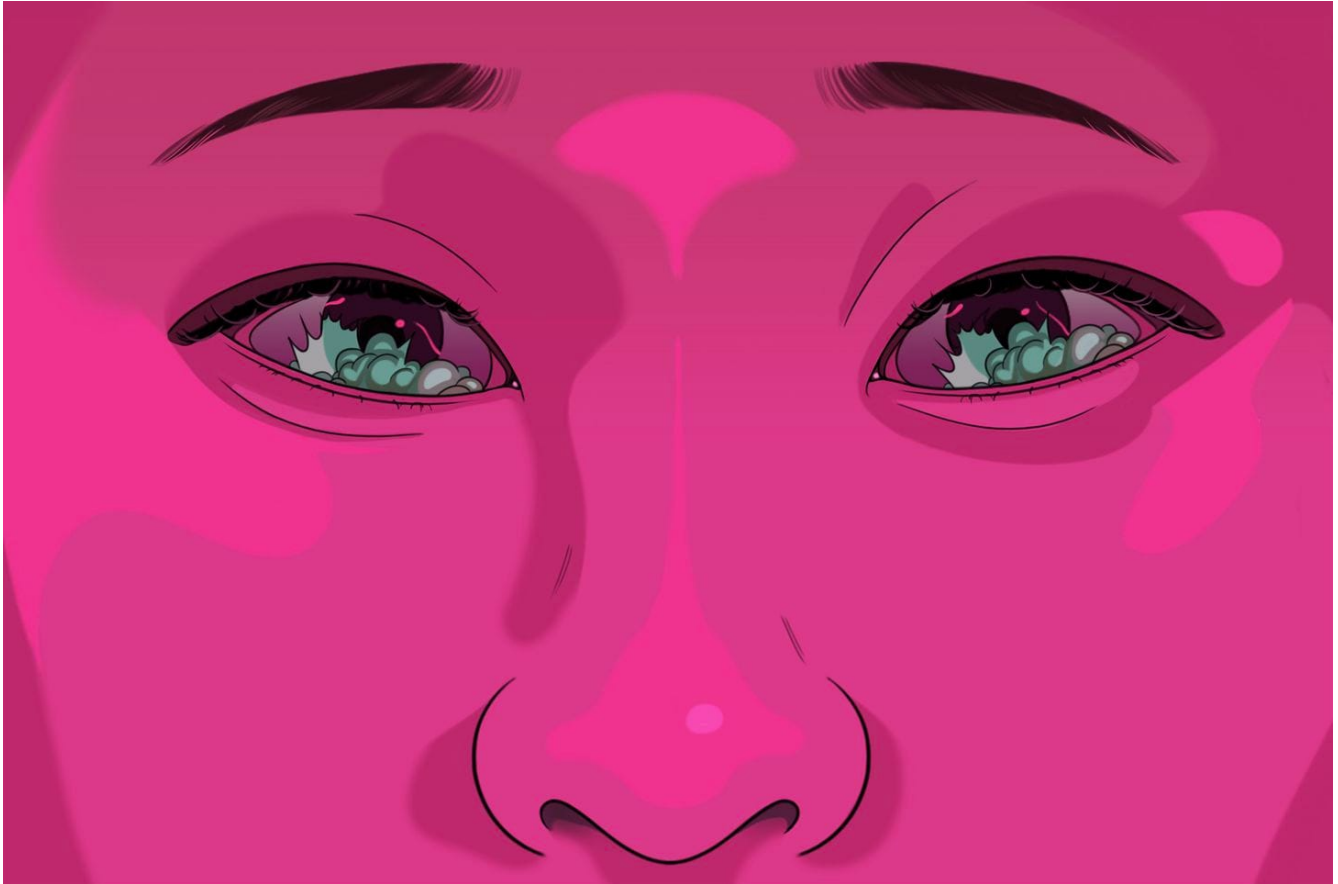


The Environmental Burden of Generation Z

Kids are terrified, anxious and depressed about climate change. Whose fault is that?



(Janelle Barone for The Washington Post)

By Jason Plautz February 3, 2020

The teenagers pour off buses near Denver's Union Station under a baking September sun. Giggling with excitement at skipping out on Friday classes, they join a host of others assembled near the terminal. Native American drummers and dancers rouse the crowd, and there's a festive feeling in the air. But this is no festival. The message these young people have come to send to their city, to their state, to the nation — to the world of adults — is serious. Deadly serious. "We won't die from old age," reads one of the signs they hoist above their heads. "We'll die from climate change."

High school sophomore Sophie Kaplan is marching in a bright yellow flowered sundress,

but the sentiment on her poster is hardly so sunny: "Why Should I Study For a Future I Won't Have?" She thinks about climate change every day, she tells me. She reads "about how we're on the brink" and hears her teachers and parents tell her that it's up to her generation to fix things. "I don't understand why I should be in school if the world is burning," she says. "What's the point of working on my education if we don't deal with this first?"

As the estimated 7,500 marchers converge on the state capitol, I come upon Chris Bray and his children, sixth-grader Arianna and second-grader Colin. Dressed in plaid shorts and blue sunglasses, Colin hovers shyly behind a homemade sign (a picture of coal with the word

“Why?” and a shining sun with the words “Why not?”). The boy is “scared about the planet,” he tells me, but it feels good to be surrounded by so many other people who care, since he can sometimes feel as if nobody else is worried.

Climate change, say Chris and his wife, Amber, is a big topic of discussion in their home. Colin and Arianna have always shown an interest in the environment. They’ve cried over nature documentaries about the destruction of the coral reefs and sought out coverage of 17-year-old Swedish climate activist Greta Thunberg.

Chris and Amber are proud that their children are so aware, and of the way their kids’ interest has informed their own actions. But at the same time, like many parents, they’re concerned that their children could be overwhelmed by predictions about the environment that seem to be growing ever more dire.

The United Nations’ Intergovernmental Panel on Climate Change said in 2018 that policymakers have just [12 years](#) to avert the worst consequences of global warming; news coverage is constantly filled with apocalyptic stories of storms and wildfires. Young people, absorbing the gravity of these warnings, have become the defining face of the climate movement — marching, protesting and berating their elders for bequeathing them an uncertain, unstable future. Underlying their anger, though, is another a-word: anxiety. And it’s something they’re increasingly voicing. Teachers hear their students talk about panic attacks when wildfires break out, and psychologists face young patients weeping about their fear of never having a family. Amber Bray recalls Colin solemnly telling her on his eighth birthday, “My life would be better without climate change.”

How to handle such fears? The adult world seems unsure, at best. The Brays, for their part, think it’s important to work through the anguish and keep talking to their kids. “We’ve decided to be open and honest. They have feelings, we validate them,” Chris says. At the same time, he admits, “It’s sad, it’s hard.”

As climate change continues unabated, parents, teachers and medical professionals across the country find themselves face-to-face with a quandary: How do you raise a generation to look toward the future with hope when all around them swirls a message of apparent hopelessness? How do you prepare today’s children for a world defined by environmental trauma without inflicting more trauma yourself? And where do you find the line between responsible education and undue alarmism?



Students and others at a climate change protest in New York in May. Photo by Erik McGregor/Pacific Press/LightRocket via Getty Images

The nexus between climate change and the mental health of children is rarely at the forefront of the discussion around environmental politics, but it’s very real: In a Washington Post-Kaiser Family Foundation poll of American teenagers released in September, 57 percent said that climate change made them feel scared and 52 percent said it made them feel angry, both higher rates than among adults. Just 29 percent of teens said they were optimistic. Reports like the U.S. government’s National Climate Assessment have cited mental health concerns as a side effect of climate change. The American Academy of Pediatrics issued a policy statement in 2015 warning that climate change poses threats to “children’s mental and physical health,” and that “failure to take prompt, substantive action would be an act of injustice to all children.”

In expert testimony for the plaintiffs from 2018 in *Juliana v. United States* — a lawsuit filed by a

number of young people seeking to force the U.S. government to adopt policies to fight climate change and end fossil fuel subsidies — psychiatrist Lise van Susteren wrote that children will be “at the center of the storm” as climate change worsens and that they may already be feeling mental health impacts. “Day in and day out worrying about the unprecedented scale of the risk posed by climate change ... takes a heavy toll on an individual’s well-being, wearing them down, sending some to the ‘breaking point,’ ” she wrote. “Children are especially vulnerable.” Those words, she told me, were “really painful” to write. Interviewing children about their fears for nature and their worries about their future families, she says, left her with “a sense of shame.”

“Eco-anxiety” or “climate depression” is playing out in real terms among young people, sometimes in extreme ways: A 2008 study in an Australian medical journal chronicled the case of a 17-year-old boy who was hospitalized after refusing to drink water during a nationwide drought, in what the authors called the first case of “climate change delusion.” A psychiatrist I interviewed told me a patient had confessed that she secretly wished a pandemic would strike to ease stress on the planet.

But the anxiety can manifest in subtler ways as well. Sarah Niles, an 18-year-old from Alabama, told me that her fears about climate change have simply become a part of her life. “I feel like in my peer group, you just go right from talking about polar bears dying to ‘Did you see what Maya posted on Snapchat?’ Nobody has a filter to adjust,” Niles says. “It’s like, the ice caps are melting and my hypothetical children will never see them, but also I have a calculus test tomorrow.”

According to the National Institutes of Health, nearly 1 in 3 people ages 13 to 18 experience an anxiety disorder, and a study published in April 2018 in the *Journal of Development and Behavioral Pediatrics* [found](#) that anxiety diagnoses in children ages 6 to 17 increased 20

percent between 2007 and 2012. There’s no single cause: A nonstop barrage of social media, a heightened political climate and the threat of school shootings are all stressors. And that’s on top of being a teenager, with all the tumult that entails.

But the often apocalyptic nature of the news about climate change is perhaps uniquely paralyzing. Elizabeth Haase, a psychiatrist in Nevada, describes how some of her patients can be overwhelmed by the scale of the problem: “I’m supposed to be emotionally hopeful in a hopeless situation, and I’m supposed to act powerful when the source of power is collective power and it’s overwhelming, and I’m supposed to feel faith and do things to be sustainable when nature is declining around me.” Overcome by a sense of powerlessness, they simply feel stuck in a situation, with no way out.

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Park Guthrie knows about this paralysis in climate-change-spooked kids. A sixth-grade teacher in Sonoma County, Calif., he has seen the toll that the state’s raging wildfires can take on the generally enthusiastic 11- and 12-year-olds in his classes. He has witnessed panic attacks triggered by the mere smell of smoke. When smoke from a nearby controlled burn once drifted to the school, he recalls, one boy smiled blankly and announced, “I think I’m having PTSD.” Last year, after the Kincade Fire burned nearly 78,000 acres in the county in late October, Guthrie found himself, not for the first time, comforting students worried about their homes and their relatives.



(Janelle Barone for The Washington Post)

Guthrie understands how much climate change troubles his students, but he doesn't shy from talking about it. He confronts not only their fears, but also the political reality of denial and decades of inaction, all of which is disturbing to his students. "It's like there's a paradigm shift, like when you learn that Santa Claus isn't real," he says. "Everything we teach them, that science is a tool for understanding the world, that adults are protecting you, falls apart. There's nothing to prepare them for this enormous problem that we simply haven't solved."

An Army brat who lived as a high schooler in Berlin, Guthrie recalls going to East Berlin to watch a tribute to the Berlin Wall, a Communist display of propaganda. Back then, it made him believe that the wall would never come down, but today he realizes how much that "fictional exercise" reinforced the wall's symbolic power. Now, he fears that by not speaking up forcefully about climate change as a generational issue, institutions are "propping up this fictional story

that you can care for kids in our country while neglecting or ignoring the climate." As a teacher, Guthrie is a "mandated reporter," someone legally required to speak up about signs of child abuse and neglect. If climate change will harm his students and is causing them anguish, isn't silence on the issue a violation of that duty?

Guthrie has taken his views national as the co-founder of the nonprofit Schools for Climate Action (S4CA), which asks schools and other educational groups to pass resolutions highlighting the effects of climate change on children. Since December 2017, more than 100 resolutions have been passed, 66 by school boards and 29 by student councils. Many set sustainability goals or call on Congress to take climate action. Most are shepherded by students, who write the resolutions with the help of administrators and school board members.

Though they don't commit organizations to any specific action, the resolutions send a signal that there are support networks for students struggling with climate change. They also bolster the idea that students can at least make a difference by raising awareness: Jordyn Bauer, a 20-year-old sophomore at California's Sonoma State University who worked to pass a resolution in her California school district in 2018, said it helped validate her ability to do something. "Too many people are just standing by," she says. "I felt like it was my responsibility to take charge."

Not everyone, however, is on board with Guthrie's agenda. Last spring, Guthrie and a number of S4CA partners — including several students — lobbied the National Association of School Psychologists to adopt a resolution stating that climate change is a children's issue, as the group's California chapter had done. But the organization declined. The group's executive director, Kathleen Minke, responded in an email to Guthrie that her group focuses on "issues that have a very direct impact on schools, student learning and children's mental and behavioral health." Climate change, she said, "falls outside this professional focus." When I interviewed her

later, Minke told me that her organization isn't ignoring climate change and has dedicated resources to help school psychologists deal with kids affected by natural disasters. But when it comes to managing anxiety, their focus is on coping, not causes. "You're not going to develop an entire curriculum around anxiety related to 'x,' " she says. "There are too many x's for that to be efficient."

Likewise, S4CA's efforts to get national school board groups to lobby on climate change have come up short. Chris Ungar has been a school board member for 20 years in California's San Luis Coastal Unified School District. Last spring, he proposed language to the National School Boards Association recognizing climate change as a threat and asking Congress for funding to help schools affected by natural disasters. It easily passed a policy committee, but before the full association the resolution was, in Ungar's words, "gutted" — the climate change language stripped because delegates from some states worried that it could obscure the natural-disaster funding request.



The People's Climate March in New York in September. (Andrew Burton/Getty Images)

That outcome underscored one of the biggest barriers to Guthrie's work: Education and youth groups don't always see climate change as having a direct link to children if they're not being displaced by a disaster — and sometimes not even then. Still, more schools have picked up the S4CA resolution model, and in September, Rep. Barbara Lee (D-Calif.) introduced a

nonbinding resolution acknowledging climate change as a social justice issue and supporting more climate education. "By failing to address climate change in a meaningful way, we are failing our children," she said in a floor speech, "and they know it."

Although there's little question that climate change will harm younger generations, there's considerably more debate about a related concern — that the rhetoric surrounding the issue is equally injurious. When young people seize on the U.N. warning that governments need to take action in 12 years to conclude, incorrectly, that the planet has only a decade remaining (Rep. Alexandria Ocasio-Cortez said last year that millennials fear "the world is gonna end in 12 years if we don't address climate change"), or when the website of the U.K.-based activist group Extinction Rebellion warns that "societal collapse and mass death are seen as inevitable by scientists and other credible voices," it can be terrifying. Some voices are now sounding the alarm about alarmism, suggesting that we'd all be better off if we dialed down some of the hyperbole.

"This message of 'We're all going to die, how dare you say there might be something we can do' ... that's just not supported by the science," says Kate Marvel, a climate scientist and mathematician at Columbia University. "I'm not saying we can all rest, and I'm not saying we live in the best of all possible worlds. But one can have a sense of optimism by working towards a solution."

Many of the adults I talked to said the heightened rhetoric around climate change reminded them of the panic around nuclear weapons during the Cold War, when school lessons were interrupted by "duck and cover" drills and there was perpetual fear that the world might end at any moment. The 1983 TV movie "The Day After," which dramatized the fallout from a nuclear attack on the Midwest, emerged as an apocalyptic touchstone; surveys after the film aired found viewers were more depressed about their chances

of survival and were less optimistic about their ability to influence nuclear weapons policy.

Michael Shellenberger, an author and founder of the California-based nonprofit Environmental Progress, which promotes nuclear energy, remembers how panicked he felt after watching the movie. Now, he considers it “bizarre” that adults would have decided “to traumatize teenagers with that.” Today, he says, some in the environmental movement are making climate change “the new apocalypse.”

“These scenarios of apocalypse, of really cataclysmic climate change that people are scaring children around, are in the realm of an extreme, unpredictable event,” he told me. He has reflected on eco-anxiety while observing his 14-year-old daughter and her friends grow more worried about the planet; his book on the topic, “Apocalypse Never,” is due out in June. He’s not advocating that children be shielded from the science, but rather that it be presented seriously. The headline-grabbing threats of mass extinctions and deaths may motivate action, he says, but at what cost?

“We have people that know the power of fear manipulate consciously the psychology of young people in a way that is wrong and should stop,” he argues. “What people need to understand is that there are extreme scenarios ... and they are not the same thing as predictive science.” Indeed, scientists say that while some warming is baked in, action now could avert the worst consequences. Marvel puts it this way: “There are so many futures between doomed and fine.”

Even the lower end of that range of futures, however, can mean destructive storms, displacement and economic upheaval, and that’s the reality that teachers have to communicate. To Meghan Duffy, a professor of ecology and evolutionary biology at the University of Michigan, the climate change lecture in her introductory biology course is the “most important” class she teaches. But, worried that the class might be overwhelming or not communicated well, she surveyed her students

for a study published in 2019. After the climate change lesson, students knew more but felt worse: Only 4 percent of the class thought humans would successfully address climate change. One student wrote in an anonymous survey, “I understand that global warming is an important part of learning from this class, but at some point one of the lectures gave me an anxiety attack, so that wasn’t fun.”

Studying that emotional response forced Duffy to reevaluate her syllabus. This past fall, she added a second lesson about solutions, highlighting the drop in the cost of renewable energy and improvements in battery technology for storing clean energy. It’s a strategy Duffy says is necessary for any climate communicator, but especially one working with young minds. “There’s a danger in having the instruction emphasize climate catastrophe,” she says. “It’s tempting to say how bad things are, how much we need to stop it. But at some point you’ve accidentally said this is a foregone conclusion. We can overemphasize how scary it is to the point where people feel hopeless and panicked.”

Working toward a solution, in fact, is the consensus approach to calming young people’s fears about the future. The key to addressing eco-anxiety at any age, says psychiatrist Haase, is getting “unstuck,” losing that feeling of paralysis in the face of the problem’s magnitude. Haase is a founding member of the Climate Psychiatry Alliance, an ad hoc group that has sprung up to offer patients and doctors advice on discussing climate anxiety. It’s one of a number of such groups that are tackling the growing rate of patients panicked about the state of the world: The Good Grief Network was launched in 2016 to offer group counseling sessions to the climate-anxious.

The emphasis, doctors say, should be on personal responsibility and empowerment. For an overwhelming problem like climate change, being able to take some action — whether eating less meat or switching to an electric vehicle — can help fight paralysis and get patients to

recognize that the worst of climate change is not a fait accompli and that some progress can be made. Haase says patients can often end up at one of two poles: one focused on catastrophe, the other essentially ignoring the problem. Recognizing the middle space “can open up your thoughts. By going back and forth, it creates a larger space for you to think in and feel in,” she explains, “and out of that come innovative solutions.”

“Everything we teach them, that science is a tool for understanding the world, that adults are protecting you, falls apart,” says California teacher Park Guthrie.

As the ones usually tasked with bringing climate change information to their students, teachers are increasingly taking on the weight of the psychological implications. Lisa Balazs, a science teacher at a private school outside Birmingham, Ala., told me she persuaded her school to offer a specialized climate change class last year. She wanted to walk students through the physics and chemistry of the changing climate, but also focus on solutions. “I wanted them to feel like they were empowered in the way you could have an intelligent conversation,” she says. “The scary part is feeling like there’s nothing you individually can do, especially when you look at the government. So turning it around and putting it back in your personal control, this is what you can vote for and work for.”

Balazs highlighted how politicians even in her conservative state have promoted clean energy, and she encouraged her students to take political action. Sarah Niles, who took Balazs’s class as a senior, says it was “inspiring” to learn about solutions to climate change, especially since, so often, the subject “felt like devastation with no hope.” She recalls “days after class where we would go to the common room and just sit because we didn’t know what to do.” Now, she’s taking a gap year before college and volunteering in Rockport, Tex., to help rebuild the community, which was devastated by Hurricane Harvey in 2017. It’s a way, she says, to put “a face and a

name to things you learn about in class,” and feel as if she’s making a small difference.

Of course, before you can bring up solutions, you have to be able to bring up climate change at all. Schools, however, have sometimes been slow to bring climate change into the classroom, especially in conservative areas. Lawmakers in states such as Florida and Texas have pushed bills that would strip climate change from curriculums entirely. In Pennsylvania’s Central Bucks School District in 2017, a Republican school board member used fears about rising anxiety among the young in lobbying to remove textbooks that discussed climate change.

Moreover, many teachers are unequipped to deal with it. A survey from the National Center for Science Education and Penn State’s Survey Research Center during the 2014-15 school year found that fewer than half of the teachers responding had taken a formal course on climate change. The same survey found that only two-thirds of teachers said they emphasize that human activity is the primary driver of climate change, despite the scientific consensus that humans are the cause. (Jeanne Kaidy, a high school science teacher in Rochester, N.Y., told me she gets a “distressing” amount of pushback from students and teachers disputing the science.)

But many teachers told me they’re supported by the Next Generation Science Standards, written in 2013 to overhaul science teaching. Created by officials from 26 states and several national science education organizations, the standards take climate change as a given, expecting students to be taught that human activities contribute to global warming and that the phenomenon is having a dire effect on human life. They also go deep on solutions, such as clean energy. So far, though, only 20 states and the District of Columbia have adopted the standards, although 24 other states have drawn up their own guidance based on them.

Renee Belisle, a curriculum specialist for Denver Public Schools, says that the standards, which passed narrowly in Colorado, have played a

“hugely significant” role in a rewrite of the district’s high school science curriculum, which now integrates climate change into biology, physics and chemistry classes. Each climate change unit contains an action item; as early as middle school, students are taught that steps such as changing your diet or turning off the lights can have an effect. “That arc of ending with the empowerment is a way to help mitigate that pessimism that could develop,” Belisle says, “particularly with kids, who might feel disenfranchised.”



Students take a break after marching during the Youth Climate Strike in Boston in September. (Craig F. Walker/The Boston Globe via Getty Images)

And yet the seemingly best approach — making young people feel enfranchised to deal with climate change — comes with both upsides and potential downsides. On the one hand, what better way for young people to process climate change worries than to pressure adults to actually do something about the crisis? Campaigns like the youth-led Sunrise Movement, founded in 2017, have pursued this strategy, placing young people on the front lines of the fight over the Green New Deal; the group gained Internet notoriety in February 2019 with a video of students, some as young as 11, confronting Sen. Dianne Feinstein of California over her lack of support for the plan.

On the other hand, high schoolers are still high schoolers, with homework and soccer practice and dates and part-time jobs. And teenagers I spoke with admitted that activism can be a burden. “I’d love to not be doing this. I’d much rather be hanging out with my friends, watching something stupid on Netflix,” says Jonah Gottlieb, 17, a high school senior in California. “I have to because adults have left us no choice.”

That feeling of responsibility, of being let down by prior generations, permeated the conversations I had — and there probably isn’t a good solution, aside from actually solving climate change itself. For now, parents are left to walk a tightrope between being honest and being comforting, between empowering their kids and weighing them down with the responsibility of saving the world.

The Bray family, at least, is erring on the side of not underplaying the situation — or the need for everyone to contribute to solutions. Amber Bray recalls the day the U.N. panel issued its 12-year warning. When Arianna came home from school, Amber told me, she hugged her daughter tight and, with tears in her eyes, apologized. Both said that day changed their perspective and rallied the family to work harder to reduce its environmental impact. “Some parents might think they should shield their children from the realities,” Amber says. “I believe it’s my job as a parent to prepare my children to be ready, make good choices, be part of the solution. It’s a disservice to our children if we don’t teach them about life’s dangers and how to protect themselves, even as we pray it is never necessary.”

Jason Plautz is a writer in Denver.

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