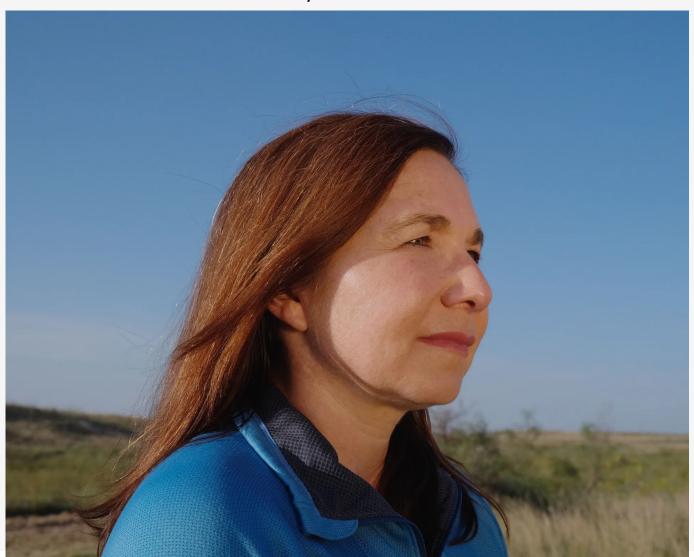
## HOW TO TALK ABOUT CLIMATE CHANGE ACROSS THE POLITICAL DIVIDE

Katharine Hayhoe, an atmospheric scientist and evangelical Christian, has written a book that lays out strategies for discussing the climate crisis in a divided country.

By Eliza Griswold



Hayhoe eschews the term "climate denier," saying that she has "seen it applied all too often to shut down discussion rather than encourage it." Photographs by Hope Mora for The New Yorker

In 2005, Katharine Hayhoe, a Canadian climate scientist and evangelical Christian, moved from South Bend, Indiana, to Lubbock, Texas, a flat expanse of arid grassland that sits at the edge of the Permian Basin, and is one of the largest oil and gas fields in the world. Her husband had been offered a position as a linguistics professor at Texas Tech and a job as a pastor at a small local church. The opportunity was too enticing to decline, so Hayhoe tagged along as the academic plus-one, securing a position as a research professor of geosciences at Texas Tech. One day, a colleague asked Hayhoe to give a guest lecture in his geology class on the carbon cycle—the way carbon travels between water, Earth, and the atmosphere. Soon after, she stood in the dark pit of a windowless lecture hall, before some hundred students, and described how volcanoes, erosion, and the shifting of tectonic plates affect carbon. In the last few minutes, Hayhoe addressed the fact that, since the Industrial Revolution, human activity has increased the amount of carbon in the atmosphere. Out of the darkness, a student rose to his feet. "Are you a Democrat?" he asked, in a belligerent tone. The question flummoxed her. "No, I'm Canadian," she replied. There were no more questions, so she packed up her computer and left. It wasn't until later that she realized the mere mention of human influence on the planet's warming temperatures was becoming politically divisive.

To Hayhoe, climate science had never been political. She had been raised in Toronto, among the Plymouth Brethren, an evangelical group that adheres to *sola scriptura*, the notion that the Bible is the supreme authority on matters of faith and for guiding one's life. Many Brethren assemblies are led by elders, not pastors. Hayhoe, whose father was an elder and a science teacher, grew up listening to him giving talks and showing slides of the stars in church, calling the dotted skies "God's art gallery." Her parents were also missionaries, and she spent several years in South America, where they taught in a school. Hayhoe was planning on becoming an astrophysicist, but, in her third year of college, she took a class on climate science that revealed the grave danger global warming poses to marginalized people around the world. "People always talk about saving the planet," she told me. "But the planet will be orbiting the sun long after we're gone." The urgency, for her, was that human beings were imperilled. When Hayhoe attended graduate school, at the University of Illinois, she

shifted her focus to study atmospheric science. She went on to research how climate change was affecting aquatic ecosystems in the Great Lakes and the water supply in California.

"It was really moving to Texas that set me on this path of figuring out how to communicate about climate change," she told me. "I was the only climate scientist within two hundred miles." After arriving, she was asked to speak with women's groups, book clubs, and eventually church groups. Many American evangelicals doubt or dismiss the realities of climate change, and religious audiences were sometimes resistant to her message. "People would say, 'Well, of course you care—you're a scientist,'" she recalled. In 2009, speaking at Second Baptist Church in Lubbock, Hayhoe decided to mention her own Christianity. "I was nervous because talking about your faith is just not something that a scientist does," she told me. "It felt very uncomfortable, like pulling your pants down or baring your soul." But, as Hayhoe began to speak, the group became more receptive—her speech wasn't political propaganda but an earnest effort to reconcile her faith with the scientific consensus.

Since then, Hayhoe has given hundreds of talks as a "climate communicator," speaking to politically diverse audiences about climate change. She records the questions she is asked afterward, using an app, and the two most frequent are: "What gives you hope?" and "How do I talk to my [blank] about climate change?" In her new book, "Saving Us," which comes out in September, Hayhoe sets out to answer these questions. Chapter by chapter, she lays out effective strategies for communicating about the urgency of climate change across America's political divide. She still believes that there will be an awakening to the urgency of the problem—what she calls our collective "oh, shit" moment.

Recently, I visited Hayhoe at the social-science building at Texas Tech, which occupies a complex of sand-colored Spanish Colonials. (She now teaches about climate policy.) Outside her office door, there's no name card, a precaution she takes for her own security. She has occasionally wandered down the dark hall by her office to find a stranger waiting to confront her about climate change. Hayhoe, who is forty-nine and freckled, invited me into her office, past a table of empty kombucha bottles, which she is storing until the university re-starts its recycling program post-pandemic. On her desk sat a stack of unopened mail. The angry notes she gets are astonishing: she's been called a "handmaiden of the beast" and received veiled threats about being shot at or beheaded. She sifted through the pile and offered me several letters to open at random. "Watch out for the big manila ones," she said. "They are usually the craziest." That day, she had received an invitation to become a

Jehovah's Witness and an angry screed against climate hoaxers, which read, in red ink, "Punishment of Climate Change Heretics!!"

limate change hasn't always been so divisive. In the late nineties, a Gallup poll found that forty-six per cent of Democrats and forty-seven per cent of Republicans agreed that the effects of global warming had already begun. "As recently as 2008, former speaker of the house Newt Gingrich, a Republican, and current House speaker Nancy Pelosi, a Democrat, cozied up on a love seat in front of the U.S. Capitol to film a commercial about climate change," Hayhoe writes in her book. In the past decade, though, as the scope of the crisis became clear, Democrats began pressing for policies to cut U.S. reliance on fossil fuels, and Republicans were reluctant to commit. Energy companies stepped into the stalemate and began aggressively lobbying politicians, and injecting doubt into the public discourse, to stop such policies from taking effect. "Industry swung into motion to activate the political system in their favor," Hayhoe said.

At its root, she notes, the climate-change divide isn't a disagreement about facts. "In a study of fifty-six countries, researchers found people's opinions on climate change to be most strongly correlated not with education and knowledge, but rather with 'values, ideologies, worldviews and political orientation,' " she writes. One salient problem is an aspect of human behavior that researchers have termed "solution aversion." Solving the climate crisis will require ending our reliance on fossil fuels, which people believe would involve major sacrifice. "If there's a problem and we're not going to fix it, then that makes us bad people," Hayhoe said. "No one wants to be a bad person." So instead people are happy to seize on excuses not to take action. Most are what she calls "science-y sounding objections, and, in the U.S., religious-y sounding objections." Hayhoe often hears that the Earth has always heated and cooled according to its own intrinsic cycle, or that God, not humanity, controls the fate of the planet. These objections can then harden into aspects of our political identity.

"We often assume that the tribes that form around climate change can be sorted into two categories: *them* and *us*. In reality though, it's a lot more complicated than that," she writes. She cited <u>a study</u> that shows seventy-two per cent of American adults agree that the weather is changing. She breaks out categories—originally defined by her colleague Anthony Leiserowitz, at the Yale Program on Climate Change Communication, and other researchers—of attitudes toward global warming: alarmed, concerned, cautious, disengaged, and doubtful. Only the remaining eight per cent of

Americans fall into the final category, dismissive. Hayhoe eschews the term "climate denier," saying that she has "seen it applied all too often to shut down discussion rather than encourage it."

Nevertheless, she doesn't spend much time engaging dismissives. "Once in a while, maybe one time out of one thousand, there's a miracle," she told me. But research has shown her that dismissives are nearly impossible to influence. They are also few enough that it should be possible to build political will around fighting climate change by focusing on others. The doubtful, unlike dismissives, can be swayed. (She noted the example of the Republican Bob Inglis, who didn't accept the realities of climate change until his son told him that he would only vote for him if he changed his mind on the issue.) "It's not about the loudest voices," Hayhoe told me. "It's about everyone else who doesn't understand why climate change matters or what they can do about it."

Hayhoe is, above all, a scientist, and she bases her assertions about human behavior on data. In "Saving Us," she cites studies conducted by Leiserowitz on the most effective methods for communicating. "This is the study of social norms which dates back at least until Aristotle," Leiserowitz told me. His work has revealed, for example, that conversations about the climate tend to be more effective if both speakers share a core value or an aspect of their identity. The most effective climate communicators to conservatives are often people of faith, members of the military, and Republicans who are nevertheless committed to the climate. Hayhoe writes, "That's why it's so important to seek out like-minded groups: winter athletes, parents, fellow birders or Rotarians, or people who share our faith."

Hayhoe is the climate ambassador to the World Evangelical Alliance, and much of her work involves helping fellow-Christians mobilize their churches. There is a long history within evangelicalism of advocating "creation care," the belief that God charged humanity with caring for the earth. The Evangelical Environmental Network, which Hayhoe advises, argues that evangelicals should follow a "Biblical mandate to care for creation," and Cal DeWitt, a professor at the University of Wisconsin, Madison, has long advocated that pastors call their congregations to "earth stewardship." But Hayhoe believes that emphasizing the care of plants and animals is less effective than highlighting the potential dangers for our fellow human beings. "It's not about saving the planet—it's about saving us," she said.

Recently, Hayhoe was appointed as the chief scientist at the Nature Conservancy, and this past summer she invited me to join her on her first trip in the field. Hayhoe pulled off the highway and into the small town of Tahoka, less than an hour's drive south of Lubbock, to meet a cotton farmer named Jack Scott, with whom she'd corresponded via e-mail. It was common for farmers to contact Hayhoe to ask for advice on dealing with shifting weather patterns. One of her communication strategies is to talk to people about their own observations, which help them connect the realities of their lives to the abstraction of climate change. "The 2011 drought in Texas was a game changer," she told me. "Everyone has a story now, where they didn't fifteen years ago." Still, not all farmers were ready to campaign for climate action. "One farmer at church asks me for seasonal forecasts every year," she said. "But he will not budge on climate change—will not."

Agriculture is under duress in West Texas, in part owing to increasingly extreme weather. Cotton remains one of the most resilient crops. "It's the only crop that turns rainfall into income even at low levels," Kater Hake, a cotton agronomist at Cotton Incorporated, told me later. Hake consults with Hayhoe on the Grower Citizen Science Project, a program that works with seventeen cotton growers on innovative ways to improve soil quality, which is suffering as the climate warms, without using more water, an increasingly scarce resource. With farmers, Hayhoe avoids using the term "climate change," since the phenomenon is frequently seen as a liberal hoax. "We use the words 'climate variability' and 'long-term trends,'" she said.

We pulled up to a ranch-style farmhouse fenced with green pipe and cedar planks, and Scott invited us into his living room, where a large cross sat atop a roll-top desk, reading "On the eighth day, God created a farmer." Scott, who is involved in the project, had been experimenting with unconventional techniques, and the high quality of his cotton was proof of their success. Among the most important strategies was crop rotation: Scott planted turnips, vetch, and other cover crops, which he had decided to plow into the soil to create "green manure." Adding the carbon contained in the vegetables to the soil improved the quality of his cotton, and also kept the carbon out of the atmosphere—a technique called "carbon sequestration." "By putting carbon into the soil, we can pull it out of the air," Hayhoe told me.



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Scott's work served another purpose. By showing success with his climate-conscious farming techniques, he might persuade other farmers to join in, potentially becoming the center of what Hayhoe calls a cluster. "I preach to my friends about how well it's doing," he said. Still, not everyone could be convinced. That afternoon, after we ate lunch at a local diner, a pickup truck pulled into the lot. "That farmer doesn't believe in climate change," Scott told Hayhoe. "He says it's all bullshit." His eyes twinkled, and I thought he was hoping that Hayhoe would confront the farmer—but she raised an eyebrow and stayed quiet. "I don't accost people in diners," she wrote me, later. "I wait until they come to me."

Several days later, I received a text from Hayhoe. She was in a recording session for the audio version of her book, and the sound engineer, David Dale, told her that he was a born-again Christian, and

that he had "some questions" about climate change. He was a climate doubter, among one of the cohorts that Hayhoe is most eager to reach. The next day, by Zoom, I joined a lunch they had. Hayhoe and Dale chatted about their faith, and their shared love of skiing. They discussed the Book of Micah, and Hayhoe pointed out the fact that the Taos Ski Valley didn't always receive enough snowfall anymore to open the entire mountain. "So much of this is not about the facts," Leiserowitz told me later. "It's about trusting the person the facts come from."

Dale told Hayhoe he was worried that Democratic politicians were exaggerating the facts of climate change to scare voters and secure their voting blocs. "This Green New Deal and all that's going on in Washington, D.C., is about power," he told her. She assured him that the science was conclusive: "A thermometer isn't Democrat or Republican." She then directed the conversation to Republican-led free market initiatives to combat climate change by putting a price on carbon emissions. Companies passed their costs onto the rest of us by putting the carbon into the atmosphere, she told Dale, "but what if they had to pay for it? What if, when someone's house burned down because of a forest fire, the companies making money from selling carbon had to pay a homeowner back?" Dale responded, "Well, I'm in favor of that." The talk turned to Dale's favorite fishing hole, where the number of fish had dwindled. He said that, during his most recent visit there, the rocky-bottomed lake was covered in algae. "That's what happens when the water gets warmer," Hayhoe said. "It breaks my heart," Dale added. "That lake is finished."

The final destination of Hayhoe's research trip was the Davis Mountains, a rare green patch of West Texas. The mountains are sometimes called "sky islands" because they function as high-altitude oases that are cool and wet enough to sustain hundreds of species, some of which are struggling to survive on the warming plains. Hayhoe, who often travelled with her fourteen-year-old son, had encouraged me to bring my eight-year-old, Robert. As we drove into a clearing dotted with log cabins, he said, "It's like going back in time." Hayhoe later told me, "It's so important to educate kids about what's going on, not to frighten them but to show them they can have a hand in solutions."

We arrived in time for a sunset hike over a fire-scarred trail. "Here, fire isn't a matter of if but when," Charlotte Reemts, an ecologist with the Nature Conservancy, told us. Reemts was most concerned that the ponderosa pines, red-barked trees that smell of vanilla and grow to heights of a hundred feet,

were threatened by fire and drought. The ponderosa is a keystone species; the fates of many others are tied to its survival. Several species of warblers depend on the ponderosa, and that afternoon they sang to one another in the nearby trees. "Most bird calls are really arguments," Reemts told us. "One calling to another, 'Hey! This is my tree. Don't come near!" "Hayhoe responded, "Now I know why they call it Twitter."

The next morning, Hayhoe showed me a Dropbox folder of hostile comments she receives on social media. Through the years, she's developed a system to manage trolls. "It's been trial and error, error, error," she said. She now responds once, offering a link to resources. Most fire back with gendered insults, often plays on her last name, after which she blocks the sender. Early on, such denigration caused her painful self-doubt. Now handling trolls is more a question of time management. She doesn't want to lose precious hours she could be spending speaking to everyone else—those ranging from doubtful about climate change to alarmed.

This included people like me, who, as she put it, "know it's real, but don't think there's anything they can do about it." Hayhoe urges the alarmed to become the first people on their block with solar panels or an electric car, or to team up with others at their schools, gyms, and workplaces to do energy audits. Studies show that early adopters help shift the norms of their communities. (Hayhoe drives a hybrid car, which she charges using solar panels on her roof.) But the most important aspect of fighting climate change is pushing for policies that will <u>cut our reliance on fossil fuels</u>. She urges the alarmed to get involved in politics, beginning with lobbying politicians at the local and state level.

At the end of our trip, Hayhoe drove us to the airport in Midland. Around the city, the landscape grew weird and raucous, with multicolored shipping containers, lines of large opaque tanks, and odd bits of pipe protruding from the earth. The horizon was broken by shooting flames. Operators were drilling down into the shale to frack for oil, and burning off the natural gas or methane that rose to the surface with it. Methane is thirty-five times more powerful a greenhouse gas than carbon dioxide, and a significant portion of it leaks directly into the atmosphere from wellheads. "They leak enough methane to supply most of the households in Texas with natural gas," Hayhoe said.

Recently, Hayhoe had been thinking about the prophet Jeremiah, who warned the Israelites to stop worshipping idols or risk destruction. During the pandemic, she'd come across a book, "Scientists as Prophets: A Rhetorical Genealogy," that examined the role of prophets in society, beginning with the

oracle at Delphi, stretching through the Old Testament, and culminating in the work of modern-day scientists. Prophets have often stood at the edge of society, warning of the need to change the status quo. Although Hayhoe would be reluctant to make the comparison, her own work also served as a warning. "The window of time to alter our current pathway is closing fast," she told me. Prophets often speak of the need to repent for past wrongdoing, but Hayhoe doesn't urge guilt on her listeners. She only urges that we change our trajectory. "That's all repentance means," she said. "To turn."



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