentially because we humans tend to discount future events, whether they're perceived favorably or unfavorably: immediate profits are worth more to companies than similar profits ten years hence; similarly, the immediate cost of averting climate change looms large compared to the estimated cost of dealing with its consequences decades from now. This attitude was exemplified, for example, in the comment of U.S. House of Representatives member Joe Barton, who told Reuters on the

sidelines of the Copenhagen conference, "We're not going to let jobs be destroyed in America for some esoteric environmental benefit 100 years from now."

But there's more to it than that. Over the past couple of centuries economic growth has been closely tied to increased burning of fossil fuels. And economic growth has become the universal measure of national well-being. Thus when talking to politicians, climate scientists often try to gain traction by describing the impact of future CO2 emissions in terms of the cost to future economic growth. Their hope is that this future cost will be high enough to justify the immediate economic sacrifice that would result from phasing out the use of fossil fuels. This is a tough argument to win, though it plays differently according to the audience: relative receptivity depends on who will be impacted most by climate change and who will bear the highest immediate costs during the energy transition. (Sometimes environmentalists go so far as to suggest that the transition from fossil fuels to "green" energy sources will result in enormous economic growth; however, this ignores the very real economic benefits of cheap fossil fuels and the problems with most of the renewable alternatives, as outlined for example in the report ["Searching for a Miracle"](#).

And so, at the climate talks in Copenhagen, bargaining positions closely reflected countries' relative vulnerability to long-range environmental impacts versus short-range economic costs for adaptation.

As mentioned, China evidently obstructed any agreement from the start. No doubt this was largely due to the fact that this nation is the world's top greenhouse gas emitter, uses over twice as much coal as the next country in line (the U.S.), and requires at least 8 percent economic growth per annum to stave off domestic political unrest. While China is quickly becoming the world leader in renewable energy technologies, it has no realistic prospect of phasing out coal without giving up its high GDP growth rates. China produces half the world's cement and 40 percent of its iron and steel; over the next 15 years, it plans to urbanize a number of its people about equal to the total population of North America—a continent that took more than a century to accomplish a similar-sized task. That means more cement, steel, appliances, power plants, and all the other energy-guzzling accouterments of urban existence. Mark Lynas, an environmental writer who was present at the final Friday night negotiations at Copenhagen, summarized the situation this way: "China knows it is becoming an uncontested superpower; indeed its newfound muscular confidence was on striking display in Copenhagen. Its coal-based economy doubles every decade, and its power increases commensurately. Its leadership will not alter this magic formula unless they absolutely have to." [[How do I know China wrecked the Copenhagen deal? I was in the room](#)]. In effect, by subverting a strong, binding climate agreement while directing blame for failure toward western nations, China is playing brilliant climate politics—with deadly consequences for all.

India's economy is also highly coal dependent, also growing rapidly, also on a trajectory of rapid urbanization. And so it should come as no surprise that this country largely echoed China's position.

There are many who correctly point out that wealthy western industrial nations are responsible for the vast bulk of historic greenhouse gas emissions, and who then go on to conclude that future climate policy must therefore center on achieving economic justice by requiring rich nations to reduce fossil fuel consumption much faster than poor ones while financing climate change mitigation and adaptation in those less-industrialized countries. If China and India have now grown big enough to bully their way around international negotiations, we should applaud them, say climate justice activists, because this means the already-rich countries are no longer in the driver's seat. Those who hold this view tend to blame western nations (especially the U.S.) for lack of progress in the Copenhagen talks. The problem with this framing is that it doesn't take account of the reality that China and India have little real interest in forging a strong, binding climate accord, and without them there can be no global agreement.

There's plenty of blame to go around for slow progress on climate policy, but the bottom line is this: once we're done fairly apportioning that blame, is there still a viable path toward an agreement?

Not if Russia gets a veto. This nation played a less visible role in wrecking the Copenhagen process, but that may be because it allowed China to play the spoiler on its behalf. Russia is the world's top oil producer, the world's biggest gas exporter, has the world's second-largest coal reserves, and can claim hardly even a token renewable energy sector.

Some fossil fuel exporting nations are rich (think Australia or Kuwait) but most are poor (think Nigeria or Angola). Prior to Copenhagen, OPEC floated the proposal that fossil fuel importers should pay exporters for the oil, coal, or gas that the latter keep in the ground to avoid greenhouse gas emissions. It's a nice idea, in the same way that that it's nice to imagine money trees or horns of plenty. But in the real world nations grow their economies by using energy to produce goods and services, not by paying for energy they'll never use.

Among the fossil fuel exporters, Venezuela was most vocal in promoting strong climate policy in Denmark: the politics and personality of that nation's president, Hugo Chavez, in this instance evidently led to a bargaining position contrary to what would be expected based on his country's economic interests. Or maybe Chavez was the originator of that OPEC policy proposal—which, by ensuring that his country's oil was paid for even if it isn't burned, would obviate almost all the economic sacrifice implied by strong climate policy.

Anyway, Venezuela's oil production is generally declining, a situation this nation holds in common with Britain—which also favored a strong global climate agreement. The European countries (with the exception of Norway) are fossil fuel importers, which means they are more or less forced to plan for a future of ever more expensive fossil fuels. For them, a climate agreement that would phase out fossil fuels globally is not as scary as it is for those that make money from fuel exports.

Small island nations and very poor countries with few indigenous fossil fuel resources were of course the countries most in favor of a strong climate agreement. They have the least to lose from increased prices for fuels they hardly use anyway, the most to lose from climate change, and the most to gain when wealthy nations establish a climate adaptation fund.

That leaves the U.S., the biggest per capita carbon emitter (well, almost—Australia and a couple of OPEC members actually rank higher), but also the world's top fossil fuel importer. With its domestic oil production long in decline but its oil and coal companies still powerfully wielding domestic political influence, the U.S. is deeply conflicted. This ambivalence is reflected in domestic climate politics and was also on display in President Obama's efforts at Copenhagen.

The nations that negotiated the Accord included the world's first and second foremost coal burners (China and the U.S.); the country home to the world's largest coal company (India); a prominent coal exporter (South Africa); and what will probably prove to be the last nation to have luck finding large amounts of oil (Brazil). It should be noted that Brazil, which is also a major biofuels producer, has just (as of December 28) announced that it has unilaterally made its ambitious 2020 emissions reduction targets legally binding. Nevertheless, with the rest of this cast of characters at the table, it should have surprised no one when the Accord turned out to be non-binding and weak.

Further, the Accord's implementation could turn out to be a joke. The document says nothing about how voluntary targets are to be achieved—whether through carbon taxes, cap-and-trade, or other mechanisms. And, as climate scientist James Hansen has pointed out tirelessly during the past few months, cap-and-trade programs, unless set up and managed flawlessly, can easily be "gamed" by fossil fuel producers by buying phony offsets while continuing to increase total emissions.

If all of this sounds shamefully self-interested and corrupt, just put yourself in the shoes of a high-level politician. No would-be leader who fails to promise economic growth is taken seriously to begin with, so the only politicians we have are ones committed to producing growth. Those who succeed at this are rewarded; those who fail are sidelined and forgotten.

Should we ever seriously have expected a much different outcome from Copenhagen?

What nobody talked about

Normally we humans like to focus on one problem at a time. It's how our brains are wired, and it's how the political process is set up to function. But reality is not always so simple and clear-cut.

Climate change is just one of several enormous interrelated dilemmas that will sink civilization unless all are somehow addressed. These include at least five long-range problems:

- topsoil loss (25 billion tons per year),
- worsening fresh water scarcity,
- the death of the oceans (currently forecast for around 2050 based on current trends),
- overpopulation and continued population growth, and
- the accelerating, catastrophic loss of biodiversity.

As events are unfolding now, these problems, together with climate change, will combine over the next few years or decades to trigger a food crisis of a scale and intensity that will dwarf to insignificance any famine in human history.

To make matters even more grim, there are two near-term dilemmas that may make climate change and these other problems much harder to address: peak oil and economic collapse.

Some of my friends who were on the streets of Copenhagen in early December assure me that most activists and concerned citizens they talked to there knew about peak oil. But the media offered no clue that the officials negotiating in the Bella Center ever mentioned fossil fuel supply limits. For many years the default assumption in all climate negotiations has been that the world has enough conventional fossil fuels to enable it to continue increasing oil, coal, and gas consumption (and hence carbon emissions) up until at least the end of this century. In fact, global oil production has probably already entered its terminal decline and coal and gas extraction will likewise do so in about 15 years—which means that the world may have seen its all-time peak of total energy production from fossil fuels during the years 2005 to 2008. Earth probably has enough economically extractable conventional fossil fuels to raise atmospheric CO₂ levels to about 470 ppm—high enough to trigger human and environmental catastrophe (remember, the "safe" level is 350 ppm), but not nearly as high as the projections commonly mentioned in U.N. climate literature. (The potential amount of carbon emissions from unconventional fossil fuels, such as tar sands and oil shale, is immense, but actual production of those fuels is likely to be constrained by a variety of economic factors, as discussed in ["Searching for a Miracle".](#))

Because petroleum has been the driver of most economic expansion during the past few decades and there is no ready substitute for it, peak oil basically means the end of economic growth as we have known it. And without economic growth, our entire financial system comes apart. Indeed, that's exactly what we've been seeing over the past 18 months in the failure of trillions of dollars' worth of bets on future economic expansion. (For a discussion of the role of peak oil in the financial crisis, see ["Temporary Recession or the End of Growth?"](#)).

No politician can ignore the worldwide economic crisis, yet its significance for the climate talks is rarely discussed. Now that people can't afford to drive as much, or even heat their homes in many cases, global carbon emissions have declined during the past year. That means that if the economy is in only a temporary state of "recovery" and resumes its swoon (as many financial analysts anticipate), and if global oil production has indeed peaked, then

global carbon emissions have probably already peaked too. In which case, the world has achieved its first major goal in mitigating climate catastrophe.

Economic crisis makes climate change much harder to solve in the way everyone wants to see—i.e., with lots of green-tech growth. But it makes almost inevitable a "solution" that nobody wants: dramatic economic contraction leading to sharply declining energy demand. This is similar to famine "solving" overpopulation.

Responsible officials can discuss none of this in public lest investors lose their nerve and head for the exits. But a conversation that excludes such essential realities is delusional.

How might that pivotal Friday night negotiation in the Bella Center have gone if it had been grounded in reality?

President Obama might have said something like this: "Colleagues, global oil production has peaked and we have witnessed the resulting carnage in the global economy. We have likely seen the last of economic growth, in an overall sense. We are in an entirely new era. Adopting strict carbon emissions caps will help us end our dependence on fossil fuels—which we must do both to mitigate climate change and also to reduce the economic impacts of fuel scarcity. While giving up fossil fuels means reducing opportunities for growth, continuing to use them is no longer an option. We must adapt to this new reality."

The Chinese delegate would have objected: "But our nation needs to continue using coal in ever-increasing amounts. If we don't continue to grow our economy at 8 percent annually, the people will revolt. We're doing all we can to develop renewable energy, but only coal can give us the growth we need." To which Obama might have replied: "Your coal production will be peaking during the next few years anyway, and you won't be able to import enough from Australia and Indonesia to maintain growth in total energy production. Your economy is about to stall in any case—it is heavily dependent on exports, and Americans just aren't going to be buying a lot more Chinese goods. Your only hope, as ours, is to build renewable energy infrastructure at top speed, provide as much of a basic safety net for citizens as we can, try to enlist them in the overall energy transition, and hope for the best. Meanwhile, a strong climate agreement can at least help us change direction toward reducing our reliance on fossil fuels, and we are obligated to produce such an agreement anyway for the sake of the planet and future generations. Let's get this done."

But that's evidently not what transpired. Instead, all accounts suggest the negotiations amounted to a theatrical set piece in which each player stayed rigidly on script.

If governments are having a difficult time addressing climate change in any serious fashion, they're not doing much better with regard to any of the other problems mentioned. Key nations are going about "solving" their financial crises by shoveling money by the billions and trillions at bankers who were largely responsible for creating the mess to begin with. Peak oil is regarded by heads of state as a subject

unworthy of mention. The crisis of fresh water scarcity is being dealt with by pumping ancient aquifers until they're dry. Topsoil erosion has slowed in a few places, but overall continues at a staggering pace.

These problems, which will shape our destiny over the next few years and decades, are for the most part discussed only by experts in relevant fields. Meanwhile citizens are subjected to a steady stream of "infotainment" and political rhetoric utterly divorced from crumbling physical reality. This is easy to illustrate with ludicrously disinforming statements from industry-backed climate-change deniers. But responsible advocates of a strong climate policy are often nearly as soaked in delusion.

Here's just one example. Professor Mark Maslin, Director of the Environment Institute at University College London, was recently quoted as saying: "The science tells us that we must drastically cut the amount of carbon going into the atmosphere to avoid catastrophic climate change. But we must also protect the moral and ethical right of countries to develop and achieve the same standard of living as we have in the west." This is a completely unremarkable statement with which nearly everyone at the climate talks in Copenhagen would probably have agreed—at least publicly. But think about it: what does this "development" consist of? The assumption is that poor countries can and should use more fossil fuels while rich ones wean themselves. But there just aren't enough fossil fuels available to enable that to happen. Poor countries will never achieve "the same standard of living as we have in the west." Rather, in the decades ahead, as nonrenewable resources deplete, people in the west will involuntarily give up their material standard of living until their way of life is supported only by renewable resources and the recycling of non-renewables. That means economic contraction, big time. We have a very long downward ramp to negotiate until that sustainable baseline is achieved.

Economic justice or leveling is to some extent inevitable during the energy transition. But it won't consist of poor families in Senegal adopting the living standards of folks in Seattle or Stuttgart. It will be a matter of industrialized countries seeing a huge increase in rates of absolute poverty.

In the meantime, countries of the global north could do a lot of good just by canceling the southern nations' debts and by ceasing to enforce trade rules that continue to transfer wealth mostly from poor countries to rich. Moreover, if our goal is to achieve global equity, there is one other thing that actually might make a significant difference: that is the shifting of wealth and income away from truly rich individuals—from bankers, CEOs, and hedge fund managers—and from the global weapons industry. The money could be used to fund public programs for food, shelter, and medical care in the industrialized nations as these careen into economic depression, and to bankroll Asia, Central and South America, and Africa, not in "development" as conventionally conceived (meaning urbanization), but in adopting simple, cheap technologies to avoid burning wood, charcoal, and dung for cooking and home heating; in helping them replace slash-and-burn agriculture with small-scale ecological farming; and in supporting them in scrapping and (where possible)

replacing inefficient, polluting, hand-me-down diesel vehicles and factories. None of these things would be easy to achieve, but they are all at least within the realm of the possible.

In summary, the discussions in Denmark took place in a conceptual fantasy world in which climate change is the only global crisis that matters much; in which rapid economic growth is still an option; in which fossil fuels are practically limitless; in which a western middle class staring at the prospect of penury can be persuaded voluntarily to transfer a significant portion of its rapidly evaporating wealth to other nations; in which subsistence farmers in poor nations should all aspire to become middle-class urbanites; and in which the subject of human overpopulation can barely be mentioned.

Once again: it's no wonder more wasn't achieved in Copenhagen.

Where does that leave us?

Copenhagen was a watershed event. Climate change has become, in many people's minds, the central survival issue for our species, and the Copenhagen talks provided a pivotal moment for addressing that issue. The fact that the talks failed to produce a binding agreement is therefore of some significance.

The next opportunity to forge a binding global climate treaty will be the 2010 U.N. climate conference in Mexico City. Many see this as a chance to achieve what proved elusive in Copenhagen. But the same challenges will face leaders there. And if the global economy relapses in the meantime, national politicians may be even more reluctant to take bold action to limit fossil fuel consumption, as they'll want to keep all their economic options open. Indeed, it seems likely that for the foreseeable future economic implosion will be sucking the air from any room in which heads of state are gathered.

So, international policies are needed if we are to deal with a potentially game-ending global issue like climate change, yet there is now convincing evidence that national and supra-national institutions are incapable of producing effective climate policies.

The same could be said for other crises mentioned above. It's not enough that national governments can't get together to solve climate change. They can't solve economic meltdown, peak oil, water scarcity, soil erosion, or overpopulation either. Yes, there are individual nations like Tuvalu that can muster a decent policy on one issue or another. Denmark is probably the shining example among industrial nations: it has reduced its greenhouse gas emissions by 14 percent since 1990 while maintaining constant energy consumption and growing its GDP by more than 40 percent. But these are the rare exceptions, and apparently destined to stay that way. We have no global means of dealing with the toxic debt that is strangling the world economy. We have no agreements in place to prevent the death of the oceans. There is no global policy to avert economic impacts from fossil fuel depletion. There is no worldwide protocol to protect the precious layer of living topsoil that is all that separates us from famine. There is no effective global convention on fresh water conservation.

This is not to say there is nothing that can be done about these problems. In fact, there are organizations and communities in many nations doing path-breaking work to address each and every one of them. Some examples:

- Agronomists at the Land Institute in Salina, Kansas, led by Wes Jackson, have for years been patiently developing perennial grain crops capable of feeding billions without destroying topsoil.
- The city of Zurich has decided through popular vote to become a 2000-Watt society. This means cutting energy consumption from the current 6000 Watts per person to one-third that amount over the next three or four decades. This was evidently a response both to climate change and the problem of energy security.
- Here in Sonoma County, California, a Go Local Co-op has formed; it's an extension of the national organization, Business Alliance for a Living Local Economy (BALLE). One of its projects is "Sustaining Capital"—a community cooperative capital formation model that, if successful and replicated widely, could end local economies' dependence on Wall Street banks.
- At Sunga in Madhyapur Thimi, Nepal, a community-supported project has built a water treatment plant based on reed-bed constructed wetlands that also serves as the main source of irrigation for farmers in the region.

These are just a few items out of hundreds, maybe thousands that could be cited. But, in aggregate, are they enough? Obviously not—even in the estimation of the folks who are doing this admirable work. Some problems are more easily tackled at the local level than others (local efforts can help maintain biodiversity, but without international agreements it's not obvious how the oceans could be rescued). And many local success stories actually depend on global systems of finance and provisioning (for example, the Nepalese water treatment plant mentioned above was built with financial support from the United Nations Human Settlements Program, U.N.-Habitat's Water for Asian Cities Program, the Asian Development Bank, and Water Aid, and received technical support from the Environment and Public Health Organization). Discouraging? Of course. But absent global agreements, local efforts are what we've got, and we will simply have to make the most of them that we can.

Meanwhile, given the amount of carbon emissions already in the atmosphere, climate impacts are in store no matter what happens at the U.N. negotiations in Mexico City. Something similar could be said with regard to all the other problems mentioned: even if strong policies could somehow be forged tomorrow, serious challenges will arise in the years ahead with regard to water, food, energy, and the economy.

If such impacts are unquestionably coming, then we should be doing something to prepare. Since we don't know exactly what the impacts will be, or when or where they will land, the most sensible strategy is simply to build resilience throughout the system. Resilience implies dispersed control points and dispersed inventories, and hence regional self-sufficiency—the opposite of economic efficiency, the

central rationale for globalization—and so it needs to be organized primarily at the local level.

To summarize: three factors—the need for resilience, the lack of effective policy at national and global levels, and the tendency of the best responses to emerge regionally and at a small scale—argue for dealing with the crushing crises of the new century locally, even though there is still undeniable need for larger-scale, global solutions.

Does this mean we should give up even trying to work at the national and global levels? Each person will have to make up her or his own mind on that one. To my thinking, Copenhagen is something of a last straw. I have no interest in trying to discourage anyone from undertaking national or global activism. Indeed, there is a danger in taking attention away from national and international affairs: policy could get hijacked not just by parties even less competent than those currently in command, but by ones that are just plain evil. Nevertheless, this writer is finally convinced that, with whatever energies for positive change may be available to us, we are likely to accomplish the most by working locally and on a small scale, while sharing information about successes and failures as widely as possible.

A final note: As 2010 begins we are about to enter the second decade of the 21st century. Historians often remark that the character of a new century doesn't make itself apparent until its second decade (think World War I). Perhaps peak oil, the global financial crash, and the failure of Copenhagen are the signal events that will propel us into the Century of Decline. If these events are indeed indicative, it will be a century of economic contraction rather than growth; a century less about warnings of environmental constraints and consequences than about the *fulfillment* of past warnings; and a century of local action rather than grand global schemes.

I suspect that things are going to be noticeably different from now on.