

Climate of Violence

Are we Killing Future Generations?

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Kim Stanley Robinson, *The Ministry for the Future*.
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Every second, the global economy burns through 1,100 barrels of oil, 270 tons of coal, and 4,000,000 cubic feet of natural gas. That combustion dumps enormous amounts of heat energy into the climate system. Some estimates put it at the equivalent of five nuclear bomb explosions. Every. Second. Human civilization is a super volcano.

It has long been known that this needs to change. The international community has committed to limiting global warming to 1.5°C above pre-industrial temperatures (we are already at 1.1°C). We have treaties and targets and conferences and pledges. And yet we are not doing nearly enough. Despite knowing for decades that greenhouse gas emissions must sharply turn downward, we have gone the other direction. 2019 set a record for CO₂ emissions. 2020 was down, but only because of the COVID-19 pandemic. Emissions rose by 6% in 2021 as the global economy rebounded. To meet the 1.5°C target, emissions have to be slashed by over 7% annually for the next thirty years. Current policies put us on track for 3.2°C of warming, a future that would be grim if not catastrophic.

Climate change is a cosmic test of our status as a so-called intelligent species. It would be one thing if a runaway bacterial colony were altering Earth's climate chemistry. They could be forgiven for not seeing and reacting to the consequences of their own behavior. But us? How can we know—or claim to know—but fail to act?

There are many theories about this, each with some truth. On a grand level, the climate system is so unfathomably complex that reading the millions of scientific articles and trillions of data points is a bit like reading the tea leaves. There are tons of legitimate interpretations that can be made. In that plurality—the *sine qua non* of the human condition—we debate what ought to be done. So, according to this theory, it's not self-evident just how we should act and what we should do. Trying to figure that out is not a failure; indeed, quite the opposite. It's not like we are a collective mind in harmony with itself. Our intelligence is multiple, fractured, and spread across billions of people and thousands of institutions.

Of course, not all readings of the evidence are done in good faith. Exxon and others in the powerful “carbon industrial complex”

have long been playing the role of Merchants of Doubt—magnifying uncertainties about climate change to justify delaying action. It's the old tobacco strategy: are we really sure cigarettes cause lung cancer? We can call these actors the “active denialists.” They certainly bear some of the responsibility for our meager response to climate change.

Yet there is also lots of “passive denial” going on. Note my passive voice in the phrase above “it has long been known.” But who really is doing the knowing? Socrates said that knowledge is virtue. Once a wise person knows what is good, they will do what is good, because that is their aim. Of course, people often fail to do good even when they know the right thing to do. Aristotle chalked this up to *akrasia* or weakness of will. Socrates said in such cases, the person is like a drunkard who is not in their right mind and has momentarily forgotten the good and so does not really know the right thing to do. What some call weakness of will, he called forgetfulness.

For climate change, Socrates would argue that our problem is the oldest one in politics: the wise do not rule. We are governed by the masses and by oligarchs who are guided by passion rather than knowledge. And climate change, though undoubtedly real, is just not real enough to excite our passions and hold our attention.

It's a metaphysical dilemma. Climate change is so massive that it disappears. It's everywhere and nowhere. Sure, there are droughts, fires, and floods, but those have always happened. We experience the weather, not the climate. There is no actual heat bomb exploding every second. All that combustion is spread across millions of tailpipes. It keeps slipping from our consciousness. And although it is rapid on a geologic timescale, our impacts are relatively slow on a human timescale. We might know in some arid sense what is going on. But, like the drunkard, we keep forgetting.

Are we harming future generations as a result? We know—abstractly—that they will exist. And yet they are not real. It's easy to forget about them, and that's what we do. In economics, we apply a high discount rate to the future, such that any decision we make weighs the interests of our generation far more heavily than the interests of future generations. In day-to-day life, this means that we all “get ours” while the getting is good. We take our vacations to Alaska to see the glaciers before they are gone, even though the vacation itself contributes to their disappearance. It's long been a philosophical conundrum: why should we care about posterity? Principles of rational self-interest are mute, and the stirrings of empathy are weak when it comes to those who-do-not-yet-exist-and-maybe-never-will.

Kim Stanley Robinson's climate fiction novel, *The Ministry for the Future*, centers on the imaginary international organization of the title, created in 2024. The Ministry is run out of Zurich by a hard-headed, soft-hearted Irish woman named Mary Murphy and her ace team of economists, lawyers, scientists, and policy wonks. Their job is to represent the interests of future generations, as well as to speak for other species and ecosystems that do not have a voice in climate politics. They are supposed to make the future real—to make it present. It is a mission impossible for legal, economic, psychological, and metaphysical reasons.

So, for many years, they fail. Emissions climb and the impacts of climate change hit harder and harder. In other words, this isn't really climate *fiction* at all. Robinson's book grapples with our actual situation: a world that knows but doesn't act. *The Ministry for the Future* starts more or less with our current social and technological structures, and traces one possible path toward a future where greenhouse gas emissions are mitigated, and the current mass extinction of species is halted. How do we get from here to there?

What is it going to take to start doing enough?

Robinson's answer: violence. For us to start taking climate change seriously, things will have to get dark, ugly, and deadly. In other words, they will have to get real, especially for the wealthy.

The violence comes in two forms. First, it is the murderous wrath of Mother Earth. The book opens with a heat wave in India that kills 20 million people. One of our protagonists, Frank May, had been an aid worker in a town besieged by the heat wave. He was a *firangi* (foreigner) trying to help the poor in India. The elderly and the very young started dying first. Then people crowded in his clinic for the last remaining air conditioners.

When the last generators went quiet, those who could still walk went to the lake, which was already reeking with the smell of dead bodies. Frank and the others waded into the warm waters and sat motionless, trying to conserve every ounce of energy. Frank took the last sip of the last clean water from a bottle he had been hiding. He fell asleep with his head resting against the pole of a pier. When he awoke, everyone was dead. He managed to pull his boiled, emaciated frame out of the water. The surrounding brush was on fire. A team of firefighters arrived, spotted Frank, and gave him spoonfuls of water. “His eyes were just slits, and so red. He looked completely mad. Like a different kind of being entirely.”

Climate change was suddenly real enough for India to take drastic action. In the wake of the heat wave, the people swept a new political order into power. They shut down their coal-fired power plants and did much more. Yet the global impact of these measures was limited, as the rest of the world found reasons to ignore them. India accounts for only 7% of global greenhouse gas emissions (despite being home to 18% of the world's population). It is a hot, crowded, and poor place. Tourists can avoid it. There are many places like it in the middle latitudes of the

planet. They will have heat waves. That's a regional problem. "So, when the funerals and the gestures of deep sympathy were done with, many people around the world... went back to business as usual. All around the world, the CO₂ emissions continued."

Thus, the second kind of violence.

The heat wave radicalized many Indians, some of whom formed a group called the Children of Kali (from the Hindu goddess of time, doomsday, and death). They issued an ultimatum to the world: start honoring your pledges to solve climate change, or else. "And so," Robinson writes, "came a time of troubles." It was the beginning of the War for the Earth.

Sometime in the 2030s, Crash Day happened. Within a matter of hours, sixty passenger jets fell out of the sky—a coordinated drone attack that killed over 7,000 people. Airline travel practically ceased overnight. Then, hundreds of diesel-powered container ships were scuttled by submarine drones. The global economy spiraled into a depression. The Children of Kali issued a manifesto over the internet: no more fossil-fuel-burning transportation (25% of total emissions). Then, they went after cows, announcing that they had introduced mad cow disease into global cattle stocks via darts from drones. Power plants and pipelines around the world were destroyed, triggering blackouts and further pain and panic.

The political thinker Hannah Arendt argued that violence is pre-political behavior characteristic of animals deprived of a life governed by words and persuasion. Similarly, Plato sets up the *Republic* with the question of the conditions necessary for speech and reason—no discussion of justice is possible where force reigns. Arendt was reacting to the fascist nightmares of mid-20th century Europe, which were partly inspired by the writings of French revolutionary syndicalist Georges Sorel. His 1908

Reflections on Violence, however, argued that violence could in fact salvage politics from the pits of barbarism. He tried to carefully parse the right conditions for violence to be an effective tool in the pursuit of justice.

So, could climate violence really work? In *How to Blow up a Pipeline*, the climate scholar Andreas Malm makes a plea for eco-sabotage as the only way now to leverage the massive action required. In a review of that book, Ezra Klein points out the pragmatic problems with this strategy. First, it would likely result in a few radicals being tossed in jail and a social backlash that would set the climate movement backward and further entrench carbon-friendly politicians.

Second, sabotage would have all sorts of collateral damage for the poor and working class who are the most vulnerable to soaring energy prices and a crumbling economy.

The Children of Kali have replies to these objections. First, they argue, to prevent the entrenchment of the carbon empire, pursue targeted assassinations. Kill enough of the royals running petrostates and executives running fossil fuel corporations, they say, and the tune will change. Make it clear that it is their lives or decarbonization. In other words, put them in the same existential situation as future generations. Second, collateral damage is unavoidable. Everyone is tangled up in the carbon complex, so there is no bloodless way to disentangle things. You try to target the wealthy (i.e., biggest polluters) as much as possible, because they are the guiltiest. But we are all complicit.

It is just a utilitarian moral calculation: kill some thousands of people now to prevent the deaths of millions in the future. Cause suffering to millions (more-or-less guilty) now to prevent the suffering of billions (wholly innocent) in the future. The most brutal utilitarian logic of short-term violence can be justified, according to the Children of Kali, if the time horizon is long enough and the avoided catastrophe is large enough.

But can such violence really be morally justified? That gets us tangled up in the metaphysics of that avoided catastrophe. If we act to avoid it, then it will never exist. So, the very thing that would justify our action is negated by the action itself. If we don't act—and the catastrophe happens—it will be too late.

Frank wanted to join the Children of Kali, but they wouldn't let him, because he was a *firangi*, and thus, not to be trusted. But he had to do something. As far as he was concerned, he was a ghost. He had already died in the lake. He was a "different kind of being." Robinson uses Frank as a metaphysical hack: he is the future superimposed on the present. That heat death in India was the future of humanity, and Frank was its incarnation as a prophet here and now. And yet he was just a crazy nobody addled by PTSD. Mary Murphy was somebody. She was the head of the Ministry for the Future. So, he kidnapped her.

Robinson's book spills out in 106 rapid-fire chapters that mirror the cadence and chaos of a world falling apart and rebuilding. In chapter 25, the heat wave is a couple of years in the past and the LA flood is yet to come. Mary has had a couple of margaritas with her team at an over-priced Zurich pub. On her walk home, Frank strides up next to her, slides a handcuff on her wrist, shoves a pistol in her side, and says "Keep going. I'm taking you into custody.... I want to talk with you." They march to her apartment where they sit down for tea and a talk at gunpoint.

"What do you and your ministry know about the future?" Frank asks.

"We can only model scenarios," Mary replies.

Frank asks, "Is there any scenario...in which there won't be more heat waves that kill millions of people?"

"Yes," Mary says, but then she pauses.

It's possible that the future will be free from carnage. Heck, anything is possible. But it's not likely. Frank can see this on her face.

"Ha!" he cries, "You know. You know the

future... But you're not trying to know! You're trying not to know!" It's the perennial philosophical problem: knowing and willing.

The French philosopher Jean-Pierre Dupuy put this age-old problem into modern terms. The Intergovernmental Panel on Climate Change (IPCC), the real body that created Robinson's fictional ministry, operates by the precautionary principle. Here is the formulation of the principle that Dupuy uses: "The absence of certainties, given the current state of scientific and technological knowledge, must not delay the adoption of effective and proportionate preventative measures aimed at forestalling a risk of grave and irreversible damage to the environment at an economically acceptable cost." Basically: not being sure is not a good reason to not act to prevent a catastrophe.

If this is our guiding international principle, why are we not doing enough? It's not that we are failing to apply the principle, Dupuy argues. Rather, the principle is bunk. If uncertainty prevails, then who is to say what the risk of the damage really is, what it will cost, or what a proportionate preventative measure would be? It *might be* that millions of people will die horrible, preventable deaths in the future. If we knew that for sure, then blowing up pipelines would seem proportional. But we don't know. Mary kept saying this phrase to Frank: "I don't know." The future is not ours to see. *Que sera sera*.

Further, if the uncertainty is itself uncertain (if we don't even know what we don't know), then we can't say whether the conditions for the precautionary principle have been met. The principle, then, is biased toward endless scientific investigation. If the problem is our "current state of knowledge," the policy will always be "more research" so that we can close the gap between what is known and what needs to be known. Yet, we've been trying to close that gap for decades only to discover how much more there is that we don't know!

Others have made a similar argument that climate scientists are biased toward avoiding type I errors—that is, they try too hard to avoid falsely attributing causation, out of a misplaced attachment to scientific rigor. They set the bar of proof too high, allowing actors in bad faith and in good faith to conclude that we just don't know enough to act. We need more research! We learn all sorts of things about, say, the complexity of clouds. Meanwhile the planet burns.

Yet this is not the heart of the problem for Frank as he tries to control his anger with Mary. Uncertainty is not the obstacle to action. Rather, as Dupuy writes, “the obstacle is the *impossibility of believing that the worst is going to occur.*” After all, Mary was just having a pleasant evening of drinks with her friends. Despite what she may or may not know, she does not believe that catastrophes are coming. For Frank, a time-traveler from our future climate hell, this is what makes her a poor representative of future generations. How can you advocate for someone if you don't really believe them?

The ongoing COVID-19 pandemic illustrates this bizarre temporality of catastrophes. We all knew, say, about the 1918 flu pandemic. We knew such things could happen and yet, right up to the moment it hit us, it seemed impossible. I remember telling my wife that we should probably buy some extra pasta. That was the extent of my imaginative capacities. Dupuy quotes the philosopher Henri Bergson's reaction to the onset of World War I: “I felt... a kind of admiration for the ease with which the shift from the abstract to the concrete had taken place: who would have thought that so awe-inspiring an eventuality could make its entrance into the real with so little fuss?” Once the catastrophic has happened, we adjust to a routine built around the once-impossible but now-familiar new reality. In the parlance of climate policy, we might cheerfully call this ‘adaptation.’

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This is the source of Frank's frustration—even a society premised on the precautionary principle behaves the same way as, say, a bacterial colony that doesn't implement preventative policies. We wait for the catastrophe to occur before acting, as if its coming-to-be was the only sufficiently strong and credible evidence for its prediction. As if it could only be possible in our minds by ‘possibilizing’ itself in reality. Of course, it's too late by then.

As Frank paced around Mary's apartment like a caged animal, he wrestled with the question of how to get people to believe in a catastrophe before it occurs. The Children of Kali had already figured out the answer: you have to visit catastrophe upon them. Bring the future into the present.

This is one reading of climate justice. Indigenous peoples and the global poor are already living through the climate destabilization and dystopia that wealthy folks like Mary fret about over a margarita. So, it's not necessarily about making the future present—it's about equitably distributing the nightmare that is already here. The rich who have caused this mess should get their fair share.

Mary sips her cold tea, “We're doing all we can with what we've got.”

“No you're not,” Frank snaps at her. He tells her about how he tried to join the Children of Kali.

“But they are a terrorist group,” Mary recoils. “I'm trying to avoid violence.” As if that was an option in our super volcano

civilization! Why is it considered ‘violence’ to destroy a pipeline, but it is considered ‘business’ when a bulldozer destroys a patch of rainforest?

Frank shakes his head. “No. You have to stop thinking with your old bourgeois values.” The real terrorists are the ones running the carbon industrial complex. Imagine you were one of the dead back there in the lake. Imagine you had watched your children die. What if you could go back in time? You would do anything to prevent the coming heat. Yes, you would kill. And you would be justified because it is self-defense. “If you were serious,” Frank tells Mary, “you’d have a black wing, doing things outside the law to accelerate changes.” The legal order is permitting mass murder via the climate violence of carbon-industrialists. When the law is unjust, break it, even (especially!) if you are a bureaucrat. Mary listens. Frank, her abductor, just gave her the job training she needed.

The violence perpetuated by Mother Nature and other ecoterrorists gets the ball rolling. Or, you could say it causes an ontological rupture where ideas that once seemed crazy can now be taken seriously. This is where *The Ministry for the Future* gets creative: Herculean geoengineering efforts to arrest the slide of glaciers into the sea, the deep decarbonization of air travel via airships, and new communal modes of organizing capital, labor, consumption, and production. Robinson helps us to imagine what a post-carbon world might look like. Yes, it is born bloody, but it is full of restorative potential. We might slow down, share more, work less, and cede some territory for the rewilding of Earth.

Robinson rightly puts finance at the heart of the transition to a post-carbon society. The fear of violent death may be the number one human motivator, but

money is in second place. Prices are like strings pulling on human limbs—they determine so much about how we behave. The climate problem can be reduced to a market failure: people get rich extracting and burning fossil fuels, but no one pays to dump the emissions in the atmosphere. Costs not reflected in prices are called externalities or, in this case, “the social cost of carbon.” They are paid for with the lives and livelihoods of future generations. That’s the intergenerational injustice: we party, they pay.

By the middle of the book, the economy is in ruins: mass unemployment, depression, inflation, and unrest. Then Los Angeles gets wiped off the map. Desperate times call for desperate measures. Mary and her team convince the heads of the world’s central banks to issue a new form of currency, the carbon coin or the carboni as it later becomes known. People could earn “one coin per ton of carbon-dioxide-equivalent sequestered from the atmosphere, either by not burning what would have been burned in the ordinary course of things, or by pulling it back out of the air.” The challenge was figuring out how to verify carbon sequestration for anyone from Saudi princes leaving millions of barrels of oil in the ground, to small farmers altering their tilling methods to restore soil carbon.

Three wildly divergent macroeconomic readings of the situation are possible. It could be that petrodollars and carbon coins are both equally fictitious constructs, so switching from one to the other is a neutral move. Or it could be that petrodollars represent real capital that does real economic work to generate real wealth, whereas carbon coins *remove* all this potential work and wealth from the economy. So, the new currency could be suicide. Or it could be that the true ecological costs of carbon were so buried

in a petrodollar regime, that switching to carboni will create wealth by allowing the biosphere (the source of capital) to regenerate and by preventing future pay-outs to clean-up the increasing damages of carbon burn and insure assets in an ever-hotter world. So: a wash, a bust, or a boon?

It's a gamble. But that is an unavoidable fact about human action, which is a boundless, unpredictable cascade of branching, maddening cause-effect relationships. As Arendt noted, this is why moderation was the political virtue par excellence until the modern age. And hubris was the worst temptation. We are frail creatures in an unfathomable cosmos. It is best not to do too much, lest we trigger a chain reaction we cannot control.

In the modern age, we have embraced a dynamic of progress rather than moderation. Our current moral relationship with future generations is premised on this dynamic. Unlike the ancients, we are not trying to preserve or steward a stable cosmos for the next generations to inherit. Rather, we are trying to build the machines that will allow us to control fate. We apply our intelligence and energy toward solving the elemental problems of water, food, shelter, and security. Along this path of innovation, true, we create new problems as unintended consequences. But these problems are generally better ones to have (we call them first-world problems for a reason). Future generations are smarter, wealthier, and more secure because of the work we do in the present to push progress forward. So, future generations can handle themselves. It's not that we are being callous, selfish, or thoughtless—we are giving them the tools they need to keep progress going.

This is the story we tell ourselves. It is why people like Mary can sleep at night, assured that they are doing all they can. According to this story, climate change is the ultimate first-world problem. It is much preferable to live in Zurich in 2021 facing global temperature rises than to live in Zurich in 1021 facing chronic exposure to the elements, malnutrition, pestilence, and insecurity. Deaths from natural disasters have dramatically decreased as we build modern infrastructure, and damages from extreme weather have decreased when viewed as a percentage of GDP. In other words, our wealth is growing faster than climate risks, which means we are winning in the war against fate. All the dire headlines are skewing our perception: we have never lived in a safer climate.

The problem with this story is not that it's false. Worse than that; it's half true. It's just true enough to soothe our conscience. And, as Mary's models showed, there's always a possibility that things will work out just fine if we follow the same logic. The other half of the truth was captured succinctly by the scientist Wallace Smith Broecker: "the climate system is an angry beast and we are poking it with sticks." The last time CO₂ concentrations in the atmosphere were this high, there were palm trees in the arctic. To repeat our basic situation: we have unleashed enormous energies extremely rapidly from a geologic perspective. We are watching the Earth adjust to a new climatic regime, one of our own doing. This is not a rollercoaster we are prepared to ride. That super volcano of emissions might be like a self-inflicted gunshot to the gut. Like Frank, we might already be dead.

Then again, who knows? And would you believe it even if you did know it? A