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Opinion

Time to Panic

The planet is getting warmer in catastrophic ways. And fear may be the only thing that saves us.

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The age of climate panic is here. Last summer, a heat wave baked the entire Northern Hemisphere, killing dozens from Quebec to Japan. Some of the most destructive wildfires in California history turned more than a million acres to ash, along the way melting the tires and the sneakers of those trying to escape the flames. Pacific hurricanes forced three million people in China to flee and wiped away almost all of Hawaii’s East Island.

We are living today in a world that has warmed by just one degree Celsius (1.8 degrees Fahrenheit) since the late 1800s, when records began on a global scale. We are adding planet-warming carbon dioxide to the atmosphere at a rate faster than at any point in human history since the beginning of industrialization.

In October, the United Nations Intergovernmental Panel on Climate Change released what has become known as its “Doomsday” report — “a deafening, piercing smoke alarm going off in the kitchen,” as one United Nations official described it — detailing climate effects at 1.5 and two degrees Celsius of warming (2.7 and 3.6 degrees Fahrenheit). At the opening of a major United Nations conference two months later, David Attenborough, the mellifluous voice of the BBC’s “Planet Earth” and now an environmental conscience for the English-speaking world, put it even more bleakly: “If we don’t take action,” he said, “the collapse of our civilizations and the extinction of much of the natural world is on the horizon.”

Scientists have felt this way for a while. But they have not often talked like it. For decades, there were few things with a worse reputation than “alarmism” among those studying climate change.

This is a bit strange. You don't typically hear from public health experts about the need for circumspection in describing the risks of carcinogens, for instance. The climatologist James Hansen, who testified before Congress about global warming in 1988, has called the phenomenon "scientific reticence" and chastised his colleagues for it — for editing their own observations so conscientiously that they failed to communicate how dire the threat actually was.

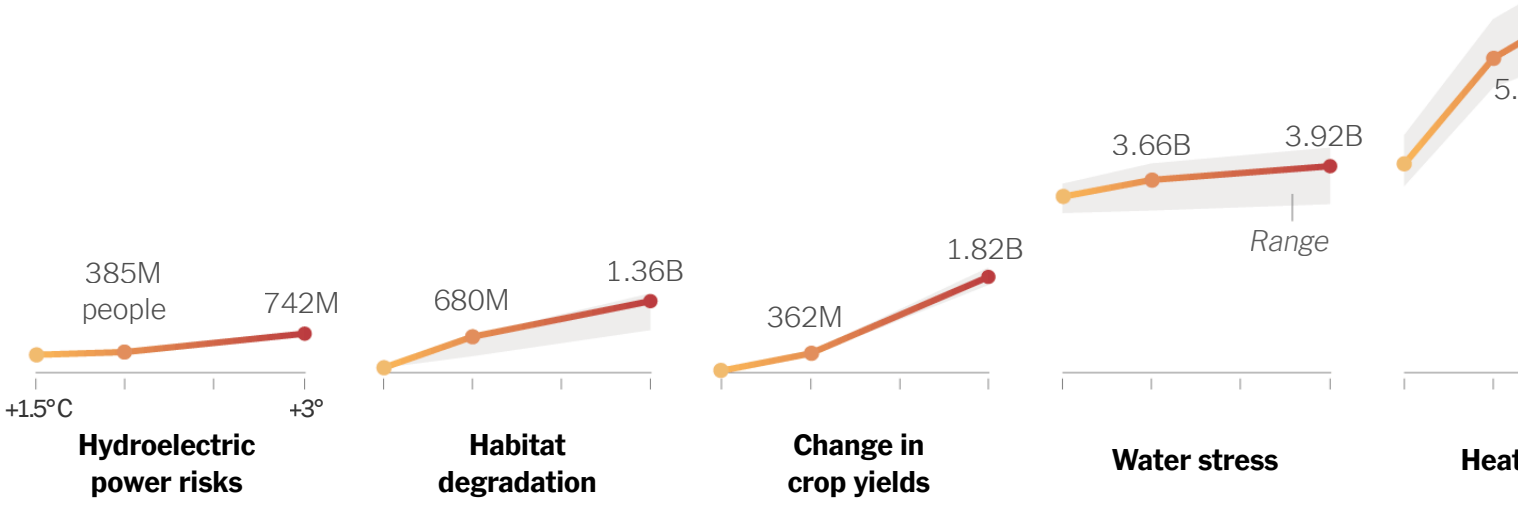
That tendency metastasized even as the news from the research grew bleaker. So for years the publication of every major paper, essay or book would be attended by a cloud of commentary debating its precise calibration of perspective and tone, with many of those articles seen by scientists as lacking an appropriate balance between bad news and optimism, and labeled "fatalistic" as a result.

In 2018, their circumspection began to change, perhaps because all that extreme weather wouldn't permit it not to. Some scientists even began embracing alarmism — particularly with that United Nations report. The research it summarized was not new, and temperatures beyond two degrees Celsius were not even discussed, though warming on that scale is where we are headed. Though the report — the product of nearly 100 scientists from around the world — did not address any of the scarier possibilities for warming, it did offer a new form of permission to the world's scientists. The thing that was new was the message: It is O.K., finally, to freak out. Even reasonable.

This, to me, is progress. Panic might seem counterproductive, but we're at a point where alarmism and catastrophic thinking are valuable, for several reasons.

The Difference a Degree Makes

The number of people projected to experience heat waves, water stress and other climate events by 2050 rises sharply as the global mean temperature increases.



Note: Temperature change relative to pre-industrial baseline. Source: International Institute for Applied Systems Analysis from a report by the Intergovernmental Panel on Climate Change | By The New York Times

The first is that climate change is a crisis precisely because it is a looming catastrophe that demands an aggressive global response, now. In other words, it is right to be alarmed. The emissions path we are on today is likely to take us to 1.5 degrees Celsius of warming by 2040, two degrees Celsius within decades after that and perhaps four degrees Celsius by 2100.

As temperatures rise, this could mean many of the biggest cities in the Middle East and South Asia would become lethally hot in summer, perhaps as soon as 2050. There would be ice-free summers in the Arctic and the unstoppable disintegration of the West Antarctic's ice sheet, which some scientists believe has already begun, threatening the world's coastal cities with inundation. Coral reefs would mostly disappear. And there would be tens of millions of climate refugees, perhaps many more, fleeing droughts, flooding and extreme heat, and the possibility of multiple climate-driven natural disasters striking simultaneously.

There are many reasons to think we may not get to four degrees Celsius, but globally, emissions are still growing, and the time we have to avert what is now thought to be catastrophic warming — two degrees Celsius — is shrinking by the day. To stay

safely below that threshold, we must reduce greenhouse gas emissions by 45 percent from 2010 levels by 2030, according to the United Nations report. Instead, they are still rising. So being alarmed is not a sign of being hysterical; when it comes to climate change, being alarmed is what the facts demand. Perhaps the only logical response.

This helps explain the second reason alarmism is useful: By defining the boundaries of conceivability more accurately, catastrophic thinking makes it easier to see the threat of climate change clearly. For years, we have read in newspapers as two degrees of warming was invoked as the highest tolerable level, beyond which disaster would ensue. Warming greater than that was rarely discussed outside scientific circles. And so it was easy to develop an intuitive portrait of the landscape of possibilities that began with the climate as it exists today and ended with the pain of two degrees, the ceiling of suffering.

In fact, it is almost certainly a floor. By far the likeliest outcomes for the end of this century fall between two and four degrees of warming. And so looking squarely at what the world might look like in that range — two degrees, three, four — is much better preparation for the challenges we will face than retreating into the comforting relative normalcy of the present.

Fire in the Shasta-Trinity National Forest in California last summer, when more than a million acres burned in the state. Scientists cite climate change as a factor in California's increasingly destructive wildfire seasons. Noah Berger/Associated Press

The third reason is while concern about climate change is growing — fortunately — complacency remains a much bigger political problem than fatalism. In December, a national survey tracking Americans' attitudes toward climate change found that 73 percent said global warming was happening, the highest percentage since the question began being asked in 2008. But a majority of Americans were unwilling to spend even $10 a month to address global warming; most drew the line at $1 a month, according to a poll conducted the previous month.

Last fall, voters in Washington, a green state in a blue-wave election, rejected even a modest carbon-tax plan. Are those people unwilling to pay that money because they think the game is over or because they don't think it's necessary yet?

This is a rhetorical question. If we had started global decarbonization in 2000, according to the Global Carbon Project, we would have had to cut emissions by only about 2 percent per year to stay safely under two degrees of warming. Did we fail to act then because we thought it was all over already or because we didn't yet consider warming an urgent enough problem to take action against? Only 44 percent of those surveyed in a survey last month cited climate change as a top political priority.

But it should be. The fact is, further delay will only make the problem worse. If we started a broad decarbonization effort today — a gargantuan undertaking to overhaul our energy systems, building and transportation infrastructure and how we produce our food — the necessary rate of emissions reduction would be about 5 percent per year. If we delay another decade, it will require us to cut emissions by some 9 percent each year. This is why the United Nations secretary-general, António Guterres, believes we have only until 2020 to change course and get started.

In “Silent Spring,” published in 1962, Rachel Carson exposed the harm the pesticide DDT inflicted on wildlife and criticized the chemical industry for spreading false assurances of safety. Bettmann Archive/Getty Images

In 1972, the Environmental Protection Agency banned DDT after mounting evidence of its adverse environmental and toxicological effects. Associated Press

A fourth argument for embracing catastrophic thinking comes from history. Fear can mobilize, even change the world. When Rachel Carson published her landmark anti-pesticide polemic “Silent Spring,” Life magazine said she had “overstated her case,” and The Saturday Evening Post dismissed the book as “alarmist.” But it almost single-handedly led to a nationwide ban on DDT.

Throughout the Cold War, foes of nuclear weapons did not shy away from warning of the horrors of mutually assured destruction, and in the 1980s and 1990s, campaigners against drunken driving did not feel obligated to make their case simply by celebrating sobriety. In its “Doomsday” report, the United Nations climate-

change panel offered a very clear analogy for the mobilization required to avert catastrophic warming: World War II, which President Franklin Roosevelt called a "challenge to life, liberty and civilization." That war was not waged on hope alone.

But perhaps the strongest argument for the wisdom of catastrophic thinking is that all of our mental reflexes run in the opposite direction, toward disbelief about the possibility of very bad outcomes. I know this from personal experience. I have spent the past three years buried in climate science and following the research as it expanded into ever darker territory.

The number of "good news" scientific papers that I've encountered in that time I could probably count on my two hands. The "bad news" papers number probably in the thousands — each day seeming to bring a new, distressing revision to our understanding of the environmental trauma already unfolding.

I know the science is true, I know the threat is all-encompassing, and I know its effects, should emissions continue unabated, will be terrifying. And yet, when I imagine my life three decades from now, or the life of my daughter five decades now, I have to admit that I am not imagining a world on fire but one similar to the one we have now. That is how hard it is to shake complacency. We are all living in delusion, unable to really process the news from science that climate change amounts to an all-encompassing threat. Indeed, a threat the size of life itself.

How can we be this deluded? One answer comes from behavioral economics. The scroll of cognitive biases identified by psychologists and fellow travelers over the past half-century can seem, like a social media feed, bottomless, and they distort and distend our perception of a changing climate. These optimistic prejudices, prophylactic biases and emotional reflexes form an entire library of climate delusion.

We build our view of the universe outward from our own experience, a reflexive tendency that surely shapes our ability to comprehend genuinely existential threats to the species. We have a tendency to wait for others to act, rather than acting ourselves; a preference for the present situation; a disinclination to change things; and an excess of confidence that we can change things easily, should we need to, no matter the scale. We can't see anything but through cataracts of self-deception.

Flooding in a residential area near the Brazos River south of Houston in 2017 after Hurricane Harvey. Barbara Davidson for The New York Times

The sum total of these biases is what makes climate change something the ecological theorist Timothy Morton calls a "hyperobject" — a conceptual fact so large and complex that it can never be properly comprehended. In his book "Worst-Case Scenarios," the legal scholar Cass Sunstein wrote that in general, we have a problem considering unlikely but potential risks, which we run from either into complacency or paranoia. His solution is a wonky one: We should all be more rigorous in our cost-benefit analysis.

That climate change demands expertise, and faith in it, at precisely the moment when public confidence in expertise is collapsing is one of its many paradoxes. That climate change touches so many of our cognitive biases is a mark of just how big it is and how much about human life it touches, which is to say, nearly everything.

And unfortunately, as climate change has been dawning more fully into view over the past several decades, all the cognitive biases that push us toward complacency have been abetted by our storytelling about warming — by journalism defined by caution in describing the scale and speed of the threat.

So what can we do? And by the way, who's "we"? The size of the threat from climate change means that organization is necessary at every level — communities, states, nations and international agreements that coordinate action among them. But most

of us don't live in the halls of the United Nations or the boardrooms in which the Paris climate agreement was negotiated.

Instead we live in a consumer culture that tells us we can make our political mark on the world through where we shop, what we wear, how we eat. This is how we get things like The Lancet's recent dietary recommendations for those who want to eat to mitigate climate change — less meat for some, more vegetables — or suggestions like those published in The Washington Post, around the time of New Year's resolutions. For instance: "Be smart about your air-conditioner."

But conscious consumption is a cop-out, a neoliberal diversion from collective action, which is what is necessary. People should try to live by their own values, about climate as with everything else, but the effects of individual lifestyle choices are ultimately trivial compared with what politics can achieve.

Buying an electric car is a drop in the bucket compared with raising fuel-efficiency standards sharply. Conscientiously flying less is a lot easier if there's more high-speed rail around. And if I eat fewer hamburgers a year, so what? But if cattle farmers were *required* to feed their cattle seaweed, which might reduce methane emissions by nearly 60 percent according to one study, that would make an enormous difference.

That is what is meant when politics is called a "moral multiplier." It is also an exit from the personal, emotional burden of climate change and from what can feel like hypocrisy about living in the world as it is and simultaneously worrying about its future. We don't ask people who pay taxes to support a social safety net to also demonstrate that commitment through philanthropic action, and similarly we shouldn't ask anyone — and certainly not everyone — to manage his or her own carbon footprint before we even really try to enact laws and policies that would reduce all of our emissions.

That is the purpose of politics: that we can be and do better together than we might manage as individuals.

And politics, suddenly, is on fire with climate change. Last fall, in Britain, an activist group with the alarmist name Extinction Rebellion was formed and immediately grew so large it was able to paralyze parts of London in its first major protest. Its leading demand: "Tell the truth." That imperative is echoed, stateside, by Genevieve Guenther's organization End Climate Silence, and the climate-change panel's calls to direct the planet's resources toward action against warming has been taken up at the grass roots, inspiringly, by Margaret Klein Salamon's Climate Mobilization project.

Of course, environmental activism isn't new, and these are just the groups that have arisen over the past few years, pushed into action by climate panic. But that alarm is cascading upward, too. In Congress, Representative Alexandria Ocasio-Cortez of New York has rallied liberal Democrats around a Green New Deal — a call to reorganize the American economy around clean energy and renewable prosperity. Washington State's governor, Jay Inslee, has more or less declared himself a single-issue presidential candidate.

And while not a single direct question about climate change was asked of either Hillary Clinton or Donald Trump during the 2016 presidential debates, the issue is sure to dominate the Democratic primary in 2020, alongside "Medicare for all" and free college. Michael Bloomberg, poised to spend at least $500 million on the campaign, has said he'll insist that any candidate the party puts forward has a concrete plan for the climate.

This is what the beginning of a solution looks like — though only a very beginning, and only a partial solution. We have probably squandered the opportunity to avert two degrees of warming, but we can avert three degrees and certainly all the terrifying suffering that lies beyond that threshold.

But the longer we wait, the worse it will get. Which is one last argument for catastrophic thinking: What creates more sense of urgency than fear?

A singed page from a book amid the burned remains of a house by a wildfire last year in Northern California. Josh Edelson/Agence France-Presse — Getty Images

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