
A Conversation with Kim Stanley Robinson

THE FLETCHER FORUM: *It often seems that climate change is a problem of imagination. Fossil fuels are so insidious that it is hard to imagine a world without them. By the same token, the worst impacts of climate change—disappearing islands or regions rendered unlivable by drought—are also difficult to picture as the new norm even when we see previews today. Ministry for the Future addresses this problem by vividly describing both a world altered by climate change and a solution set that begins to repair the damage. As a writer, how did you overcome this problem of imagination to envision both the devastation climate change will have and how humans might address it? What do you think policymakers might be able to learn from your process?*

KIM STANLEY ROBINSON: I'm not so sure these things are hard to imagine. We all move inside fossil fuels, so it only takes looking around: our various modes of transportation, the materials around us, the food we eat—it's all powered by fossil fuels, so we can see that reliance in our own lives. As for the catastrophes to come—they are already happening, so the news provides constant images, and also, almost everywhere on Earth, people are seeing climate change's effects right where they live, not just in the news. So, what's to imagine? Even a world powered by sources other than fossil fuels is there to see, in all the wind towers and solar panels. So I think the hard thing to imagine now might be this: that we *can* do it—

Kim Stanley Robinson is an American science fiction writer. He is the author of about twenty books, including the internationally bestselling Mars trilogy, and more recently *Red Moon*, *New York 2140*, and *The Ministry for the Future*. He was part of the U.S. National Science Foundation's Antarctic Artists and Writers' Program in 1995 and 2016, and a featured speaker at COP26 in Glasgow, as a guest of the United Kingdom's government and the United Nations. His work has been translated into twenty-six languages, and won awards including the Hugo, Nebula, and World Fantasy awards. In 2016, asteroid 72432 was named "Kimrobinson."

that this civilization that we all form together is capable of rapid effective change.

Admittedly, the solutions are not completely visible now as a total package. The worst part of that may be that we don't have a good image for how we're going to pay ourselves to do the necessary work at the speed needed. Also, we don't have a great image of civilization as being in the end rather cooperative and altruistic. So these may be the areas where my novel provided some scenarios that are somewhat new. But really, I only proceeded as a reporter, or maybe a reporter slightly offset into the future. I showed already-existing processes proceeding from our present in ultimately good ways. Now it's evident that people wanted that story; they had a hunger for it.

THE FLETCHER FORUM: *The titular character, if you will, of the book is a UN ministry charged with protecting the rights of future generations and non-human species. In today's world, it is difficult to imagine a political landscape that genuinely values future generations. Do you think we as a society could get to a place where we set the discount rate closer to 0, or have a dedicated body devoted to people who do not yet exist? What might it take to get us there?*

KIM STANLEY ROBINSON: This is a good question, and I don't know the answer. People wonder if it will take catastrophes like the one that begins my novel, or if we can act before something like that happens. Of course, it would be better if we acted preemptively to dodge the coming disasters—also to keep the ones happening now from getting worse. And it seems like a general consensus is gathering that we must act now. This consensus, if it happens, would be a success of science and policy, and a manifestation of everyone's solidarity with our descendants.

One concept I like comes from disruption ecology: the speed of a crisis matters. If catastrophes strike hard all at once, there simply isn't time to adjust to them; it's a disaster. One example now might be Ukrainians: they don't have time to worry about decarbonization because they are working to survive under a brutal Russian invasion. On the other end, if change is happening slowly, as in over decades or centuries, it's hard to see, and thus hard to rally efforts to deal with it. This second situation used to be our problem concerning climate change, namely that it was happening too slowly for us to care.

But there's an in-between zone, a kind of Goldilocks speed of change, which is fast, but not too fast to react to. At present, we may have moved

into that zone as a civilization. The polycrisis might now be happening at the right speed to enable us to make a quick and appropriate response. People speak of the 2020s as being the decisive decade; this is only partly true, and only partly comforting, but it's a little comforting, because it's fast but not instantaneous. There might be enough time to cope well. Even though that window is closing fast.

THE FLETCHER FORUM: *One of the most exciting ideas in the book is the carboni, a currency developed by a group of the most powerful central banks. Carboni acts as a universal carbon price, with its value derived from the removal of carbon from the atmosphere. How did you come up with the idea for a currency, rather than the more widely discussed possibilities of a global carbon price or tax?*

KIM STANLEY ROBINSON: The idea came from Delton Chen, who now leads a group called the Global Carbon Reward, which is spreading the idea, and also elaborating its details. He felt that people are motivated more by rewards than punishments; also, he found sociological studies that seemed to indicate that when rewards and punishments were both applied together as “incentives,” as economists like to name these, they were more powerful than either method applied by itself.

So, carbon taxes, or “putting the true price on carbon” is a great idea, yes; but being able to make your living by removing carbon from the atmosphere is perhaps even better. Thus the carbon reward—governments paying people directly for decarbonization. This would require such a huge investment in the biosphere that the central banks of the world would have to pay for it, meaning fiat currency, not a purely private cryptocurrency.

I found this idea important enough to portray it as happening in my novel. Reacting to the polycrisis well is going to be very expensive, and part of the solution is simply financing what we need to do, by governments paying for it through their central banks. This would mark a profound and much-needed shift away from predatory neoliberal capitalism (which has always been a Ponzi scheme foisted on the people of the future, who are not here to defend themselves), to a more Keynesian economic system in which we pay ourselves to do the necessary things to keep from crashing through certain planetary boundaries in irreversible ways. We have the technologies to make that shift, including the financial technologies; and we can imagine the story, as my novel shows. So now we need to pay for all the work we need to do. All such payments could be paid in a way that means

lots of people would make a living from the work, and maybe not so many companies would make a profit from it—that would depend on the details, but in any case, the work would get done. And we need that.

THE FLETCHER FORUM: *One of the major forces for change in the book is acts of violence committed by the Children of Kali or the black wing of the Ministry for the Future itself. Planes are shot down, individuals are murdered, and other acts of sabotage eventually dissuade people from using fossil fuels. I'm sure you've been asked this many times, but do you see violence as a necessary step in solving climate change? How did you decide what degree of violence to include in the novel? Did you restrain yourself from more dreadful scenarios?*

KIM STANLEY ROBINSON: I don't see that kind of violence as necessary. I hope we can preempt it by acting well before such anger is unleashed. I portrayed it happening in my novel because of a feeling I had when I wrote the book in 2019 that we weren't responding quickly enough to climate change, and that some people who survived their families and villages dying were going to be so angry that they would be intent not just on justice, but revenge. So the book functions as a kind of warning, I hope, of what could happen if we don't respond well now. It would be much better to achieve the needed transition peacefully, obviously. But 2019 was a darker time than now—this needs to be remembered. Trump was still president and might have won in 2020, or so it seemed in 2019; and COVID-19 had not yet taught our civilizations some very important lessons about our dependence on the biosphere. We are much more in emergency mode on climate than we were in 2019. Things can change fast, and they have.

THE FLETCHER FORUM: *Some might worry that the crises you describe could lead us not to create a more just society, but to hunker down in fear. Did you think about that possibility while you were writing? Has watching the reaction to COVID-19 changed your thinking?*

KIM STANLEY ROBINSON: I found the reaction to COVID-19 to be mostly very encouraging, especially when people were actually scared for their own lives. COVID-19 showed us very clearly that the biosphere can force all of us to change our ways profoundly in order to survive. And the scientific response to the crisis was quick and powerful—a magnificent achievement, in fact. Now, partly as a result of that experience, we're taking climate change seriously in a way we weren't before COVID-19.

McKibben has modeled for us how best to react: to work as hard as

possible to create a more just society, which will then be better at dealing with the biosphere emergency. Of course that will only happen by way of a wicked political battle against people who are currently overwhelmed by fear or rage to the point of fighting hard for bad things to happen. But this is always true. No moment in history has lacked people who fear change, or who might lose from change for the better. The majority has to win them over, or win over them.

THE FLETCHER FORUM: *Which of your many ideas (block chain, carbon coin, technical solutions, violent, purposeful terrorism, etc.) do you believe should be taken most seriously by policy makers as being both possible and effective? Why?*

KIM STANLEY ROBINSON: They aren't my ideas; they are the world's ideas.

I'd say that there is no single solution, maybe not even a "most important solution." It's now more a situation that could be described as "all hands on deck."

Among the methods you listed, the ones I think policy leaders (or maybe I would say legislators) should take most seriously are changing the laws to guide private capital into green work, and then also investing in green work directly. The Inflation Reduction Act is a great example of this kind of legislation; it's not the whole story, but it's a great start. We need more laws like that one, and we'll see those happening.

THE FLETCHER FORUM: *There are so many ideas presented in the book that you don't have time to go into detail on the implementation of all of them. What are some of the challenges to implementing plans like rewilding, slowing glacial flow, or mainstreaming airships that you thought through but were unable to include?*

KIM STANLEY ROBINSON: I think I did include the most obvious challenges. My novel shows these historical developments only in their beginning phases, and the braided plots are therefore about the various challenges being overcome—or not. The main plot, concerning the introduction of a carbon coin, details the many problems we will face in getting central banks to implement it—in the book it's about a fifteen-year long process—in the real world I hope we can go faster.

The slowing of Antarctic glaciers is shown in my book as a slow and uncertain experimental process, only getting going properly at the time the

novel ends. There is also vigorous resistance to rewilding dramatized in the novel.

So I think I portrayed the problems with implementation as real and difficult, which is one reason people stick with the book as more than a utopian program: it feels like the good things have been achieved against resistance, which is the way it is most likely to happen. And at the end of the novel, the rescue of the biosphere from human harm has really only just begun; many problems remain on the agenda, and are listed as such in the final COP meeting portrayed. But beginnings for good things can be hard, so I wanted to focus on that.

THE FLETCHER FORUM: *There is tension, when it comes to climate change, between scaring people into action and encouraging them. Ministry for the Future starts with a horrific sequence about the consequences of unmitigated climate change, but ultimately is an optimistic book. Did you consider these tradeoffs as you were writing? Did you set out to write a story about how we might solve climate change, or did you set out to write what you thought was the most realistic path forward?*

KIM STANLEY ROBINSON: I set out to write a novel about how we might start to solve climate change. Of course I had to consider the history I was imagining and portraying, but I don't think "tradeoffs" is the right word here. It was a question of plausibilities, effects, and feelings, in a complex mix. If you try for "a best-case scenario you can still believe in," that might describe how I thought of my process.

No one can say what "the most realistic path forward" is, even if they wanted to, because "realism" is itself a weighted term, an ideological construct that changes all the time as our culturally constructed "structure of feeling" changes. What one person might think of as realistic, another might think of as completely delusional, and vice versa.

"Capitalist realism" is a useful new term to describe the kind of hypnotized state people fall into when they think, "we can never get out of this system, it's a trap, we're caught forever!" This is clearly an illusory feeling, since history is a matter of perpetual change, and capitalism is a shaky predatory system that is falling apart as it wrecks things. What can't happen won't happen, so capitalism won't continue as it is practiced now, because it will soon wreck the biosphere; so change will happen either before that or after that. Maybe this is the only realism possible: change is going to happen in unpredictable ways.

THE FLETCHER FORUM: *The Fletcher Forum is read by graduate students and practitioners in international affairs and policy. You are a quick study of the workings of international negotiations, bureaucracy, and possibility. What do you wish Forum readers were reading (besides your novel) to help us think creatively about our future vis a vis the challenges of climate change?*

KIM STANLEY ROBINSON: I hope they read Thomas Piketty, Bill McKibben, the Dalai Lama, Johan Rockstrom, Kate Raworth, Naomi Klein, Adam Tooze, and the *London Review of Books*.*f*