



'The problem with climate change is that it's a timed test,' the writer Bill McKibben says. 'If you don't solve it fast, then you don't solve it.' (photo: S.E. Arndt/Redux)

Bill McKibben and Elizabeth Kolbert on the UN Extinction Report

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While the political tide could be turning on climate change, both writers worry that it is too late.

After years of languishing far down the list of voters' priorities—for Democrats and even more so for Republicans—the desire for action on climate change has brought this issue to the top of many voters' concerns, according to a CNN poll. Now Presidential candidates are competing to establish themselves as leaders on the issue, while children are making headlines for striking from school.

Bill McKibben, whose book "[The End of Nature](#)" brought the idea of global warming to public consciousness thirty years ago, tells David Remnick that the accumulation of weather catastrophes—droughts, wildfires, floods—may have finally made an impact. McKibben joined Elizabeth Kolbert in a conversation about the U.N.'s new report on species extinction. It finds that a million species could become extinct within a few decades, and that human life itself may be imperilled. While the political tide could be turning, both worry that it is too late.

This conversation has been edited and condensed.

David Remnick: Bill, you wrote "The End of Nature," which was really the first popular book on climate change, thirty years ago. What are you seeing now in the current moment that's different from what you've seen before? We've had so many missed opportunities.

Bill McKibben: What's different about now? Well, one of the things that's different is it's much easier to see precisely what's going on. I mean, thirty years ago we were offering warnings, even ten years ago. It was still a little hard to make out the precise shape of climate change as it started to affect the planet. Now, I mean, you watch as a California city literally called Paradise literally turns into Hell inside half an hour. You know, once people have seen pictures like that, it's no wonder that we begin to see a real uptick in the response. In the last six months we've seen this rise of the demand for a Green New Deal in the Democratic Party. We've seen the Extinction Rebellion shut down London, the center of London,

for a week, and the Tory-led Parliament and the U.K. declare a climate emergency. And, you know, most poignantly, we've watched a few million schoolchildren following the lead of Greta Thunberg, in Sweden, and walking out of classes. It's not a good sign that we're asking twelve-year-olds to solve the problem for us, but it's good that they're stepping up.

Do you think that this had to be the case? In other words, that we had to see, say, Guatemala so affected by climate change that thousands of, essentially, climate refugees come to our borders. Or Syria, in many ways, was a product not only of political rebellion but also climate rebellion, in a certain sense. Did this have to be?

McKibben: I don't think it had to be. I think that we were capable of taking the warnings from science and doing the right thing. I mean, heck, in 1988, Republican President George H. W. Bush announced that he would, quote, "fight the greenhouse effect with the White House effect." But what happened was a thirty-year, no-holds-barred campaign by the fossil-fuel industry, the richest industry on earth, to confuse and obfuscate and deny and delay, and it's been remarkably successful. I mean, thirty years later, the Republican President believes that climate change was a hoax manufactured by the Chinese. So, you know, it's that thirty years that may turn out to have been the crucial thirty years.

So, just to be clear, you're blaming the fossil-fuel industry as the singular culprit for these lost thirty years, above all other factors.

McKibben: Well, you know, it obviously would have been hard to change, because it's a big problem, but imagine the alternative-history version where—I mean, this is the kind of "Man in the High Castle" approach—where, in 1988, after Jim Hansen testifies before Congress, we now know from great investigative reporting that the big oil companies knew and understood and agreed with that assessment of climate change. If the C.E.O. of Exxon had gone on TV that night and said, "You know what? Our scientists are telling us the same thing." And that, by the way, is pretty much the least that any moral or ethical system you could come up with would demand, or so it seems to me. If that had happened, no one was going to be running around saying, "Oh, Exxon's a bunch of climate alarmists, you know, pay them no mind." We would have gotten to work. And

thirty years ago there actually were things that weren't that hard to do. A modest price on carbon in 1988 or '89 would have started steering the giant ocean liner that is our economy a few degrees differently, and, thirty years later, we'd be in a different ocean. We didn't do that. Now all our choices are very tough, and it's going to require extraordinary political maturity and will to move as quickly as we need to move.

Betsy, I think what Bill is saying is that we're at a certain kind of tipping point now, a political tipping point, where climate change is concerned, that hadn't existed before. How do you perceive the politics around climate change at this moment? Because, in many ways, the Trump Administration is proactively making the problem much worse.

Elizabeth Kolbert: Yes, I think it's going to be, you know, if we have a history, if we have a future that will look back on this moment, it will be a very interesting moment, because we do have these two extraordinary trends happening simultaneously. As Bill says, there is a lot of energy on the street, and for the first time, you know, you have Democratic candidates competing to be the climate candidate with some very detailed and pretty significant programs to try to wean us off of fossil fuels. At the same time you have just the most remarkably retrograde Administration in Washington, which isn't just not making progress on these issues but actively rolling back whatever modest progress was made under the Obama Administration. That will take, at a minimum, years to undo that—if we decide to undo it, you know, if you don't decide to give them another term. And meanwhile, on the ground, just the facts in the air, as it were, are really bad. When Bill wrote "The End of Nature," I just checked back, and the records, CO₂ levels in the atmosphere were approximately three hundred and fifty parts per million. We just hit four hundred and fifteen. So things are going in the wrong direction, and very rapidly.

What does that difference mean, qualitatively, in terms of our lives and the environment?

Kolbert: Well, every increment of CO₂ that we put up there is a certain amount of warming that you get out at the end of this process, and this sort of general, very, very rough rule of thumb is, if we want to keep average global temperatures from rising more than

two degrees Celsius, which has been sort of defined as this threshold that you do not want to cross, this sort of general sense is we really can't get above four hundred and fifty parts per million. Now we're really—it's very, very hard, if you think about how fast we've moved from three fifty to four fifteen. Meanwhile, CO₂ emissions are increasing every year, they just increased pretty dramatically in 2018, we just got those figures. So it's pretty hard to come up with a scenario in which we keep things under four hundred and fifty parts per million without, you know, sort of immediately ceasing globally—and this is not just in the U.S., you know—to burn fossil fuels.

Now, why would Donald Trump, who is not an executive in the oil industry, believe something like that global warming is a Chinese hoax? And why, correspondingly, why is a matter of science a matter of partisan politics? You say that the Democratic Party believes X, but a lot of Republicans believe otherwise.

Kolbert: Well, this is, as Bill alluded to, this has been kind of a long history of a combination of moneyed interests and political interests colluding, as it were—the word of the hour—to make this issue seem to be one of belief. It has nothing to do with your belief. It has to do with geophysics, and geophysics that have been established for quite some time now. And so how we got into the situation here, the most technologically sophisticated society in history in the world where you still have a lot of people saying—and a lot of people in very high places, like the White House, and also at the head of the E.P.A.—and they've put in place, they've taken people out of this, you know, denier complex, and put them into top offices in the federal government. And those guys know exactly what they want to undo, and they are pretty systematically going about doing it. I don't know—to be honest, with all the noise there is around the Trump Administration, I'm not sure enough attention has been paid to what they're doing to environmental regulations across the board.

Well, how sincere are they? In other words, those officials, those government officials in the Trump Administration have children and grandchildren, as well. And they have to see what the effects of climate change you've seen already—whether it's in Central America or Bangladesh, or the air quality in Delhi or Beijing. This is happening

already. This is not something that we're projecting twenty years, thirty years, fifty years, a hundred years in the future. It is happening now.

Kolbert: Well, I would think it would be extremely interesting if you could, in an unguarded moment—I don't think any of the three of us are getting these guys in an unguarded moment—but to say, you know, how do you sleep with yourself at night? How do you look at yourself in the mirror? I would love to be able to pose that question now. I think that one of the lessons of the last couple of years, unfortunately, is the capacity for human delusion and self-delusion is limitless. So, you know, it's possible that you could administer truth serum to these guys and they would still be saying the same thing, because they actually, you know, quote-unquote “believe it.” I honestly don't know.

Bill, you made a decision in your life to become not only a writer but an activist. You wrote your book thirty years ago. It had a certain effect. And at a certain point you decided, That's not enough, that, I have to get out from behind my desk, which is unusual for for most writers who enjoy the kind of solitude of being behind the desk—except when they're not enjoying it, I guess. What propelled you to do this, and what complications does it cause in your own activity?

McKibben: Well, you know, I miss the solitude of my desk, too. Like most writers, I'm really an introvert. But at a certain point it became clear to me that I had made a mistake, that we were not really engaged in an argument. The argument about climate change was over by the early nineteen-nineties, when scientists had reached a very robust consensus. We'd won the argument. We were just losing the fight, because the fight was not about data and reason and evidence. It was about the thing that fights are always about: money and power. And, I mean, this goes directly to your previous question for Betsy. Look, the richest person in our society is the two Koch brothers taken together, our biggest oil-and-gas barons. They've purchased themselves a political party. So we knew we'd never have the money to stand up to that. But sometimes, in human history, organizing, movement-building, is enough to at least start to counterbalance that power. So that's what we've been trying slowly to build over these last decade or so. And now, thank heaven, with those foundations laid, it's an enormous

number of people rushing in to do this work, which might even mean that I can get back to my desk a little more, we'll see.

Well, what's so striking about the movement in in large measure is that it's led very often by kids, by teen-agers. In mid-March, nearly a million and a half kids worldwide went on a climate strike and refused to go to school. You saw this young woman, I think she's sixteen or so, Greta Thunberg, speak in front of the E.U., in front of other political bodies. The most striking speaker one could ever imagine. Why is this generational shift happening, and what effect is it having?

McKibben: So, young people have been at the forefront of this for quite a while. When we started 350.org, it was myself and seven undergraduates here at Middlebury. And I think the reason that young people are so involved is because, well, because, you know, you and I are going to be dead before climate change hits its absolute worst pitch. But if you're in high school right now, that absolute worst pitch comes right in the prime of your life. And if we're not able to take hold of this, then those lives will be completely disrupted, and they've figured that out. That said, it's not O.K. for the rest of us to leave it to fourth graders to solve the problem. There's going to be—keep your eyes peeled, but I think soon there'll be calls for adult strikes, as it were, to follow and back up the kids, beginning in the autumn. And that makes real sense. You know, it's at some level business as usual that's doing us in. The fact that we get up each day and do more or less the same thing that we did the day before. Even while the worst scenario that we've seen in our civilization is unfolding, you get a sense of that. I was just looking at the newspapers today. The U.N. just published a truly remarkable report saying that we're going to lose a million species on the planet sometime over the next few decades. It completely backs up the work that Betsy did so brilliantly in "[The Sixth Extinction](#)." And yet, you know, it's in the newspapers, but it's well below the new royal baby and the trade talks with China, and it's that business as usual that's literally doing us in. And we have to figure out how to disrupt it a little bit.

Betsy, I hate to be a competitive journalist, but when I read the report about "The Sixth Extinction" in the U.N. report, I said, *The New Yorker* had that ten years ago, when you published

it, in 2009, the very same thing. What is the difference between 2009 and 2019 in terms of the extinction of hundreds of thousands of species on the planet Earth?

Kolbert: Well, I think that it's one of those cases where, as I'm sure Bill would say, you don't like to see the news bearing out what you said. But, in this case, you know, the only difference is more documented destruction, really. And a lot more studies piled on the ones that were available to us five, ten years ago. But the general trend lines—an accelerating trend line, I do want to say, of human impacts—but the general trend line of biodiversity loss, which has been recognized for quite some time now, it's all just playing out according to plan, unfortunately. And what this report does, I think, it's really trying to, (a), raise the alarm, but, (b), really pointing to, there seems to be this strange disconnect, once again, out there. And it's true that global G.D.P. is larger than ever. And at the same time species loss and destruction of the natural environment, natural world, other species is also greater than ever. And those two things are very intimately linked, and if you only pay attention to the G.D.P. part, you might say, "Oh, everything's fine." But I think what the point that this report is really trying to make is, those lines are going to cross. People are still dependent on the natural world—all the oxygen we breathe, all the food we eat, all the water—you know, these are biological and geochemical systems that we're still dependent on, for better or worse, and we are mucking with them in the most profound ways. I think that that is the message, the take-home message of that report.

In other words, this so-called soaring economy that we're enjoying now is the worst kind of illusion.

Kolbert: Well, once again, it depends on how you measure it. If you measure it by stuff that we're producing, I don't want to say it's an illusion. But if you look at the other side of that, the cost it's taken on the natural world, everything from land use gobbling up habitat to plastic pollution in the oceans. The list goes on and on and on. And the question of, can you sustain that over time, we haven't been at this project very long without really wreaking havoc with the systems that sustain us. I mean, there are two issues here. And I think they have to be separated to a certain extent, intellectually if not biologically. And

one is, could humans go on like this for quite a long time, just letting the rest of the world decay around us? Is that O.K.? You know, for us as a species to just do in a million or more other species, just because we are enjoying a better and better standard of living, is that O.K.? That's one question, and then the other question is, can that happen? You know, just physically, are we capable of sustaining this, with all of these other trends going around, or are we really threatening our own life-support systems? And I think this report is suggesting very significantly that we are threatening our own life-support systems. But I think that the other question of the ethical stance that we take toward this is also extremely important.

And yet, for years and years, if you betrayed the fact that you cared about this, you were described as a tree-hugger and mocked.

Kolbert: Well, and that's still true. I mean, we are arguing in this country right now. Even as I speak, and we speak, this goes back to the Trump Administration, and how they're systematically trying to unravel a lot of very basic environmental protections in this country. We're going to argue over the Endangered Species Act, which actually has been quite successful, in its own modest way. If you are a species, you get on the list, you have to have a recovery plan, and those species have tended to survive—not necessarily thrive, but survive. And now we're going to argue about whether we should even be doing that. So these arguments are never-ending and, you know, pitting human welfare against the welfare of everything else, that doesn't seem like a winning strategy over the long run.

Bill, I was really interested to read that you think that the great climate-change document of our time is by Pope Francis.

McKibben: Well, I think that the encyclical that he wrote three and a half years ago now, "[Laudato Si](#)," it is amazing. Mostly because, though it takes off from climate change, it's actually a fairly thorough and remarkable critique of modernity. And it talks really about precisely the things that Betsy has been talking about—understanding this as, yes, a problem of physics and of the need to put up a lot of solar panels and wind turbines, which we now can do because the engineers have made them affordable, but also understanding it as a problem of human beings and their relations with each other. As Francis points out,

the last forty years, this period of time when we've worshipped markets and assumed they solved all problems has not only spiked the temperature through the roof, it's spiked inequality through the roof. And the two are not unrelated.

How are they related? What is the essential relationship between the two?

McKibben: One of the things I spent some time doing in this new book is kind of teasing out the history that begins with Ayn Rand and kind of reaches a first zenith in the Reagan Administration, in 1980. The idea now in the air that we breathe, literally, that government is the problem, that if you leave corporations alone they'll get done what needs doing, this reigning ideology came just at the wrong moment. It came at precisely the moment when we actually needed governments to be doing something very strong to deal with climate change. And that combination of ideology and interest has been enough to suppress our reactions in the crucial thirty years.

But have other governments that are less capitalist-oriented been any more successful in tamping down climate change than the United States?

McKibben: Sure. The first thing to be said is that same period was the period when the U.S. was ascendant over the rest of the world, so it held sway to some degree everywhere. But, go to Germany and look at what they did, beginning about 2000, with this law that made it easy for people to put up renewable energy. There will be days this month when Germany generates way more than half the power it uses from the sun, which is saying something, because no one ever went to Germany on a beach vacation, you know. Look at Northern Europe, at Scandinavia. I mean, they're doing remarkable things. The engineers gave us an enormous gift. They dropped the price of renewable energy ninety per cent in the last decade. In China and India, thank God, that's resulting now in very, very rapid expansion of renewable energy.

You wrote a wonderful piece for *The New Yorker* about [solar panels in Africa](#). And yet you're very—I think both of you are very wary of an excessive emphasis on technological transformation to solve all problems in climate change. Am I right?

McKibben: Well, technology is going to help enormously. We obviously have to produce a lot of electrons, and now we can, with renewable energy, but we can't do that job—or the job of energy efficiency, or the job of starting to relocalize economies—we can't do that without mustering political will. The reason that we build movements is not so much to pass particular pieces of legislation. It's because one tries to change the *Zeitgeist*, the sense of what is natural and normal and obvious and coming next. And when you win that battle, then legislation follows. We're getting closer. The polling last week showed that, for Democratic voters, anyway, climate change is now far and away the most important issue going into these primaries. That's something that would have been unthinkable even a few years ago. And it's a sign that all the movement-building, all the science, all the writing, all the engineering are reaching some kind of head, one hopes not too late.

Betsy, is Silicon Valley on the side of the angels here?

Kolbert: Well, I think to the question of, is technology going to save us, which is a very big question, perhaps the question right now, I think one of the things that's important to think about is, there are a lot of steps that we could take that would potentially mitigate or alleviate climate change that would actually be terrible for other species. So, for example, one of the real tragedies of the last couple of decades has been the transformation of Indonesia into a series of palm-oil plantations, which has really just destroyed habitats for a lot of iconic and non-iconic species, like orangutans, for example. Now, one of the—only one of the drivers behind that, but a driver, was the Europeans deciding that biofuels were good for climate change, which, on some level, they are, but if the cost of that is mowing down the world's remaining rain forests, then the cure can be as bad as the disease. So one of my fears is that we're moving into a lot of territory where some of the answers to climate change involve land-use change are good on a climate balance sheet, but they're terrible on a biodiversity balance sheet. And to make all of these things add up is extremely difficult. And that is why we're in the situation we're in, and that is why we got that new report.

Betsy, at the forefront of political conversation where this is concerned is the Green New Deal. What do you make of the proposals, and is it sufficiently specific for you?

Kolbert: Well, I think there's a tremendous amount of thought that went into the Green New Deal, and it's sort of the very big-tent view of who should be interested in climate change. I think it was very smart in a lot of ways, because one of the things that always happens when you try to use, for example, pricing mechanisms to drive us off of fossil fuels and toward renewable energy is you can get this terrible coalition of polluters and poor people, or people who claim to be campaigning on behalf of low-income Americans, because there's ways, for example, to do a carbon tax that is revenue-neutral and that's cost-neutral to people. But there are also ways to play it so that it seems like it's a regressive tax on the poor. So we need a really big tent to get some of these key pieces of legislation passed, and I think that that's a very smart aspect of the Green New Deal, that it's really trying to bring as many people together, a coalition of labor interests, of people working on behalf of income equality, all sorts of causes under the same tent. Now, that being said, to get from here to there, to get to the kind of society that is envisioned in the Green New Deal, which the three of us here might very much agree with, that's not one political battle, that's a zillion political battles. So that's the question, you know, is it better to try to take on all these things at one point, or would it be better to have one single piece of legislation. There is no legislation associated with the Green New Deal. It is really just as a series of aspirational goals at this point.

Bill, how do you see the Green New Deal? Do you see it the same way?

McKibben: I think it's the first time we've had legislation that's on the same scale as the size of the problem. I mean, look. It's one of these places where I have to be careful not to be a jerk and say, "Oh if only you listened to me when . . ." Because, as I said before, there were things we could have done at a certain point that were relatively small and easy, but those options are no longer available. Like a modest carbon tax, which still makes perfect sense but by itself is nowhere big enough to get the yield, the savings in carbon emissions that we now desperately need, because we're talking six, seven per cent a year

or more now to try and meet anything like these U.N. goals. Those are enormous, on the bleeding edge of technically possible. So I think it's really important that the Green New Deal is out there, and I think it's really important, most of all, that we just keep ramping up pressure on this system to produce something large.

Well that's why the first reaction to the proposal of a Green New Deal from the President of the United States and people at CPAC and the rest was, "They're going to take away your hamburgers, they're going to ban cows." You're dealing with an opposition that's working not in the spirit of science or good faith.

McKibben: Right. Which is why it's probably not worth trying to spend a whole lot of time coming up with a solution that the President's going to love and enjoy. What we have to do is rally the three-quarters of this country that understands we're facing a really serious problem. I think that this is going to become one of the issues in this Presidential campaign, because I think everyone's begun to realize how out of touch Trump is with most voters. It's a good thing, too, because, David, we're basically out of Presidential cycles in order to deal with this problem.

How do you mean?

McKibben: Well the U.N. Intergovernmental Panel on Climate Change last November issued their most recent report, and it was by far their most pointed to date. It said if really fundamentally transformative work was not well under way by 2030 then we were not going to catch up with the math of climate change. Physics was going to just be too far ahead in this race. And you know enough about political life in this country or any other to know that a decade is a short period of time—if we want to have anything substantial happening in a decade then we have got to be doing it right away.

Now, there's a recent CNN poll, Betsy, that shows that Democrats care more about climate change than any other issue in the upcoming election. More than health care, more than gun control, more than impeaching or not impeaching President Trump. Did that surprise you? And do you think that will hold up somehow when it comes time for the campaign to intensify in the debates to happen?

Kolbert: I will confess that I was very surprised by that. I mean, you've always seen climate change rank, you know, nineteenth, or something like that. And so I think that's an extraordinary development. And you could argue it's a positive result, and you could argue, oh, my God, that's the scariest thing I've ever heard, because it does suggest that people are really seeing changes in their own lives that they find very frightening. And I think that, to get back to your point of, do the Koch brothers have grandchildren, I mean, people look at their kids. You know, I certainly do, and all the kids who are out on the street and say, "What is the world going to look like?" You know, twenty or thirty years from now, when my kids are my age—it's scary and it's depressing and it makes you ashamed. I mean, how could we leave a world like this to our children? I think increasing numbers of people are feeling that.

I guess they don't have to look very far. If you were to visit Delhi and try to breathe, if you go to Beijing or Shanghai and try to breathe, or try to be a farmer in Central America, or exist in Bangladesh, it's not that hard to figure out it's no longer a speculative matter, is it?

Kolbert: No. And I mean, you don't have to go as far as Bangladesh. You can go to Miami or you can go to New Orleans, you can go to, to be honest, you can go to New York City. All of these major American cities that are going to be dealing and already are dealing with sea-level rise, and a lot of places are dealing with storms that they never saw. We're seeing tremendous flooding right now in the Mississippi, which probably has a climate fingerprint on it. So almost everywhere you go in this country, farmers are grappling with it in the U.S., you know, what is the weather going to be like. It's changing the crops you can grow. So all of these things do have a bearing on how people see the world, which, as I say, is fortunate in some ways, but very scary in another.

Bill, in the financial crisis of 2009, as discussed, very often people say, Well, why didn't anybody go to jail? Why didn't anybody from various offending institutions, banks, or the like go to jail? I never hear that when it comes to the fossil-fuel industries in the late eighties and nineties.

McKibben: Well, people are really beginning to talk at least about trying to hold those companies financially accountable. As you know, the New York

state attorney general is suing Exxon on the grounds that it lied to investors. New York City is suing the oil companies on the grounds that their product produced a knowable and foreseeable harm in terms of the sea-level rise. The city is now spending billions to try and cope with it. This is happening now around the country and around the world. The clearest analogy probably is to the tobacco wars of the previous generation. In fact, the oil industry hired veterans of the tobacco wars and the DDT wars to try and pull the same trick here. And they did it with, sadly, great power. That's what happens when you have the biggest industry in the world all in behind the most consequential lie in human history.

You know, for nearly twenty years that I've been working together with Betsy, the running joke between us is about Betsy's pessimism, which is well-founded, but we managed to joke about it anyway. And Bill, early on in "[Falter](#)," your new book, you write, "There is one sense in which I am less grim than in my younger days. This book ends with the conviction that resistance to these dangers is at least possible." And I sense in both of you, each in your own way, and it might be different, but each in your own way, some sense of hope is informing your work now, in 2019, the way it might not have five years ago. Am I right, Betsy?

Kolbert: I'll play my usual role here: Eeyore. I do see glimmers of hope on a political front but it's sort of like mountains after mountains after mountains. And I think, as they say, the facts on the ground, climate change, the thing that distinguishes it from a lot of other environmental problems is it's cumulative. It's not something where you can say, at the moment you don't like things, let's undo them and have a chance of undoing them. There's a lot of time lag in the system, there's a lot of inertia in the system.

The system, meaning science?

Kolbert: No, in the climate system. So we have not yet experienced the full impact of the greenhouse gases we have already put up there. And once we do, you know, in whatever, a decade or so, there's a sort of a long tail to that, we will have put up that much more. So we're always chasing this problem, and you can't decide—once we decide "Oh, we really don't like this climate," you don't get the old climate back for, you know, many, many, many generations. So we are fighting a very very, very uphill battle. And I think

the point that Bill has made, and I agree with it, is maybe we can avoid the worst possible future. But I don't think at this point we can avoid a lot, a lot, a lot of damage.

And we've been seeing it already.

Kolbert: And we're seeing it, but it's just beginning. And it's not just beginning and then we can turn it around, it's just beginning and a lot more is built in.

What can be held back, Bill, and what can't be held back at this point?

McKibben: Well, look, Betsy's right. The problem with climate change is that it's a timed test, and if you don't solve it, it's really the first timed test like this we've ever had. And if you don't solve it fast then you don't solve it. No one's got a plan for refreezing the Arctic once it's melted, and we've lost now seventy or eighty per cent of the summer sea ice in the Arctic. So that's a tipping point more or less crossed. The oceans are thirty per cent more acidic than they used to. So we're not playing for stopping climate change. We're playing maybe for being able to slow it down to the point where it doesn't make civilizations impossible. That's an open question. There are scientists who tell you we're already past that point. The consensus, at least for the moment, is that we've got a narrow and closing window, but that if we move with everything we have, then, perhaps, we'll be able to squeeze a fair amount of our legacy through it. But Betsy is right, an already very difficult century is going to become a lot harder no matter what we do. It's at this point trying to keep it from becoming not a difficult and even miserable century but a literally impossible one.

You've both expressed your admiration for some of the movements that are generated by younger people. Are there any politicians that are running for President at the moment with whom any hope can reside where this is concerned?

McKibben: Well, from my point of view, we need this time all the at least Democratic candidates to be climate candidates. And there's some very good people who know a lot about climate running. [Jay Inslee](#), say, and others who are doing a terrific job of talking about it in powerful ways. [Elizabeth Warren](#)'s plan on public lands is great. [Bernie](#) [Sanders] in many ways got this conversation started on a national level in the last Presidential election. I think it's

probably in the end maybe less important precisely who the President is than what the atmosphere is like, what the Zeitgeist is like. That will push them enormously in the right direction. That's why people have got to be working on the Presidential campaign, but that can't be all or even most of what we're doing, at least for the next six months or so. There's a lot of other organizing to get done. And you can tell, I mean, here's the hopeful case, if you want it. Fifty years ago next spring, we had the first Earth Day, in 1970. Twenty million people, one in ten of the then American population, went into the street. Now Earth Day is kind of a nice day in the park, whatever. Then a lot of those people were angry, and that anger transformed the flavor of this issue in America over the next four years. Richard Nixon, who had not an environmental bone in his body, signed every piece of legislation on which we still depend, the Clean Air Act, the Clean Water Act, the Endangered Species Act that Betsy described is now under siege. Those all came because of that outpouring of public energy that shifted the Zeitgeist. We'd better do it again. And in spades.

Now, Betsy, we've been talking for a while as if the only political force that's involved here is the United States. And right-wing populism has swept not only the United States, the executive branch of

Elizabeth Kolbert, Bill McKibben—authors of really the essential works on climate change these last thirty years. Thank you so much.

United States and the Senate, but you see this all over the world. Is right-wing populism in concert with anti-environmentalism globally?

Kolbert: Well, they they do tend to go hand in hand. They have tended to go hand in hand, and one of the strains to all of this, and it does get back to some of the points that Bill was making about this peculiar moment that we have lived through and live in, is climate change is a global problem. The atmosphere is the global commons. There's just no getting around it. The atmosphere doesn't care where the carbon was emitted, it just cares that it was emitted. And so you do need global coöperation and global action. And at precisely this moment where nothing could be more important we are seeing a resurgent nationalism. Coincidence? You know, possibly, but it is possibly also a lot of anxiety around how are we going to deal with this global problem.

And I don't see when you look at all of the global politics involved, you know, putting even aside American politics for the moment, which are very hard to see beyond.

But that's why I say it's one of these problems where you scale one mountain and then you see, you know, another mountain chain ahead of you, unfortunately.