

Really Bad Timing

(What is wrong with us?)

Many answers to that question have been offered, ranging from the extreme difficulty of getting all the governments in the world to agree on anything, to an absence of real technological solutions, to something deep in our human nature that keeps us from acting in the face of seemingly remote threats, to—more recently—the claim that we have blown it anyway and there's no point in even trying to do much more than enjoy the scenery on the way down.

Some of these explanations are valid, but all are ultimately inadequate.

Take the claim that it's just too hard for so many countries to agree on a course of action. It is hard. But many times in the past, the United Nations has helped governments to come together to tackle tough cross-border challenges, from ozone depletion to nuclear proliferation. The deals produced weren't perfect, but they represented real progress. Moreover, during the same years that our governments failed to enact a tough and binding legal architecture requiring emission reductions, supposedly because cooperation was too complex, they managed to create the World Trade Organization—an intricate global system that regulates the flow of goods and services around the planet, under which the rules are clear and violations are harshly penalized.

The assertion that we have been held back by a lack of technological solutions is no more compelling. Power from renewable sources like wind and water predates the use of fossil fuels and is becoming cheaper, more efficient, and easier to store every year. The past two decades have seen an explosion of ingenious zero-waste design, as well as green urban planning. Not only do we have the technical tools to get off fossil fuels, we also have no end of small pockets where these low carbon lifestyles have been tested with tremendous success. And yet the kind of large-scale transition that would give us a collective chance of averting catastrophe eludes us.

Is it just human nature that holds us back then? In fact we humans have shown ourselves willing to collectively sacrifice in the face of threats many times, most famously in the embrace of rationing, victory gardens, and victory bonds during World Wars I and II. Indeed to support fuel conservation during World War II, pleasure driving was virtually eliminated in the U.K., and between 1938 and 1944, use of public transit went up by 87 percent in

the U.S. and by 95 percent in Canada. Twenty million U.S. households—representing three fifths of the population—were growing victory gardens in 1943, and their yields accounted for 42 percent of the fresh vegetables consumed that year. Interestingly, all of these activities together dramatically reduce carbon emissions.²²

Yes, the threat of war seemed immediate and concrete but so too is the threat posed by the climate crisis that has already likely been a substantial contributor to massive disasters in some of the world's major cities. Still, we've gone soft since those days of wartime sacrifice, haven't we? Contemporary humans are too self-centered, too addicted to gratification to live without the full freedom to satisfy our every whim—or so our culture tells us every day. And yet the truth is that we continue to make collective sacrifices in the name of an abstract greater good all the time. We sacrifice our pensions, our hard-won labor rights, our arts and after-school programs. We send our kids to learn in ever more crowded classrooms, led by ever more harried teachers. We accept that we have to pay dramatically more for the destructive energy sources that power our transportation and our lives. We accept that bus and subway fares go up and up while service fails to improve or degenerates. We accept that a public university education should result in a debt that will take half a lifetime to pay off when such a thing was unheard of a generation ago. In Canada, where I live, we are in the midst of accepting that our mail can no longer be delivered to our homes.

The past thirty years have been a steady process of getting less and less in the public sphere. This is all defended in the name of austerity, the current justification for these never-ending demands for collective sacrifice. In the past, other words and phrases, equally abstracted from daily life, have served a similar purpose: balanced budgets, increased efficiency, fostering economic growth.

It seems to me that if humans are capable of sacrificing this much collective benefit in the name of stabilizing an economic system that makes daily life so much more expensive and precarious, then surely humans should be capable of making some important lifestyle changes in the interest of stabilizing the physical systems upon which all of life depends. Especially because many of the changes that need to be made to dramatically cut emissions would also materially improve the quality of life for the majority of people on the planet—from allowing kids in Beijing to play outside without

wearing pollution masks to creating good jobs in clean energy sectors for millions. There seems to be no shortage of both short-term and medium-term incentives to do the right thing for our climate.

Time is tight, to be sure. But we could commit ourselves, tomorrow, to radically cutting our fossil fuel emissions and beginning the shift to zero-carbon sources of energy based on renewable technology, with a full-blown transition underway within the decade. We have the tools to do that. And if we did, the seas would still rise and the storms would still come, but we would stand a much greater chance of preventing truly catastrophic warming. Indeed, entire nations could be saved from the waves. As Pablo Solón, Bolivia's former ambassador to the United Nations, puts it: "If I burned your house the least I can do is welcome you into my house . . . and if I'm burning it right now I should try to stop the fire now."²³

But we are not stopping the fire. In fact we are dousing it with gasoline. After a rare decline in 2009 due to the financial crisis, global emissions surged by a whopping 5.9 percent in 2010—the largest absolute increase since the Industrial Revolution.²⁴

So my mind keeps coming back to the question: what is wrong with us? What is really preventing us from putting out the fire that is threatening to burn down our collective house?

I think the answer is far more simple than many have led us to believe: we have not done the things that are necessary to lower emissions because those things fundamentally conflict with deregulated capitalism, the reigning ideology for the entire period we have been struggling to find a way out of this crisis. We are struck because the actions that would give us the best chance of averting catastrophe—and would benefit the vast majority—are extremely threatening to an elite minority that has a stranglehold over our economy, our political process, and most of our major media outlets. That problem might not have been insurmountable had it presented itself at another point in our history. But it is our great collective misfortune that the scientific community made its decisive diagnosis of the climate threat at the precise moment when those elites were enjoying more unfettered political, cultural, and intellectual power than at any point since the 1920s. Indeed, governments and scientists began talking seriously about radical cuts to greenhouse gas emissions in 1988—the exact year that marked the dawning of what came to be called “globalization,” with the signing of the agreement

representing the world's largest bilateral trade relationship between Canada and the United States, later to be expanded into the North American Free Trade Agreement (NAFTA) with the inclusion of Mexico.²⁵

When historians look back on the past quarter century of international negotiations, two defining processes will stand out. There will be the climate process: struggling, sputtering, failing utterly to achieve its goals. And there will be the corporate globalization process, zooming from victory to victory: from that first free trade deal to the creation of the World Trade Organization to the mass privatization of the former Soviet economies to the transformation of large parts of Asia into sprawling free-trade zones to the “structural adjusting” of Africa. There were setbacks to that process, to be sure—for example, popular pushback that stalled trade rounds and free trade deals. But what remained successful were the ideological underpinnings of the entire project, which was never really about trading goods across borders—selling French wine in Brazil, for instance, or U.S. software in China. It was always about using these sweeping deals, as well as a range of other tools, to lock in a global policy framework that provided maximum freedom to multinational corporations to produce their goods as cheaply as possible and sell them with as few regulations as possible—while paying as little in taxes as possible. Granting this corporate wishlist, we were told, would fuel economic growth, which would trickle down to the rest of us, eventually. The trade deals mattered only in so far as they stood in for, and plainly articulated, this far broader agenda.

The three policy pillars of this new era are familiar to us all: privatization of the public sphere, deregulation of the corporate sector, and lower corporate taxation, paid for with cuts to public spending. Much has been written about the real-world costs of these policies—the instability of financial markets, the excesses of the super-rich, and the desperation of the increasingly disposable poor, as well as the failing state of public infrastructure and services. Very little, however, has been written about how market fundamentalism has, from the very first moments, systematically sabotaged our collective response to climate change, a threat that came knocking just as this ideology was reaching its zenith.

The core problem was that the stranglehold that market logic secured over public life in this period made the most direct and obvious climate responses seem politically heretical. How, for instance, could societies invest

massively in zero-carbon public services and infrastructure at a time when the public sphere was being systematically dismantled and auctioned off? How could governments heavily regulate, tax, and penalize fossil fuel companies when all such measures were being dismissed as relics of “command and control” communism? And how could the renewable energy sector receive the supports and protections it needed to replace fossil fuels when “protectionism” had been made a dirty word?

A different kind of climate movement would have tried to challenge the extreme ideology that was blocking so much sensible action, joining with other sectors to show how unfettered corporate power posed a grave threat to the habitability of the planet. Instead, large parts of the climate movement wasted precious decades attempting to make the square peg of the climate crisis fit into the round hole of deregulated capitalism, forever touting ways for the problem to be solved by the market itself. (Though it was only years into this project that I discovered the depths of collusion between big polluters and Big Green.)

But blocking strong climate action wasn't the only way that the triumph of market fundamentalism acted to deepen the crisis in this period. Even more directly, the policies that so successfully freed multinational corporations from virtually all constraints also contributed significantly to the underlying cause of global warming—rising greenhouse gas emissions. The numbers are striking: in the 1990s, as the market integration project ramped up, global emissions were going up an average of 1 percent a year; by the 2000s, with “emerging markets” like China now fully integrated into the world economy, emissions growth had sped up disastrously, with the annual rate of increase reaching 3.4 percent a year for much of the decade. That rapid growth rate continues to this day, interrupted only briefly in 2009 by the world financial crisis.²⁶

With hindsight, it's hard to see how it could have turned out otherwise. The twin signatures of this era have been the mass export of products across vast distances (relentlessly burning carbon all the way), and the import of a uniquely wasteful model of production, consumption, and agriculture to every corner of the world (also based on the profligate burning of fossil fuels). Put differently, the liberation of world markets, a process powered by the liberation of unprecedented amounts of fossil fuels from the earth,

has dramatically sped up the same process that is liberating Arctic ice from existence.

As a result, we now find ourselves in a very difficult and slightly ironic position. Because of those decades of hardcore emitting exactly when we were supposed to be cutting back, the things we must do to avoid catastrophic warming are no longer just in conflict with the particular strain of deregulated capitalism that triumphed in the 1980s. They are now in conflict with the fundamental imperative at the heart of our economic model: grow or die.

Once carbon has been emitted into the atmosphere, it sticks around for hundreds of years, some of it even longer, trapping heat. The effects are cumulative, growing more severe with time. And according to emissions specialists like the Tyndall Centre's Kevin Anderson (as well as others), so much carbon has been allowed to accumulate in the atmosphere over the past two decades that now our only hope of keeping warming below the internationally agreed-upon target of 2 degrees Celsius is for wealthy countries to cut their emissions by somewhere in the neighborhood of 8–10 percent a year.²⁷ The “free” market simply cannot accomplish this task. Indeed, this level of emission reduction has happened only in the context of economic collapse or deep depressions.

I'll be delving deeper into those numbers in Chapter 2, but the bottom line is what matters here: our economic system and our planetary system are now at war. Or, more accurately, our economy is at war with many forms of life on earth, including human life. What the climate needs to avoid collapse is a contraction in humanity's use of resources; what our economic model demands to avoid collapse is unfettered expansion. Only one of these sets of rules can be changed, and it's not the laws of nature.

Fortunately, it is eminently possible to transform our economy so that it is less resource-intensive, and to do it in ways that are equitable, with the most vulnerable protected and the most responsible bearing the bulk of the burden. Low-carbon sectors of our economies can be encouraged to expand and create jobs, while high-carbon sectors are encouraged to contract. The problem, however, is that this scale of economic planning and management is entirely outside the boundaries of our reigning ideology. The only kind of contraction our current system can manage is a brutal crash, in which the most vulnerable will suffer most of all.

So we are left with a stark choice: allow climate disruption to change everything about our world, or change pretty much everything about our economy to avoid that fate. But we need to be very clear: because of our decades of collective denial, no gradual, incremental options are now available to us. Gentle tweaks to the status quo stopped being a climate option when we supersized the American Dream in the 1990s, and then proceeded to take it global. And it's no longer just radicals who see the need for radical change. In 2012, twenty-one past winners of the prestigious Blue Planet Prize—a group that includes James Hansen, former director of NASA's Goddard Institute for Space Studies, and Gro Harlem Brundtland, former prime minister of Norway—authored a landmark report. It stated that, “In the face of an absolutely unprecedented emergency, society has no choice but to take dramatic action to avert a collapse of civilization. Either we will change our ways and build an entirely new kind of global society, or they will be changed for us.”²⁸

That's tough for a lot of people in important positions to accept, since it challenges something that might be even more powerful than capitalism, and that is the fetish of centrism—of reasonableness, seriousness, splitting the difference, and generally not getting overly excited about anything. This is the habit of thought that truly rules our era, far more among the liberals who concern themselves with matters of climate policy than among conservatives, many of whom simply deny the existence of the crisis. Climate change presents a profound challenge to this cautious centrism because half measures won't cut it: “all of the above energy” programs, as U.S. President Barack Obama describes his approach, has about as much chance of success as an all of the above diet, and the firm deadlines imposed by science require that we get very worked up indeed.

By posing climate change as a battle between capitalism and the planet, I am not saying anything that we don't already know. The battle is already under way, but right now capitalism is winning hands down. It wins every time the need for economic growth is used as the excuse for putting off climate action yet again, or for breaking emission reduction commitments already made. It wins when Greeks are told that their only path out of economic crisis is to open up their beautiful seas to high-risk oil and gas drilling. It wins when Canadians are told our only hope of not ending up

like Greece is to allow our boreal forests to be flayed so we can access the semisolid bitumen from the Alberta tar sands. It wins when a park in Istanbul is slotted for demolition to make way for yet another shopping mall. It wins when parents in Beijing are told that sending their wheezing kids to school in pollution masks decorated to look like cute cartoon characters is an acceptable price for economic progress. It wins every time we accept that we have only bad choices available to us: austerity or extraction, poisoning or poverty.

The challenge, then, is not simply that we need to spend a lot of money and change a lot of policies; it's that we need to think differently, radically differently, for those changes to be remotely possible. Right now, the triumph of market logic, with its ethos of domination and fierce competition, is paralyzing almost all serious efforts to respond to climate change. Curthroat competition between nations has deadlocked U.N. climate negotiations for decades: rich countries dig in their heels and declare that they won't cut emissions and risk losing their vaulted position in the global hierarchy; poorer countries declare that they won't give up their right to pollute as much as rich countries did on their way to wealth, even if that means deepening a disaster that hurts the poor most of all. For any of this to change, a worldview will need to rise to the fore that sees nature, other nations, and our own neighbors not as adversaries, but rather as partners in a grand project of mutual reinvention.

That's a big ask. But it gets bigger. Because of our endless delays, we also have to pull off this massive transformation without delay. The International Energy Agency warns that if we do not get our emissions under control by a rather terrifying 2017, our fossil fuel economy will “lock-in” extremely dangerous warming. “The energy-related infrastructure then in place will generate all the CO₂ emissions allowed” in our carbon budget for limiting warming to 2 degrees Celsius—“leaving no room for additional power plants, factories and other infrastructure unless they are zero-carbon, which would be extremely costly.” This assumes, probably accurately, that governments would be unwilling to force the closure of still-profitable power plants and factories. As Farah Birol, the IEA's chief economist, bluntly put it: “The door to reach two degrees is about to close. In 2017 it will be closed forever.” In short, we have reached what some activists have started calling

“Decade Zero” of the climate crisis: we either change now or we lose our chance.²⁹

All this means that the usual free market assurances—A techno-fix is around the corner! Dirty development is just a phase on the way to a clean environment, look at nineteenth-century London!—simply don’t add up. We don’t have a century to spare for China and India to move past their Dickensian phases. Because of our lost decades, it is time to turn this around now. Is it possible? Absolutely. Is it possible without challenging the fundamental logic of deregulated capitalism? Not a chance.

One of the people I met on this journey and who you will meet in these pages is Henry Red Cloud, a Lakota educator and entrepreneur who trains young Native people to become solar engineers. He tells his students that there are times when we must accept small steps forward—and there are other times “when you need to run like a buffalo.”³⁰ Now is one of those times when we must run.

Power, Not Just Energy

I was struck recently by a mea culpa of sorts, written by Gary Stix, a senior editor of *Scientific American*. Back in 2006, he edited a special issue on responses to climate change and, like most such efforts, the articles were narrowly focused on showcasing exciting low-carbon technologies. But in 2012 Stix wrote that he had overlooked a much larger and more important part of the story—the need to create the social and political context in which these technological shifts stand a chance of displacing the all too profitable status quo. “If we are ever to cope with climate change in any fundamental way, radical solutions on the social side are where we must focus, though. The relative efficiency of the next generation of solar cells is trivial by comparison.”³¹

This book is about those radical changes on the social side, as well as on the political, economic, and cultural sides. What concerns me is less the mechanics of the transition—the shift from brown to green energy, from sole-rider cars to mass transit, from sprawling exurbs to dense and walkable cities—than the power and ideological roadblocks that have so far

prevented any of these long understood solutions from taking hold on anything close to the scale required.

It seems to me that our problem has a lot less to do with the mechanics of solar power than the politics of human power—specifically whether there can be a shift in who wields it, a shift away from corporations and toward communities, which in turn depends on whether or not the great many people who are getting a rotten deal under our current system can build a determined and diverse enough social force to change the balance of power. I have also come to understand, over the course of researching this book, that the shift will require rethinking the very nature of humanity’s power—our right to extract ever more without facing consequences, our capacity to bend complex natural systems to our will. This is a shift that challenges not only capitalism, but also the building blocks of materialism that preceded modern capitalism, a mentality some call “extractivism.”

Because, underneath all of this is the real truth we have been avoiding: climate change isn’t an “issue” to add to the list of things to worry about, next to health care and taxes. It is a civilizational wake-up call. A powerful message—spoken in the language of fires, floods, droughts, and extinctions—telling us that we need an entirely new economic model and a new way of sharing this planet. Telling us that we need to evolve.

Coming Out of Denial

Some say there is no time for this transformation; the crisis is too pressing and the clock is ticking. I agree that it would be reckless to claim that the only solution to this crisis is to revolutionize our economy and revamp our worldview from the bottom up—and anything short of that is not worth doing. There are all kinds of measures that would lower emissions substantially that could and should be done right now. But we aren’t taking those measures, are we? The reason is that by failing to fight these big battles that stand to shift our ideological direction and change the balance of who holds power in our societies, a context has been slowly created in which any muscular response to climate change seems politically impossible, especially during times of economic crisis (which lately seems to be all the time).

So this book proposes a different strategy: think big, go deep, and move the ideological pole far away from the stifling market fundamentalism that has become the greatest enemy to planetary health. If we can shift the cultural context even a little, then there will be some breathing room for those sensible reformist policies that will at least get the atmospheric carbon numbers moving in the right direction. And winning is contagious so, who knows? Maybe within a few years, some of the ideas highlighted in these pages that sound impossibly radical today—like a basic income for all, or a rewriting of trade law, or real recognition of the rights of Indigenous people to protect huge parts of the world from polluting extraction—will start to seem reasonable, even essential.

For a quarter of a century, we have tried the approach of polite incremental change, attempting to bend the physical needs of the planet to our economic model's need for constant growth and new profit-making opportunities. The results have been disastrous, leaving us all in a great deal more danger than when the experiment began.

There are, of course, no guarantees that a more systemic approach will be any more successful—though there are, as will be explored later on, historical precedents that are grounds for hope. The truth is that this is the hardest book I have ever written, precisely because the research has led me to search out such radical responses. I have no doubt of their necessity, but I question their political feasibility every day, especially given that climate change puts us on such a tight and unforgiving deadline.

It's been a harder book to write for personal reasons too.

What gets me most are not the scary scientific studies about melting glaciers, the ones I used to avoid. It's the books I read to my two-year-old. *Have You Ever Seen a Moose?* is one of his favorites. It's about a bunch of kids that really, really, really want to see a moose. They search high and low—through a forest, a swamp, in brambly bushes and up a mountain, for “a long legged, bulgy nosed, brancky antlered moose.” The joke is that there are moose hiding on each page. In the end, the animals all come out of hiding and the ecstatic kids proclaim: “We’ve never ever seen so many moose!”

On about the seventy-fifth reading, it suddenly hit me: he might never

see a moose. I tried to hold it together. I went back to my computer and began to write about my time in northern Alberta, tar sands country, where members of the Beaver Lake Cree Nation told me about how the moose had changed—one woman described killing a moose on a hunting trip only to find that the flesh had already turned green. I heard a lot about strange tumors too, which locals assumed had to do with the animals drinking water contaminated by tar sands toxins. But mostly I heard about how the moose were simply gone.

And not just in Alberta. “Rapid Climate Changes Turn North Woods into Moose Graveyard,” reads a May 2012 headline in *Scientific American*. A year and a half later, *The New York Times* was reporting that one of Minnesota’s two moose populations had declined from four thousand in the 1990s to just one hundred today.³²

Will he ever see a moose?

Then, the other day, I was slain by a miniature board book called *Snuggle Wuggle*. It involves different animals cuddling, with each posture given a ridiculously silly name: “How does a bat hug?” it asks. “Topsy turry, topsy turry.” For some reason my son reliably cracks up at this page. I explain that it means upside down, because that’s the way bats sleep.

But all I could think about was the report of some 100,000 dead and dying bats raining down from the sky in the midst of record-breaking heat across part of Queensland, Australia. Whole colonies devastated.³³

Will he ever see a bat?

I knew I was in trouble when the other day I found myself bargaining with starfish. Red and purple ones are ubiquitous on the rocky coast of British Columbia where my parents live, where my son was born, and where I have spent about half of my adult life. They are always the biggest kid pleasers, because you can gently pick one up and give it a really good look. “This is the best day of my life!” my seven-year-old niece Miriam, visiting from Chicago, proclaimed after a long afternoon spent in the tide pools.

But in the fall of 2013, stories began to appear about a strange wasting disease that was causing starfish along the Pacific Coast to die by the tens of thousands. Termed the “sea star wasting syndrome,” multiple species were disintegrating alive, their vibrant bodies melting into distorted globs, with legs falling off and bodies caving in. Scientists were mystified.³⁴

As I read these stories, I caught myself praying for the invertebrates to

hang in for just one more year—long enough for my son to be amazed by them. Then I doubted myself: maybe it's better if he never sees a starfish at all—certainly not like this. . . .

When fear like that used to creep through my armor of climate change denial, I would do my utmost to stuff it away, change the channel, click past it. Now I try to feel it. It seems to me that I owe it to my son, just as we all owe it to ourselves and one another.

But what should we do with this fear that comes from living on a planet that is dying, made less alive every day? First, accept that it won't go away. That it is a fully rational response to the unbearable reality that we are living in a dying world, a world that a great many of us are helping to kill, by doing things like making tea and driving to the grocery store and yes, okay, having kids.

Next, use it. Fear is a survival response. Fear makes us run, it makes us leap, it can make us act superhuman. But we need somewhere to run to. Without that, the fear is only paralyzing. So the real trick, the only hope, really, is to allow the terror of an unlivable future to be balanced and soothed by the prospect of building something much better than many of us have previously dared hope.

Yes, there will be things we will lose, luxuries some of us will have to give up, whole industries that will disappear. And it's too late to stop climate change from coming; it is already here, and increasingly brutal disasters are headed our way no matter what we do. But it's not too late to avert the worst, and there is still time to change ourselves so that we are far less brutal to one another when those disasters strike. And that, it seems to me, is worth a great deal.

Because the thing about a crisis this big, this all-encompassing, is that it changes everything. It changes what we can do, what we can hope for, what we can demand from ourselves and our leaders. It means there is a whole lot of stuff that we have been told is inevitable that simply cannot stand. And it means that a whole lot of stuff we have been told is impossible has to start happening right away.

Can we pull it off? All I know is that nothing is inevitable. Nothing except that climate change changes everything. And for a very brief time, the nature of that change is still up to us.