

# CLIMATE IS EVERYTHING.

HOW THE PANDEMIC CAN LEAD US TO A BETTER, GREENER WORLD BY JUSTIN WORLAND

# TIME



Artist Red Hong Yi created this image out of 50,000 matchsticks to represent how the climate crisis connects us all



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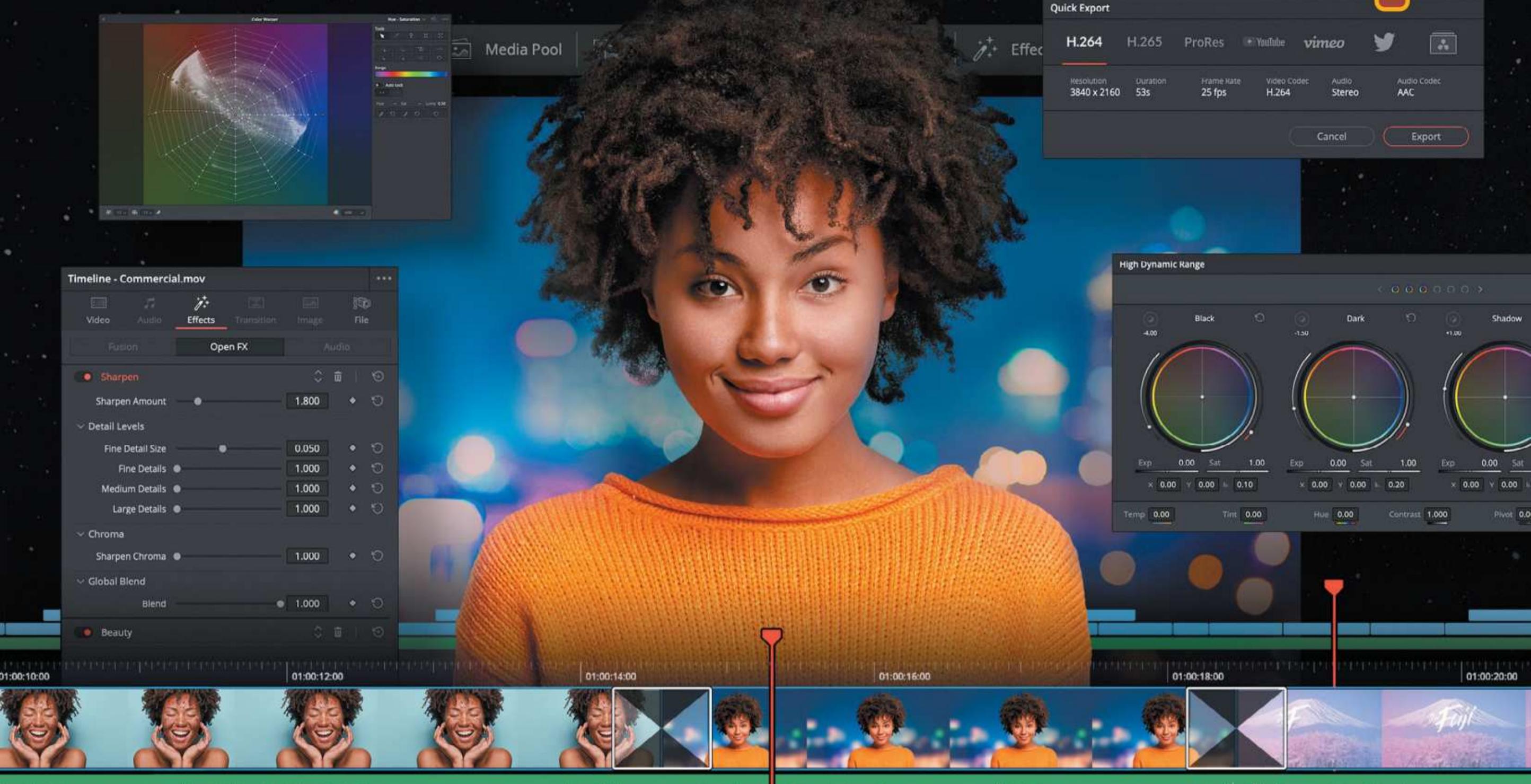
**Once bottled, the Pfizer-BioNTech vaccine is stored at -82°C (-116°F) at a filling and labeling facility in Halle, Germany**

*Photograph by Luca Locatelli for TIME*

**ON THE COVER:**  
Artwork by Red Hong Yi; photograph by Annice Lyn for TIME

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# Conversation



## WHAT YOU SAID ABOUT ...

**THE LOST YEAR** The education features in the April 12/April 19 issue prompted readers to share their own school stories—and their costs. Carl Spamer of Howell, Mich., proposed more financial guidance for parents saving for their children's

education—and money-management classes for 18-to-21-year-olds too. To avoid the “never-ending circle” of students’ reliance on loans and financial-aid packages, Greg Frank of San Diego called for lowering college tuition fees—and for higher-education institutions to tap into their endowment funds to balance their books, while Rick Zwelling in Columbus, Ohio, suggested cutting college officials’ pay: “There are way too many six-figure salaries ... put on the shoulders of students and parents.”

**Now more than ever, students need secure pathways to opportunity.**

MARNI BAKER STEIN,  
on Twitter

**FIXING DEBT** Cheryl Smith Garrett, 68, of Midlothian, Va., related to Alana Semuels’ story on student-loan forgiveness. “As I age, I wonder whether I will live to pay the loans off,” she wrote of her now six-figure college debt. And Katie Reilly’s reporting on stu-

dents who can’t afford to apply to college was evidence to many that larger reforms are needed to address educational inequity. Sebastian Rahmer, of Tucson, Ariz., said his time at college has been a political awakening. “The U.S. education system has been exposed as a flawed one,” he wrote, “that struck this pandemic and shattered.”

**‘How about we try reframing this to look at what kids learned this past year? Things like resilience, compassion, the value of community.’**

KIM JOHNSON,  
on Twitter



### Behind the cover

This week’s TIME cover image was created by Malaysian artist Red Hong Yi. Red and a five-person team spent two weeks creating a large-scale world map out of 50,000 green-tipped matchsticks. She then set the artwork on fire—illustrating how the global climate crisis touches all of us, no matter where we live. To read more about the project visit [time.com/climatecover](http://time.com/climatecover)



**SETTING THE RECORD STRAIGHT** ▶ In “How docu-mania took streaming by storm” (April 12/April 19), the last name of the college counselor involved in Operation Varsity Blues was misspelled. He is Rick Singer.

### TALK TO US

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# HOW A CLIMATE DIVIDEND COULD MAKE A WORLD OF DIFFERENCE

## TRANSFORMING FOOD SYSTEMS FOR A LOWER CARBON WORLD IS THE ULTIMATE GOAL OF NRF, THAILAND'S PLANT-BASED FOOD PRODUCER.

Four years ago, I paid over \$1,000 for a hamburger. I didn't spend that considerable sum to flaunt my wealth or to be ostentatious. I was passionate about burgers, and I wanted to sample them all in search of the best. To me, veganism was for hipsters. Sustainability was just public relations. Then, our group acquired a leading food manufacturer. As a professional investor, my plan was simple: change the company's operations and sell it for a profit. But that company changed me.

NR Instant Produce Public Company Limited or NRF is a manufacturer of ethnic foods with a stable of successful international brands. It also had a hidden gem: a small but fast growing business producing plant-based pork from jackfruit. Every time I would visit with this client to see how we could grow the business together he would ask me, 'Why aren't you vegan yet?' He was annoyingly persistent. That persistence inspired me to take a deeper dive into the business of plant-based food. What I learned was a punch to the gut.

If we think about climate change, what comes to mind are highways jammed with cars and factories belching smoke. Few realize the role played by agriculture and food systems. Somewhere between 19 and 29 percent of all greenhouse gas emissions come from growing crops, raising livestock or clearing land. Producing, transporting and selling food adds even more. I realized our industry is a major cause of climate change. However, plant based foods and alternative proteins can be part of the solution.

Today, I've abandoned professional investing and am fully committed to succeeding as NRF's CEO. We now operate the only carbon-neutral food manufacturing facility in Thailand. The first of many facilities we are building around the world to support the rapid rise in demand for alternative protein based foods. We seek to further expand our production to include all types of novel proteins, whether made from mung beans or cell-based cultures. About 70 percent of our business is co-manufacturing products for other companies' brands. What Foxconn is to mobile phones, NRF plans to become for plant-based and alternative proteins. In the next decade, we envision everyone will be consuming proteins derived from plant-based sources on a daily basis.

Six months ago, NRF became the first purpose-led company to be listed on the Stock Exchange of Thailand and the first company whose business model is based on making plant based foods. Our purpose is food system transformation for a low-carbon world. Our guiding principle is: whatever we do, it has to fight climate change.

But we can't fight alone. And governments move too slowly. We need business to lead and consumers to join. Consumers have a very effective weapon – their wallets. Use your spending power to choose green goods and services. As a business, we make novel proteins. For other businesses, we have a novel idea: a climate dividend.

This year, NRF will set a new policy to increase its dividend to shareholders by an additional 3 percent. What we ask is that our shareholders return that 3 percent so we can invest it in measures to counter climate change. Using a dividend does



DAN PATHOMVANICH  
CEO, NR Instant Produce

not affect the company's earnings or bottom line. It allows our shareholders to make an active contribution. In return, they will receive a 'carbon receipt' that can serve as evidence of their contribution.

Our climate dividend will pay for the planting of millions of trees in Thailand. We will announce this initiative on Earth Day and lobby other companies to issue climate dividends. If every firm listed on the Stock Exchange of Thailand joined, we could plant 2.6 billion trees in the Kingdom in five years. If even one percent of the companies on the New York Stock Exchange and NASDAQ joined then the World Economic Forum's One Trillion Tree initiative would be achieved. And so on Earth Day, I am calling on my fellow CEOs in Thailand and the world to issue climate dividends at their firms and use the proceeds to plant trees or take other meaningful, effective actions to reverse climate change. If you would like to join with NRF in our tree planting initiative, please sign up at [www.theclimatedividend.org](http://www.theclimatedividend.org) and hashtag #theclimatedividend on social media.

## OUR GUIDING PRINCIPLE IS: WHATEVER WE DO, IT HAS TO FIGHT CLIMATE CHANGE

A climate dividend's ultimate reward is priceless – a livable planet we can pass on to our children. If we do not act now, then in a few decades food systems and societies will collapse. We don't have the luxury of time to leave this to the next generation. As business leaders, we must become the activists.

My customer initially inspired me. But it was my young son who created my commitment. As I was leaving for another long business trip, he asked "Dad, don't you love me? Why do you have to travel again?" The question broke my heart. I realized the pursuit of money could not justify my time away from family. But the sacrifice would be worth it if my journey could help create a better world for all children.



# For the Record

**'Sedition came from within and without our one house.'**

**KING ABDULLAH II OF JORDAN,** in an April 7 statement responding to reports of an alleged royal coup attempt

*'Even if I have to lose the crown for the values I stand for, I believe I am serving the purpose Mrs. World stands for.'*

**CAROLINE JURIE,** Mrs. World 2020, in an April 10 apology video, following an incident at the Mrs. Sri Lanka pageant, where she snatched the crown from the winner, who she claimed had violated rules mandating that contestants be married

# 3,400

Approximate age of a "golden city" unearthed by archaeologists in Egypt, which experts on April 8 described as the most significant find since the discovery of Tutankhamun's tomb

# 'WHAT MONSTERS MIGHT BE LURKING THERE?'

**CHRIS POLLY,** Fermilab physicist, speaking at an April 7 news conference on experiments with magnetic fields that suggest the tiny particles known as muons do not always obey known laws of physics, a discovery scientists believe could change our understanding of the evolution of our universe

**'I've ran from myself for a long time. I've hated myself for a long time.'**

**COLTON UNDERWOOD**, former star of ABC's *The Bachelor*, in an April 14 interview on *Good Morning America*, during which he came out as gay



## 11-1

Odds of a first-place finish by Minella Times and jockey Rachael Blackmore, who became the first woman to win the U.K.'s Grand National horse race, on April 10

*'Every award is meaningful, but this one—especially recognized by British people, known as very snobbish people... I'm very, very privileged.'*

**YUH-JUNG YOUN**, in an acceptance speech on April 11 after winning the Best Supporting Actress award at the 2021 BAFTAs for her role in *Minari*



**GOOD NEWS**  
of the week

**The United Arab Emirates announced engineer Noura Al Matrooshi, 27, as its first female astronaut on April 10**

# theBrief

FIGHTING  
THE POWER  
Transgender-  
rights advocates  
rally outside the  
state capitol in  
Little Rock, Ark.,  
on March 18



## INSIDE

UKRAINE'S ZELENSKY ON  
RUSSIAN WAR GAMES

REMEMBERING PRINCE PHILIP,  
DUKE OF EDINBURGH

GRIEF AND RAGE IN MINNESOTA  
AFTER LATEST POLICE KILLING

PHOTOGRAPH BY SYDNEY RASCH

*The Brief is reported by Madeleine Carlisle, Alejandro de la Garza, Suyin Haynes, Sanya Mansoor, Ciara Nugent, Billy Perrigo, Madeline Roache and Olivia B. Waxman*

# The Brief Opener

NATION

## A wave of new bills threatens trans youth

By Raisa Bruner

**I**T'S A SPRING EVENING IN ARKANSAS, AND JOANNA Brandt just closed down her boutique. She and her son Dylan, a 15-year-old with a thatch of floppy blond hair, are tired. It's not the pandemic; Joanna has actually enjoyed remote-schooling her two kids. And it's not the management of Dylan's weekly hormone-therapy treatments, injections he has learned to administer himself over the past eight months. No, it's that they—like most of the U.S.'s transgender community and its advocates—are tired because in recent months, Arkansas and a growing number of other states have been stripping trans youth like Dylan of their rights. "The one thing that is helping me become who I want to be and has made me as happy as I am and as confident as I am—they're taking that away, without a second thought," Dylan says.

HB 1570, which passed in Arkansas on April 6 after state lawmakers overrode a gubernatorial veto, is the first bill in the U.S. that effectively bars trans youth from transitioning. Specifically, it bans gender-affirming care, making it illegal for clinicians to provide puberty blockers and hormone therapy. It's the third anti-trans bill passed this spring in Arkansas alone; the state's legislature is now considering two more. Over 100 anti-trans bills in 33 states are being considered in legislative sessions, according to the Human Rights Campaign, the highest number in any year on record. Some seek to bar trans women and girls from competing on sports teams consistent with their gender identity; some restrict opportunities for medical care, or criminalize it; some give care providers the right to deny a trans patient treatment on the basis of moral or religious grounds. They share a common theme—attempts to limit and minimize the potential for trans youth to live normal lives—and backing by conservative groups seeking a new hot-button issue around which to rally. The ACLU is planning to sue in Arkansas, hoping to make an example of this kind of legislation. Meanwhile, the bills keep coming.

"I HEARD FROM THE MOM of a trans kid that if this bill passed, her child was going to kill themselves," says Willow Breshears, an 18-year-old community organizer at Little Rock's Center for Artistic Revolution and the founder of the Young Transwomen's Project, who is trans herself. "That's the reality, the kind of environment that we live in in Arkansas." Stories like this now proliferate across the U.S.

The CDC's latest Youth Risk Behavior Survey, released in 2019, estimated that about 2% of U.S. high schoolers identify as trans—or roughly 300,000 teens across the country. (The figure doesn't count students not enrolled in high school or those unsure of their gender identity.) Thirty-five percent of surveyed trans students attempted suicide in the prior year. "There's a panic, and there's been rising desperation," says Freelon, executive director of Lucie's Place, a homeless shelter and resource center for LGBTQ+ young adults. Freelon says such legislation—and the rhetoric it represents—will embolden those who reject trans and queer lives.

Organizers like Breshears and Freelon in every state are battling powerful right-wing groups, like the Family Research Council, and rampant misinformation. Conservative campaigns claim that trans health care is dangerous and irreversible; in fact, gender-affirmation care for most minors entails things like counseling and puberty suppressants, which give a child time to make gender-identity choices and are reversible. Hormones can be an option as a teen ages. These treatments have been around for decades and are proven safe. Many clinicians have spoken out against the legislation and its potential for criminalizing evidence-based health care. And the National Collegiate Athletic Association has announced it will hold college championships only in states where trans students can participate. This means Texas, with six anti-trans bills on the docket, could be impacted. So could Florida, Mississippi and Arizona.



**'With this one bill, they took away so much.'**

DYLAN BRANDT

**THE BILLS VARY** by target and success. In Idaho, an anti-trans sports bill that passed in 2020 remains unimplemented after a legal challenge was upheld. In South Carolina, an anti-trans sports bill failed in committee in mid-March, while in South Dakota, after the state's bill became tied up in a legislative back-and-forth, Governor Kristi Noem issued two executive orders that effectively bar trans girls from participating in girls' sports. In North Carolina, a bill prohibiting gender-affirming surgeries for minors seems unlikely to succeed, thanks to the state's Democratic gover-

nor. But at the national level, the Equality Act, which would amend 1964's Civil Rights Act to include federal protections against discrimination on the basis of sexual orientation and gender identity, still faces stiff opposition from Republicans in the U.S. Senate.

"I will do whatever I need to do to make sure that he gets what he needs," Joanna Brandt says of Dylan's care. She would prefer not to have to consider what she calls plan B: uprooting to a state where treatment is available. But they're running out of options. For now, the Brandts—and many families like them—are just focused on getting through the rest of the school year; Dylan is looking forward to returning to school in person next fall. With luck, they will still be in Arkansas. □



Zelensky, center, meets with soldiers stationed on the Ukraine-Russia border on April 8

POSTCARD

## At the front with Ukraine's President

By Simon Shuster/  
Shumy, Ukraine

"THEY WANT US TO BE AFRAID," Volodymyr Zelensky, the President of Ukraine, says as his plane starts to descend, bringing him home from a trip to the war zone near his country's border with Russia. He's referring to the Russian troops who have massed along that border during the past two weeks, forcing the world to guess at the intentions of President Vladimir Putin. Is it a show of force? A sign of an imminent invasion? Or a test of resolve for Ukraine and its allies?

Zelensky has his own read on the Russian message. "They want the West to be frightened of Russia's strength, of her power," he tells TIME in an interview on April 9. "There's no big secret here."

That motive might help explain some of Moscow's behavior. Had the Kremlin really set out to invade its neighbor, its troops might have tried a little harder (as they did during their 2014 invasion of Ukraine) to maintain some element

of surprise. Instead the Russians have done the opposite. They have spread footage of their military buildup on social media. They have sent warships to menace Ukraine from the sea and gathered tens of thousands of troops at the border—the most since Russia's annexation of Crimea seven years ago. Russia has warned the U.S. that support for Ukraine could spiral into a wider conflict. On state television, a Kremlin propagandist even suggested launching a pre-emptive nuclear strike designed to scare the Americans off.

But Zelensky, who entered politics only two years ago after a long career as a comedian, does not appear to be buying the bluster. Russia's aim, he says, is to "raise the temperature just enough to show that the West will waver in its support for Ukraine, that they do not really see us as a partner." As Zelensky puts it, "It's a kind of test."

So far the U.S. appears to be holding firm. In response to the first military standoff of his tenure, President Joe Biden has pledged his "unwavering

**'They want the West to be frightened of Russia's strength.'**

**VOLODYMYR ZELENSKY,**  
Ukraine's President,  
on the forces the  
Kremlin has massed  
at the border of the  
two nations

support" to Ukraine, including through military aid, which the U.S. announced in March. Biden reiterated the message during a call with Putin on April 13, according to a White House statement.

Zelensky and his government would like to see more support, especially high-end weapons. During a call with the Secretary-General of NATO, Zelensky urged the alliance to give Ukraine a clearer path to membership. But to his own nation, the President seems focused on projecting a sense of calm.

**HIS TRIP TO THE EAST** was a case in point. On the morning of April 8, Zelensky boarded a rickety Antonov plane and flew to the edge of the war zone with a coterie of generals, some of whom looked more nervous than their commander in chief. Among their first stops was a military outpost near the village of Shumy, a cluster of cabins and potato patches where the current hostilities began on March 26 with a volley of shots from a sniper rifle that left three Ukrainian soldiers dead beside their trenches. "There was no tactical reason to attack that post," says General Ruslan Khomchak, the commander of Ukraine's armed forces. "They just shot those boys in cold blood."

Standing beside the trenches in a bulletproof vest (see photo), Zelensky didn't promise to avenge their deaths. Instead he questioned the wisdom of

taking that ground in the first place, which Ukraine did with an assault against the Russian-backed positions in 2018, the year before Zelensky was elected. "For some, that meant we were the tough guys," he says, glancing around at the field of shrubs. "For others it meant their sons would not be coming home."

Zelensky does not intend to make such trades again. The risks are too high. Putin still could decide to mount a full-scale invasion, one that Ukraine would have little chance of resisting. "And that is frightening," Zelensky admits. But he's trying not to show it. —  
*With reporting by MADELINE ROACHE/LONDON*

# The Brief News

GOOD QUESTION

## Why did the U.S. pause vaccinations with J&J shots?

BOTH THE U.S. FOOD AND DRUG ADMINISTRATION (FDA) and Centers for Disease Control and Prevention (CDC) recommended on April 13 that vaccinations with Johnson & Johnson's Janssen COVID-19 vaccine be temporarily halted while the agencies review six reports of blood clots among vaccinated people. J&J has also proactively suspended vaccinations in Europe as it reviews these cases. Blood clots linked to COVID-19 vaccines are a growing concern, after reports in Europe linked to another vaccine, from AstraZeneca, designed in a similar way, led U.K. health officials in early April to advise that younger people use different shots.

While the U.S. recommendation is not a mandate to stop using the vaccine, local officials quickly followed the federal advice; some are swapping in either of the two-dose vaccines from Pfizer-BioNTech or Moderna—which have not been linked to such clotting events—for those who had been scheduled to get the J&J shot. Still, it could slow vaccination, especially in under-resourced communities where public-health officials had been relying on the J&J shot, since it requires only one dose and can be stored at

refrigerated, not frozen, temperatures.

The CDC is convening a special advisory committee to review the cases, and is expected to provide more guidance soon. Both the CDC and FDA have stressed that the side effect is rare: six reports among nearly 7 million people vaccinated with the J&J shot in the U.S. so far. But they decided to pause immunization so doctors could learn how to recognize and properly treat the clots.

Very few recently vaccinated people appear to generate an allergic-type reaction that stimulates their blood-clotting factors and immune cells, including antibodies directed against the blood-clotting factors, to aggregate, blocking blood flow. The clotting mirrors a rare condition triggered by the blood thinner heparin, which normally prevents clots but in unusual cases has the opposite effect and prompts immune cells to form clots instead. So in these cases, as with the vaccine-induced clots, doctors should use blood thinners other than heparin, or immune globulin therapy.

If you've been vaccinated with the J&J shot, and it's been over a month, you're probably not going to have clotting problems, since most occur between five to 14 days after vaccination. But if you've recently received the shot, be aware of symptoms like headaches, abdominal or leg pain, or shortness of breath, and report them to your doctor. —ALICE PARK



### ACTIVIST HONORED

Civil rights activist Viola Desmond, arrested for refusing to leave the whites-only section of a Canada theater in 1946, was chosen for the country's \$10 bill in 2018—the first Canadian woman to appear on currency.

### BILL REVERSED

After Saddam Hussein's ouster in 2003, Iraq's leaders removed his image from currency and instead issued 25,000-dinar bills picturing a Kurdish farmer to represent the people Hussein had oppressed.

### NUN CHECKED

Since 1978, 17th century nun and poet Sor Juana Inés de la Cruz, whose feminist views caused controversy in her lifetime, has been featured on several Mexican banknotes. Her poem "Foolish Men" has also appeared on the 200-peso note.

### NEWS TICKER

## Sabotage at Iran nuke facility

Iran described a blackout and apparent explosion at an atomic facility in the city of Natanz on April 11 as **"an act of nuclear terrorism."** The U.S. has denied involvement, with suspicions pointed toward Israel as tensions mount between the two Middle East nations.

## Biden calls for gun-law reforms

Calling U.S. gun violence an "epidemic," President Joe Biden announced **new executive actions on gun violence** on April 7. They include proposed rules to stop the spread of "ghost guns" that can be assembled from kits, and publishing "red flag" legislation for states to model.

## India facing drastic COVID-19 surge

With 13.5 million confirmed as of April 12, India became the country with the **world's second highest number of COVID-19 cases**, amid a new wave. Experts argue incomplete testing suggests the real total is likely higher than that of the U.S., which currently has the most confirmed cases worldwide.

when I grow up,  
I want to be a  
doctor!

Last year, Ben was too sick to dream.  
He has Primary Immunodeficiency or PI.  
Thanks to the Jeffrey Modell Foundation,  
he has been properly diagnosed and treated.

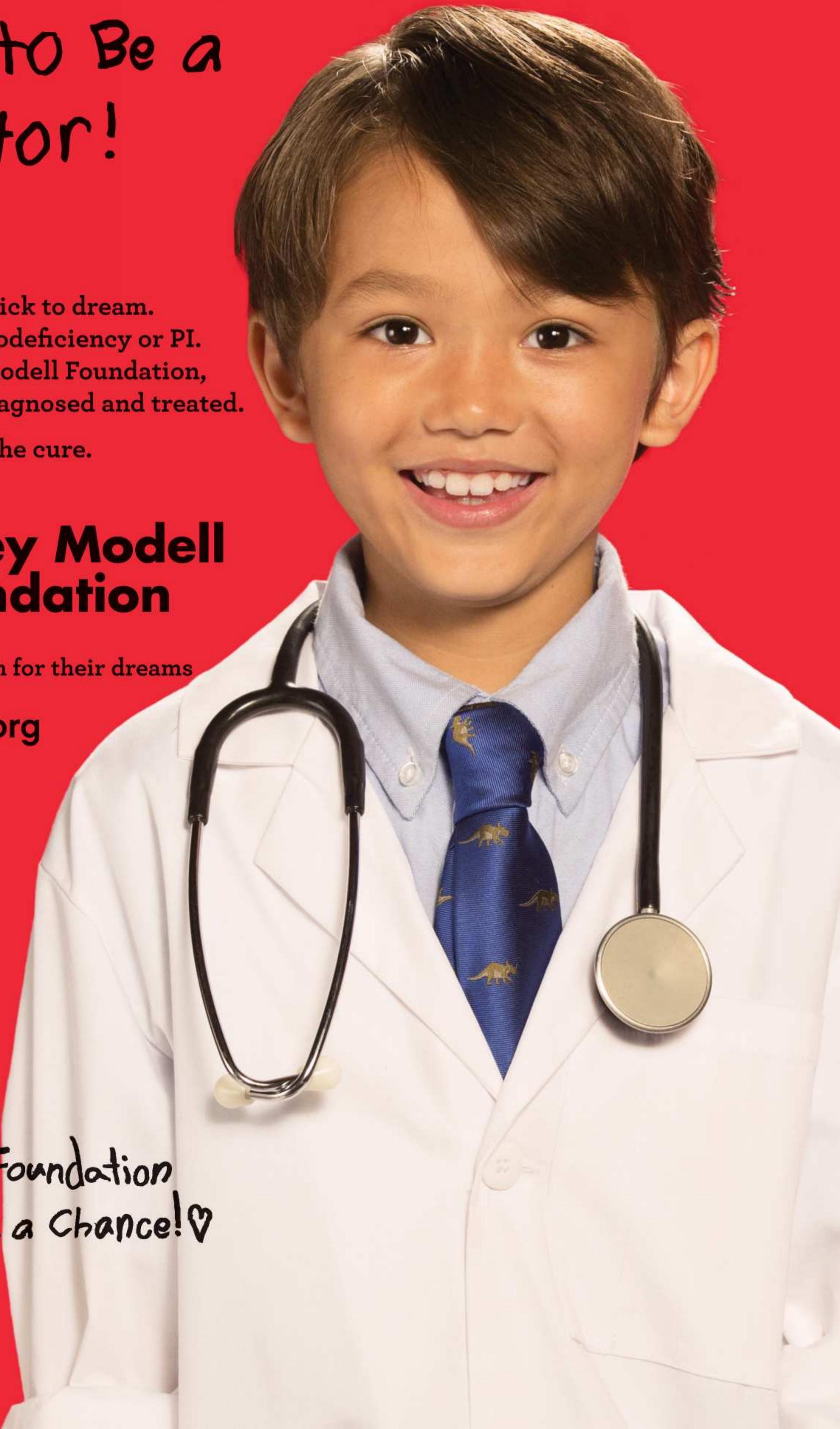
Now he can search for the cure.



helping children reach for their dreams

[info4pi.org](http://info4pi.org)

Because of the  
Jeffrey Modell Foundation  
I have a chance! ♡



# LightBox



Demonstrators protesting the fatal police shooting of Daunte Wright on April 11 in Brooklyn Center, Minn.

PHOTOGRAPH BY JOSHUA LOTT—  
THE WASHINGTON POST/GETTY IMAGES

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[visit time.com/lightbox](http://time.com/lightbox)



NATION

## American crucible

IT'S BECOME AN AMERICAN routine: a sudden death followed by public displays of grief and protest, and a sorting of two distant camps. Some will call the death an egregious, extrajudicial killing statistically unlikely to be redressed; to others, almost without exception, it is justifiable homicide. The machinery of justice is once again asked how to respond when police officers end civilian lives—a disproportionate share of which are Black.

But this week in metro Minneapolis, a rare police trial connected to one Black man's death could not conclude before another died. In Brooklyn Center, a diverse bedroom community of around 31,000 about 10 miles north of Minneapolis, the April 11 shooting of Daunte Wright, 20, by Kim Potter, a white police officer who has since resigned, has set off protests in both cities, as well as some property damage and looting. The National Guard, state and local law enforcement—equipped with guns, batons, tear gas, rubber bullets and flash-bangs—have since been dispatched to restore what's known as order. And each morning in downtown Minneapolis, Derek Chauvin, a white former police officer who in May 2020 used his knee to pin down another Black man, George Floyd, for over nine minutes, is on trial inside a courthouse encircled by concrete boundaries, chain-link fencing and citizen-soldiers dressed for war. Floyd's death was ruled a homicide.

On April 14, county prosecutors confirmed their plans to file second-degree manslaughter charges against Potter, the day after Chauvin's trial judge said the case will likely go to jury next week. In the interim, the metro region awakes to an expectant tension, as irritating as the whiffs of tear gas that, in some places, remain.

—JANELL ROSS/MINNEAPOLIS

# The Brief Milestones

## Prince Philip

The Queen's man

By Howard Chua-Eoan

UNTIL HER FATHER'S HEALTH BEGAN deteriorating, the couple could have been mistaken for any other happy young husband and wife. She had been just 13 when they met. He was the striking, handsome 18-year-old guide who took her and her sister on a tour of his naval college. During the war, when he was on a battleship in the Mediterranean, she kept his photograph on her dressing table, even though her father didn't quite approve. They had a spectacular wedding, and had had two children by the time they were traveling in Africa and got the news: her father, King George VI, had died. At age 25, she had succeeded to the British throne as Elizabeth II. Everything also changed for her husband.

A man who was with the couple recalled the transformation that took place on Feb. 6, 1952. Speaking to British newspaper the *Independent*, he said of the succession, "She seemed almost to reach out for it. There were no tears. She was just there, back braced ... Waiting for her destiny." Her husband, by contrast, sat almost crumpled behind his newspaper. "He didn't want it at all. It was going to change his whole life: take away the emotional stability he'd finally found."

But by the time of his death, on April 9 at 99, Philip had long ago surpassed the record for a man with the title of consort. (The closest was Philip and Elizabeth's common great-great-grandfather Albert, prince consort to Queen Victoria during their 21 years of marriage.)

Philip, who received the title of Duke of Edinburgh upon marrying Elizabeth in 1947, would, before retiring from public engagements in the summer of 2017, perform royal duties for seven decades, through scandals and flamboyant in-laws, with just enough audible grouching from him now and then to make everyone remember what a strange business it all was.

If anyone was a princely pauper, it was Philip Schleswig-Holstein-Sonderburg-Glucksburg, born in 1921

atop a kitchen table on the island of Corfu. His father was the seventh son of a Danish prince plucked out of Scandinavia to become King of Greece; his mother was a Battenberg, a British family of German origin that had changed its last name to Mountbatten during World War I, about the same time the British royal family became the Windsors instead of the Saxe-Coburg-Gothas.

**HIS PARENTS' MARRIAGE ended when Philip was 10 years old.** Raising her four daughters and young son by dint of loans, limited family legacies and hand-me-downs, Alice of Greece would eventually find solace in religion and become a nun. (At the end of her life, she lived in Buckingham Palace, walking the halls in her wimple.) Her daughters would seek their fortunes in marriages in distant places. Philip was shuttled from country to country: from Greece, the family moved to Paris; when his parents split, he ended up in England for a couple of years and then was taken in by German relatives.

The unanchored life bred insecurity into the young noble. He found a harbor in Gordonstoun, a public school set up in Scotland. Gordonstoun's combination of pacifism and physical discipline would help define Philip for the rest of his life; his pursuit of what might have been a lifelong career in the Royal Navy was propelled by its tenets.

But then he met Princess Elizabeth, the heiress presumptive to the throne—or Lilibet, as she was then known. And while George VI may have looked askance at a Greek Orthodox royal from the wrong side of the blue-blooded track, his daughter could not be argued into considering any other match.

The dynasty's last crisis was a matter of the heart: George VI's brother, Edward, had abdicated in order to marry a divorcée—an impermissible entanglement for the head of the Church of England. In Elizabeth's case, the solution was simple: Philip gave up Greek Orthodoxy and was accepted into the Anglican Communion. They were married on Nov. 20, 1947. She was 21; he was 26.

Being consort to the British sovereign may have been more difficult than any feat demanded by Gordonstoun. Philip was always one step behind Elizabeth,



always deferring to her in public.

But Philip's reported insistence on leaving his own mark may have led to a postcoronation rupture in their relationship behind palace doors. At one point, he proposed changing the family's last name to include his own, but his wife would not hear of it. Furious, Philip reportedly said, "I'm just a bloody amoeba! That's all!"

The duke would always be sensitive about his role. Asked about it once by the BBC, he said, "Constitutionally, I don't exist."



*Queen Elizabeth II and Prince Philip attend the 100th running of the Queen's Plate horse race in Toronto on June 30, 1959*

**PHILIP WAS ALWAYS** publicly loyal to his wife, evidenced by his immense amount of appearances and charity work. His faithfulness was another issue, with rumors dogging him throughout his public life. (He also disliked her corgis.)

But Philip and Elizabeth did exude a palpable affection when they were

seen in public together; in unguarded moments, the usually austere Queen was, in the word of one observer, “kittenish” when interacting with her husband. Celebrating their 50th wedding anniversary in 1997, Elizabeth called him “my strength and stay all these years,” adding, “I, and his whole family, and this and many other countries, owe him a debt greater than he would ever claim.”

To almost everyone, she is the Queen—except for her children, to whom she is “Mummy.” Even when

Philip spoke of his wife to others, he would refer to her by her title. But when they spoke to each other, he still called her Lilibet, that ancient term of endearment from the early years of marriage before she ascended the throne.

In a 1992 interview with the journalist Fiammetta Rocco, he offered an unfinished yet poignant sentence. “People forget what it was like when the Queen was 26 and I was 30, when she succeeded. Well, that’s when things started . . .”

Or, perhaps, when they ended. □

# Milestones

ANNOUNCED

## Homecoming

U.S. troops to exit Afghanistan

BY NAMING SEPT. 11, 2021, as the date that all U.S. troops will be out of Afghanistan, President Joe Biden reminded the world why they were sent there in the first place: to avenge the 9/11 terrorist attacks that had been planned in the country by al-Qaeda, which the ruling Taliban regarded as a guest. There were a lot of distractions—like Iraq, which had no role in 9/11, although the U.S. invasion spawned a new terrorist threat: ISIS. There was also altruism; much of the \$2 trillion spent on Afghanistan aimed to transform a country that had barred girls from school.

Brown University, which keeps count, reports that the 157,000 people killed there over the 20 years include 2,300 U.S. troops, 3,800 U.S. contractors and 43,000 Afghan civilians. The highest toll, 64,000, is among the official Afghan forces. When the U.S. leaves, they must carry on the fight against a Taliban that, while it claims to have severed ties with al-Qaeda, is again gaining ground.

—KARL VICK



DIED

## DMX

Redemptive hip-hop icon

IN EARLY 1998, PUFF DADDY AND BAD BOY Records ruled hip-hop with lush production and silk Versace suits. Then 27-year-old Earl Simmons, better known as DMX, released his debut album, *It's Dark and Hell Is Hot*, and everything changed. The album, full of violent nihilism and hair-raising tales of betrayal and revenge, immediately skyrocketed to the top of the charts, as songs like "Ruff Ryders' Anthem" rang out of car stereos across New York City and beyond.

"It was a complete 180," the Apple Music radio show host Lowkey tells TIME. "Here comes this crazy energetic figure from Yonkers with the Timbs and the bandannas, running around with pit bulls, giving a perspective on the streets that a lot of people weren't familiar with and taking command of what hip-hop didn't look like."

By abrasively challenging the slickness of rap's assimilation into the mainstream, DMX,

who died on April 9 at 50 a week after suffering a heart attack, had unwittingly become one of the biggest rappers in the world. And over the next two decades, his raspy delivery and streetwise storytelling would have an outsize impact on the genre and its listeners.

DMX's road to stardom was brutally difficult: he survived years of childhood abuse, homelessness and prison stints. In his music, he fearlessly animated those traumas, giving voice to the countless Americans suffering from poverty, PTSD or bipolar disorder. But DMX also wrote prayers for redemption as well as spirited anthems that would hypercharge clubs around the world, from "X Gon' Give It to Ya" to "Party Up."

This versatility would make him a beacon for future generations of artists; he's recently been sampled or quoted by Drake, by A\$AP Rocky and even in *Hamilton*. And in 2012, Kendrick Lamar wrote a song paying respects to a record that changed his life: "Thank God for the album I idolized/ *It's dark and plus hell is hot*, that's the start of this crazy ride."

—ANDREW R. CHOW

DIED

**Bernie Madoff**, who in 2009 was sentenced to 150 years in prison for running the largest Ponzi scheme in history, on April 14, at 82.

SEIZED

The **Ever Given**, on April 13, by Egypt, which claims the ship cost the

country nearly \$1 billion when it blocked the Suez Canal for six days.

RECORDED

An all-time monthly high of nearly **19,000 unaccompanied migrant children** at the U.S.-Mexico border, in March 2021, U.S. authorities said on April 8.

EXTENDED

Somalia's President Mohamed Abdullahi Mohamed's term, **by his own order**, on April 14.

RESTORED

\$235 million of **U.S. aid to Palestinians** that was cut under President Donald Trump, U.S. officials said on April 7.

WON

**The Masters**, on April 11 by Hideki Matsuyama, the first Asian-born man to win the golf tournament.

STOLEN

Darius, the **world's longest rabbit**, from his owner's home in England on the night of April 10.

# TheView

NATION

## OPTIMISM IS IN THE AIR

By Charlotte Alter

On an April day in Manhattan, Erin Fox emerged from the giant glass building where she had gotten her first dose of the Pfizer vaccine. The Javits Center, home to comic-book confabs and one highly dramatic presidential nonvictory, had become a key hub of a New York City vaccination effort inoculating close to 100,000 people a day. ▶

INSIDE

THE RISING VIOLENCE IN  
NORTHERN IRELAND

BIDEN SHOULD PRIORITIZE  
NATIONAL SERVICE

THE GOLDEN RETRIEVER WHO  
SAVED MY FAMILY

# The View Opener

It was now “operational nirvana,” said Fox, a vice president of operations for Kaplan North America, who was in and out with her shot in under half an hour.

Walking into the afternoon sun, Fox felt “surprisingly emotional,” almost like “back-to-school jitters.” It was finally warm enough to loosen her jacket. “It’s like the COVID spring,” she says. “It’s poetic that people are getting vaccinated just as spring is coming, and spring is a symbol of emerging from the dark COVID winter.”

A year ago in New York, sirens blared day and night as the city became the epicenter of the nation’s battle against the disease. Streets were empty, restaurants were deserted, and a hospital ship was docked not far from the Javits Center. A temporary field hospital was built in Central Park, where the trees are now starting to bloom.

America isn’t past the pandemic yet. Dangerous variants of the virus are circulating. Lockdown fatigue has caused anxiety, depression or burnout. More than 550,000 Americans are dead, millions have lost loved ones, and the effects of the pandemic are still reverberating through communities of color that were hardest hit.

And yet, it’s undeniable that green shoots are beginning to pop up everywhere. From vaccination rates to new jobs added, the pace and scale of the recovery have outstripped even the rosiest projections. One in 4 U.S. adults is now fully vaccinated, and every adult in America should be eligible for the vaccine by April 19. According to the Centers for Disease Control and Prevention, the U.S. is now administering an average of around 3 million shots a day, and has delivered more vaccine doses than any other nation on earth. Meanwhile, the economy added 916,000 jobs in March, smashing expectations and bringing the unemployment rate down to 6%. “I’ve probably never been as confident about the outlook as I’ve been today,” says Mark Zandi, the chief economist at Moody’s Analytics, who predicts the next six to 18 months are “going to be rip-roaring.”

It’s going to be gangbusters growth.”

The optimism has pervaded even the industries most affected by the pandemic. Airline leaders believe more Americans will be eager to travel as vaccinations increase. The theater industry is preparing for a big comeback, with a jump in ticket sales and dozens of new shows preparing to open on Broadway later this year. Restaurants are still struggling to break even, but business looks much better than it did a year ago.

America is finally coming out of a period of collective hibernation, clawing its way back into the sun after one of the longest, darkest winters anybody can remember. We’re emerging from our cramped, dark isolation to blink at the fresh new world that awaits. Save-the-dates for rescheduled weddings are appearing in mailboxes, baseball stadiums are beginning to fill up, and vacations are being planned. Grandparents are finally hugging their grandchildren.

This spring is also a time for new beginnings. A year of rumination has forced many Americans to rethink their frenzied pre-COVID routines: moving to new cities, launching new careers, building

new relationships and considering how to spend their working hours. It’s not yet clear how permanent these changes will be—the buds are only just emerging, after all—but after a nationwide trauma, Americans are reimagining how they want to live.

Many of the newly vaccinated New Yorkers streaming out of the Javits Center were busy making more immediate plans. Fashion designer Rita De La Rosa, 50, said she intended to visit her parents in the Dominican Republic and her children in Florida. Carol DiSanto, 62, who survived COVID-19 early last year, said she couldn’t wait to go to a concert at Jones Beach. Tuscany Foussard, 24, said he was excited to “finally meet up with my Tinder and Hinge matches.”

“It’s almost symbolic: we were in the dark, and in the cold, and now it’s new life and new beginnings,” says Tim Birner, 29, who got his second vaccine dose in early April. “It’s a renaissance.” □



Masked New Yorkers stroll past cherry blossom trees blooming in Central Park in early April

## SHORT READS

► Highlights from stories on [time.com/ideas](http://time.com/ideas)

### Skepticism among soldiers

Too many troops have opted out of vaccines, write Representative Seth Moulton (D., Mass.) and Marine Corps War College professor Tammy S. Schultz. **If we allow disinformation to cloud the judgment of service members and erode their trust in science, we will not be ready for the next fight.**

### A belief in the power of protest

MiMi Aye, a Burmese-British food writer, says fear has defined the lives of her relatives in Myanmar. But now she’s hopeful. **What has finally broken the dam of fear for me and for so many others, and why we are fighting so hard to support the revolution, is seeing a real chance for freedom.**

### What counts as a ‘violent crime’?

It’s not a neutral category, writes *A Pattern of Violence* author David Alan Sklansky. **The blurry line between violent and nonviolent crimes has been an open invitation to racial bias by law enforcement and the criminal-justice system.**

## Troubling times for Northern Ireland

By Ian Bremmer



IN RECENT WEEKS, Molotov cocktails, bricks and bottles have met barricades and water cannons as towns and cities in Northern Ireland

faced some of their worst rioting in years. Mobs made up mainly of teenagers from both loyalist and republican neighborhoods have clashed with police, who struggled to keep both sides apart at a “peace line” in Belfast.

The anger in Northern Ireland has many sources. Loyalists, who want to remain part of the U.K., want to know why, in a time of COVID restrictions, authorities pursued no prosecutions after crowds defied lockdown rules to gather for the recent funeral of a prominent member of the Irish Republican Army. A police crackdown on criminal gangs in loyalist neighborhoods has also pushed defiant young people into the streets.

But underneath all of this is the growing fear among loyalists that Brexit will increase the likelihood of Northern Ireland’s leaving the U.K. to reunify with the Irish Republic, a member of the E.U. The controversy of the moment centers on the question of borders. As part of Brexit negotiations with the E.U., U.K. Prime Minister Boris Johnson agreed to avoid reimposition of the land border that separates Ireland from Northern Ireland—and, therefore, the E.U. from Britain. Instead, the two sides agreed on the so-called Northern Ireland Protocol, which establishes a trade boundary in the Irish Sea.

There is still haggling to be done over the movement of food, animals and plants across that boundary to ensure that products leaving the U.K. meet E.U. legal, regulatory and health standards. There are also outstanding questions ranging from the future of steel and aluminum tariffs to the movement of pets across the border.

**No border fix can ease tensions between those who hope for a unified Ireland and those who fear it**

The E.U. had argued that an alignment of standards on the manufacture of many products would mean fewer and faster border checks, but Johnson’s government is reluctant to make commitments that make it harder for the U.K. to sign future trade deals with other countries.

All of this leaves loyalists in Northern Ireland feeling pushed to the European side and fearful of a unified Ireland, while facing product shortages as new customs processes slow the movement of goods. This surge of anger comes as the governing and staunchly loyalist Democratic Unionist Party (DUP) preps for a serious electoral challenge next

year. To fend off criticism that the DUP, supporters of Brexit, is responsible for Northern Ireland’s current predicament, its leaders have demanded that the protocol be scrapped entirely. If that’s not enough to blunt criticism of the party, a fragmentation of its voting bloc could leave the Northern Ireland Assembly in the hands of nationalists led by a Sinn Fein First Minister.

That’s a nightmare scenario for loyalists and a serious challenge to the Good Friday Agreement, which brought peace 23 years ago.

**HOW WILL JOHNSON RESPOND?** Many in the U.K. have moved in favor of Brexit in recent months, easing pressure on him for bold action, and Britain’s successful vaccine rollout should continue that trend. But Johnson can’t ignore Northern Ireland’s troubles, because they may become worse.

An end to the violence will require cooperation between loyalist and republican leaders, the British and Irish governments, and U.K. and E.U. negotiators charged with finding a way to ease the flow of trade to limit the risk to Ireland. Don’t expect quick progress. And there is no border fix that can ease tensions between those who hope for a unified Ireland and those who fear it. □

## NATION

## A service presidency

Amid the worst public-health crisis in our lifetime, President Biden has signed the largest investment in national service in decades. The American Rescue Plan includes \$1 billion for national service. That is a significant step, but it isn’t enough to achieve a long-term recovery for our economy or our democracy. Biden has a chance to make national service the cornerstone of his legacy.

National service can provide economic opportunity while preserving the planet, creating a more informed public that rejects misinformation and demagoguery, and strengthening the cohesion of the American citizenry. And people who serve advance professionally.

As I learned in my 34 years in the U.S. Army, service teaches you to focus more on the things you have in common with others and less on the differences. A service presidency for the 21st century can not only rescue our economy and restore civility but also usher in a new generation of leaders ready to tackle whatever crisis we face next. —Former Army General Stanley McChrystal is a co-chair of Serve America Together



Biden delivers remarks at the White House on March 15

## How a puppy saved my grieving family

By Nicole Chung

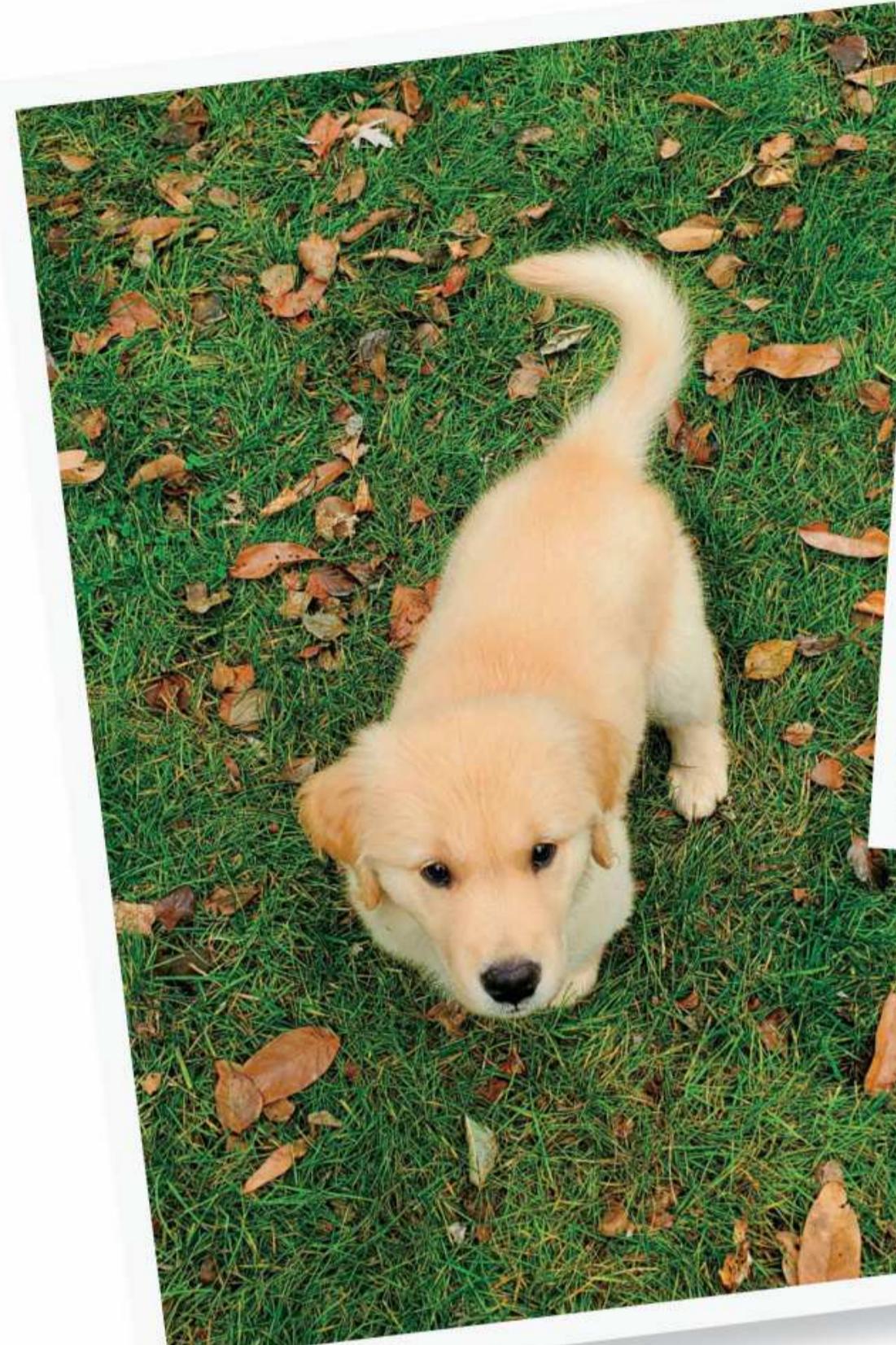
FOR YEARS, WHENEVER OUR CHILDREN ASKED US IF WE could get a dog, my husband and I had some vague and only slightly encouraging go-to responses, such as, “Someday?” and “Maybe when you’re old enough to help.” Then came 2020, the year of our pandemic dread. Sometime between my mother’s livestreamed funeral in the spring and back-to-school that never quite happened in the fall, “maybe” gave way to “yes” and “someday” became “as soon as possible.”

Saying yes to the dog was very much about saying yes to our kids in the worst year of their lives. They had lost so much with and during the pandemic—their grandma, their great-grandma, their school routines, the ability to spend time with friends and family. Like parents everywhere, my husband and I have spent the past year fretting about our children. We’ve been doing a lot of wellness checks, probably annoying them with attempts at probing heart-to-hearts, watching them for signs of anxiety and depression. It hasn’t been difficult to drill down on the source of our sadness—we’ve all been depressed since my mom died—but knowing the reason, knowing that we have a right to be sad, doesn’t make it any easier to be sad all the time.

For all of us, my husband and me as well as our two daughters, getting a puppy became an obsession. “This dog is going to be the family comfort animal,” I explained to friends. *PUPPY DAY!!!* was soon recorded and circled on the calendar. The kids picked a name and refused to consider others. My older daughter created a small yellow sign that read PEGGY for a very large crate. Whenever I was feeling particularly low, which was often, I would go online and start looking for supplies and puppy toys. Soon the four of us couldn’t even work up much angst over the coming pandemic winter, so focused were we on meeting our new family member and becoming, finally, the Dog People we were meant to be.

**NO DOUBT YOU’VE HEARD** of the pandemic-pup phenomenon. By the time our new golden retriever came along, in mid-November, to plunge our household into joyful chaos, several families we know had also gotten dogs. One went “just to look” at a litter of puppies and wound up bringing home a goldendoodle on the same day we got Peggy—without so much as a crate or a food bowl ready. Holdouts teased us for giving their children additional ammo for their own pet campaigns: “Way to make it that much harder for the rest of us,” a friend told me. “I want my kid to meet your puppy, but also my kid should never meet your puppy,” a neighbor said. While I’ve heard that some people regret their decision to get a pandemic pup, this is frankly impossible for me to relate to. In fact, our family is already discussing the day, perhaps in two or three years, when we might bring home another dog.

It’s not that it’s been easy. Peggy, now 6 months old, did house-train reasonably quickly, and she is sleeping through the night, but our living-room rug and nearly every piece of



Peggy in November,  
not long after she  
joined the family

*In my more fanciful moments, I've almost wanted to believe in the comforting fiction that my mother, or someone, knew we needed this dog at this time*

furniture we own should probably be replaced. Peggy is, in many ways, your typical pandemic puppy: she’s terrible at being alone; she has yet to accept long daytime stretches in the crate; she will pace and sometimes whine when she doesn’t know where any two of us are at a given time. (We are just in other rooms in the house, Peggy! We literally never go anywhere!)

But it’s fine, because it turns out we humans are also codependent and constantly crave the dog’s company. Why would I make our perfect pup cool her heels in a crate when I could have her sleeping on my feet while I work? Why would my kids want her “self-soothing” in a room by herself when she could be sitting at their knees, ready to be stealthily petted whenever they get frustrated or bored with school Zooms? A friend floated the idea of doggy day care, and even though I know Peggy would probably love the socialization, I admit my first selfish reaction was:



The author with her mother and their dog Casey in the early 1980s



The author with Peggy in February

"But I didn't get this dog so that other people could be with her all day!"

Are we setting ourselves up for disaster? Perhaps. Will Peggy know how to deal with a mostly empty house when my kids return to school, my husband returns to the office and it's just the two of us all day? Unlikely. Can any of us work up the energy to care or change course? Absolutely not.

**I'M OFTEN SURPRISED** to find myself with this dog at all, despite how obsessed I've become. I like dogs well enough, but I'm also highly allergic and never really knew whether I could be a true Dog Person. I suppose my attitude for much of my adult life was "dogs, how nice for you/other people" (hardly an opinion I could express to my dog-loving family or on the dog-obsessed Internet). For years, I assumed that if we ever got a dog, it would be mainly for my husband and kids, and I would have to let them do most of the snuggling or

else suffer constantly red, itchy eyes.

But by the time we got Peggy, I couldn't pretend she was just for the kids. I'd been looking forward to bringing her home for weeks, and was probably more desperate than any of us for something good to happen. It was my lap that Peggy curled up on to sleep all the way home. I'm the one who lets her lick my face and eat my toast and break the house rules. I take three different allergy medications just to share a home with her.

In the foreword to her little dog-centric collection *A Dog Runs Through It*, poet Linda Pastan refers to one of her many dogs as "the dog of my life," as in the love of one's life. That is how I feel about Peggy. I tell her several times a day what a perfect angel she is, using a tone I wouldn't have dreamed of using even with my children. I direct my family members to look at her, as if they don't look at her all the time anyway, and note how especially beautiful she is. I've filled my Twitter and Instagram feeds with pictures of her; multiple friends text me asking for Peggy photos when they need a pick-me-up. Every night, before bed, I spend a couple of quiet, peaceful hours enjoying cuddle time with her on the couch she wasn't supposed to be allowed on.

It now seems so obvious that I would be this way. I've never been more in need of comfort and a limitless source of uncomplicated love. Sometimes I almost worry that we're going to overwhelm her, given how much we all love and need her—that it's too much pressure to put on one puppy. And sometimes, because I've lost two parents in two years, I'm afraid to love another being that's mortal. But even when we're in the deepest pain, we need to love and be loved. Having a new puppy doesn't erase our grief, of course—and that wasn't the goal—but part of the grieving process is also slowly finding space for other pursuits, reminding yourself why you are still alive, taking what joy you can.

My mom loved dogs, as did my grandmother; they died within a month of each other last year. When my mother was dying, one of her biggest fears was that Buster, the beloved new dog of her widowhood, would have nowhere to go. Despite her allergies

and mine, she always seemed to have a dog in the house, except when my father was most ill toward the end of his life and she was concerned that a dog underfoot would cause him to trip and fall. In so many of my favorite photos of her—the ones I keep on desks and shelves, so I never have to look far to see her face—she's grinning, with her arms wrapped around one of her cherished dogs. I can't always name the year or the place or the animal, but I can see my mother happy, and remember how her worry and anxiety and even her deep fear of death would be eased when she had a dog to dote on.

I do not believe in fate, nor do I really think anyone guided our dog to us, in the way my adoptive parents long believed that God intervened to guide me to them. But in my more fanciful moments, I've almost wanted to believe in the comforting fiction that my mother, or someone, knew we needed this dog at this time. In getting a dog of my own, one I'm sure she would have loved, I also feel I'm finally doing something my mom would have been able to relate to—unlike, say, my writing, or the fact that I've settled (in every sense of the word) on the East Coast. I suspect she would have called Peggy her "grand-puppy" and sent her plenty of toys and treats, the way she always seemed to find time and money to send gifts to my kids throughout the year, not just on their birthdays. She'd have peppered me with questions about the dog, her likes and dislikes, her habits bad and good, her appetite and sleep and training "progress." When she came to visit, she would have been glad to offer Peggy a new warm lap.

When I tell people that Peggy has saved me this year—saved our whole family—it's true. We still miss all the friends and loved ones we can't see, our old routines, the feeling of relative safety. We will always miss my mom, my dad and my grandma. But Peggy has given our weary, grieving family a new shared focus, an emotional center that isn't all about our loss. She's given us all a new place to put our love and brought us back to ourselves.

Chung is the author of the memoir All You Can Ever Know

TIME 2030

## 4 prescriptions for a more sustainable 2030

January brought the launch of TIME 2030, a decade-long reporting project spotlighting the ideas and innovations driving progress toward a more sustainable and equitable world. We convened a range of leaders from around the globe to help steer our coverage, and for this climate-focused issue, we invited four major thinkers on sustainability to join the 2030 committee: environmentalist Ma Jun; activist Vanessa Nakate, founder of Africa's Rise Up climate movement; former EPA administrator Lisa P. Jackson; and corporate leader Paul Polman. Here, each offers a solution to a major problem we must solve before the end of the decade.



### Use technology to hold polluters accountable

By Ma Jun

THE GLOBALIZATION OF MANUFACTURING has transformed some of the world's poorest nations to unprecedented levels of economic prosperity. But the resulting increase in poorly controlled emissions and eco-degradation has caused unsustainable levels of local air and water pollution, destabilizing the climate and threatening biodiversity.

Just as the vast development of technology hastened this cycle of boom and doom, it can also help break it. Automated environmental monitoring, electronic reporting and web-based disclosure systems now available in the digital age create the possibility of new levels of accountability for environmental performance. Technology allows the public to scrutinize factory pollution problems, governments to make more efficient enforcement efforts and companies to hold their supply chains to account. To check pressing industrial pollution, for example, corporations

in China have been driven to install automated online monitoring and report their emission data to the public in real time.

These kinds of innovations are having a real impact in China, the manufacturing "factory of the world." The Institute of Public and Environmental Affairs' interactive Blue Map Database gathers private- and public-sector data to collate critical environmental performance information, monitoring and recording air and water pollution as it is happening. Many factories have begun self-reporting carbon emissions into the database as well. Hundreds of local and multinational corporations now make routine use of the database for remote supplier oversight, receiving push notifications the instant a violation occurs.

Applying digital solutions to environmental problems has delivered new levels of accountability for industrial pollution in China, with more than 10,000 factories rectifying problems and more than 20,000 electing to participate in these improved oversight programs to give their clients and customers peace of mind.

China is becoming more informed and more open with its environmental data. That should give us great hope that our electronically connected world can deliver a greener industrial future.

*Ma is the director of the Institute of Public and Environmental Affairs in Beijing*



### Educated girls will turn the world green

By Vanessa Nakate

When you think of climate solutions, you probably think of renewable energy or electric vehicles. But while we need these kinds of innovations, there are other powerful solutions we are not paying proper attention to.

There exists an environmental solution that can reduce inequality, build resilience to the climate crisis and reduce emissions all at the same time. It's called educating girls and young women, and it needs to happen now.

If we are to limit global heating to 1.5°C above preindustrial levels, then educating girls is one of the best tools we have. According to nonprofit group Project Drawdown, investing in universal education and family planning in low- and middle-income countries could reduce emissions by 85.42 gigatons by 2050. That's about a decade's worth of China's emissions.

Girls who have been to school grow up to be empowered women. They are not forced into early marriage, and they tend to have healthier, smaller families, reducing emissions well into the future.

Girls who have been to school have the tools they need to be more resilient to climate disasters. They are economically empowered, are empowered in their communities and know how to respond to extreme weather.

Girls who have been to school can grow up to be women leaders, who have been shown to be more likely to ratify environmental treaties. Think of Christiana Figueres, the U.N. diplomat who led negotiations for the Paris Agreement. Or Hilda Heine, the former President of the Marshall Islands, who has shown the world the impact climate change is having in the Pacific. Look too at the female leaders of the youth climate movement.

Educating a girl will give her a brighter future; educating girls will provide us all with a lifeline.

*Nakate is a climate-justice activist*



Researchers working for Conservation International take a soil sample to test carbon levels of mangrove trees in Bogotá



## To fight climate change, fight for the people

By Lisa P. Jackson

WHEN I WAS 8 YEARS OLD, I WROTE a letter asking President Nixon to do what he could to protect our planet. I didn't know I'd one day go on to lead the agency he founded, the Environmental Protection Agency, or build on that work at Apple. But I saw the impact pollution was having on my community, contaminating our air and water. I knew then, as I know now, that when people's health is at risk, we should do something about it.

At the heart of our concern for the planet should be a concern for people. If we want to stave off the worst

impacts of climate change, we'll do it by bringing the communities most affected to the table and working together. Equity should be the bedrock of environmental progress.

Apple is already carbon neutral for our direct emissions, and by 2030 our carbon footprint will net to zero—from our supply chain down to the energy used to charge an iPhone. To date, more than 100 Apple suppliers have committed to our 2030 goal. And we've kept equity at the center of environmental progress—for example, by working with Indigenous communities in Colombia to preserve mangrove forests that store carbon, and launching an Impact Accelerator to support minority-owned businesses on the cutting edge of clean energy.

Climate change and global inequity are far bigger problems than any one company can solve. But I'm inspired by how many are seeing that a healthy planet demands an equitable future. It's the future I wanted as an 8-year-old writing to the President. It's a future we can build together.

Jackson is Apple's VP of environment, policy and social initiatives

## Help nature restore balance

By Paul Polman

Nature and climate are inextricably linked. Nature loss drives climate change and vice versa. Right now, both are in crisis.

Repairing our natural climate—reversing deforestation, for example, or conserving ecosystems to sequester and store carbon—addresses both these crises. So-called natural climate solutions are one of the most important and cost-effective ways to stay on track for net-zero carbon emissions by 2050. Yet they receive little attention and just 8% of public climate funding. That must change.

Well-designed natural climate solutions yield multiple co-benefits, including greater biodiversity, improved watersheds, better farm outcomes and enhanced resilience against the impacts of global warming. They also address the opportunity for more inclusive growth for the world's poor.

By 2030, nature-positive solutions will create more than \$10 trillion and 395 million jobs, which is a huge opportunity. To accelerate progress, businesses are calling on governments to work together to create a policy feedback loop to spur bolder corporate action. This must include redefining our model of growth to value natural as well as financial capital.

Reversing nature loss is a crucial part of building back better. This is not just a critical opportunity. It's our only option.

Polman is a former CEO of Unilever and chair of social venture IMAGINE





# World **THE LIFESAVING FACTORY**

**BEHIND THE SCENES AT THE GERMAN FACILITIES  
MAKING COVID-19 VACCINES FOR THE WORLD**

*By Aryn Baker/Marburg, Germany, and Alice Park  
Photographs by Luca Locatelli for TIME*

This 11-min. time-lapse shows the final step of production: technicians at BioNTech's Marburg complex filter the vaccine before pumping it into bulk packages ready for shipping to a filling and labeling facility elsewhere in Germany



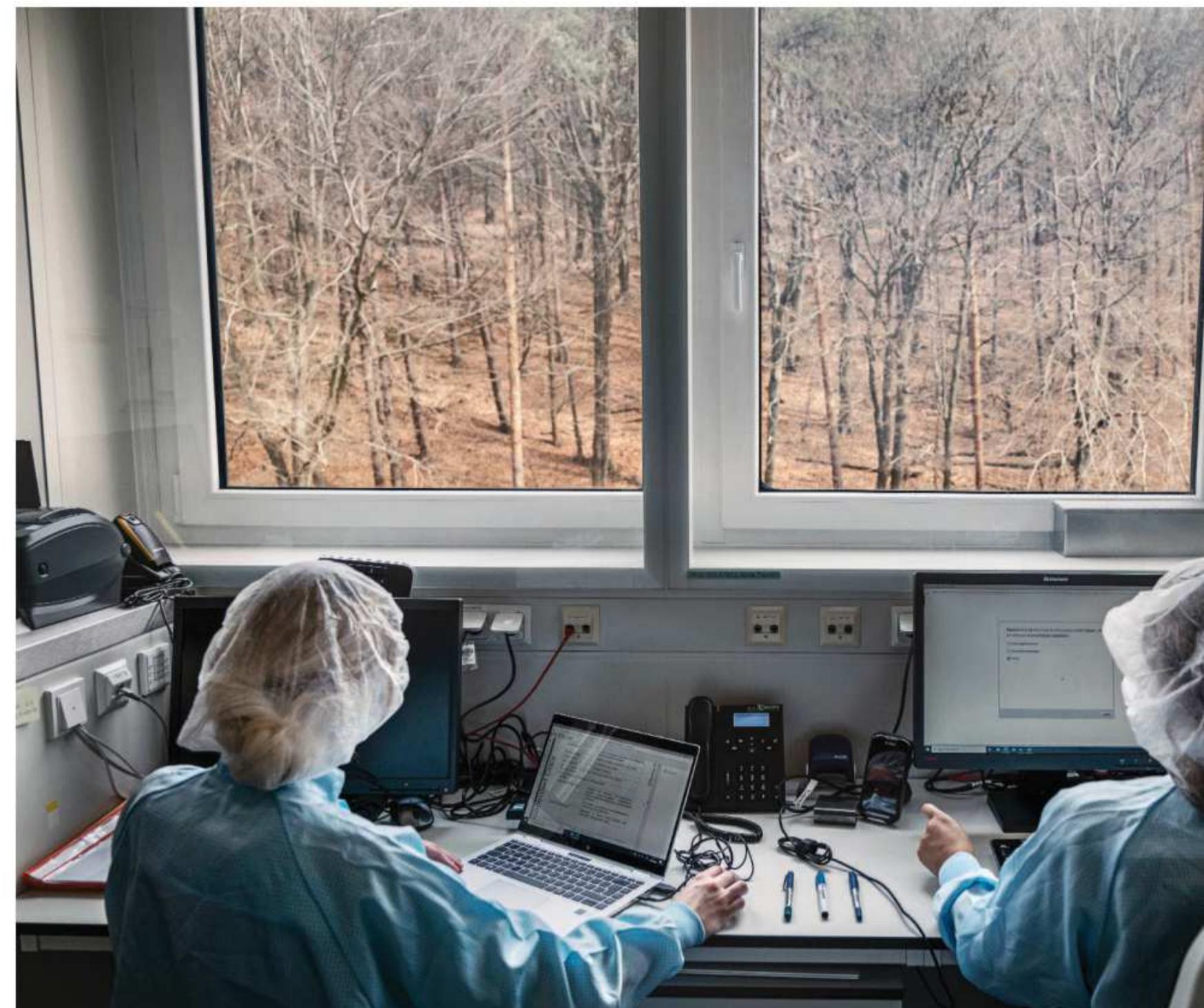
# World

# I

IF YOU'VE BEEN VACCINATED FOR COVID-19, chances are pretty high that you're benefiting from a product made by BioNTech. The German biotech company, co-founded by a husband-and-wife team of scientists, developed the vaccine that became not only the first to earn authorization in the U.S. for COVID-19 in December but also the first ever based on a new technology involving the genetic material mRNA.

In interviews in December and March, co-founders Ugur Sahin and Ozlem Tureci spoke about their whirlwind year and their partnership with U.S. pharmaceutical company Pfizer to test and manufacture the vaccine. Over three days in late March, they also opened up their new manufacturing plant to TIME for the first step-by-step look at how their life-saving, and potentially pandemic-ending, vaccine is made.

When Sahin read a scientific paper in late January 2020 describing the first identified cases of COVID-19 in Wuhan, China, "it was very clear to me that this was not a local outbreak anymore," he says. "And most likely the virus had already spread worldwide." He knew there was no time to waste. But BioNTech, based in Mainz, was then primarily a cancer-vaccine company; after more than a decade of research and development, the company had tested its mRNA-based cancer vaccines in about 400 people, with encouraging results. They were just exploring the possibility of creating vaccines against infectious diseases—specifically an mRNA-based vaccine against flu—when COVID-19 hit.



**Top left:** The new BioNTech production facility is in a wooded valley in Marburg. Technicians working in one of the prep labs often spot deer roaming in the nearby forest

**Lower left:** Sylvia Groeb works in the early stages of the process, encoding the mRNA that teaches human cells how to trigger the antibody response needed to combat the virus

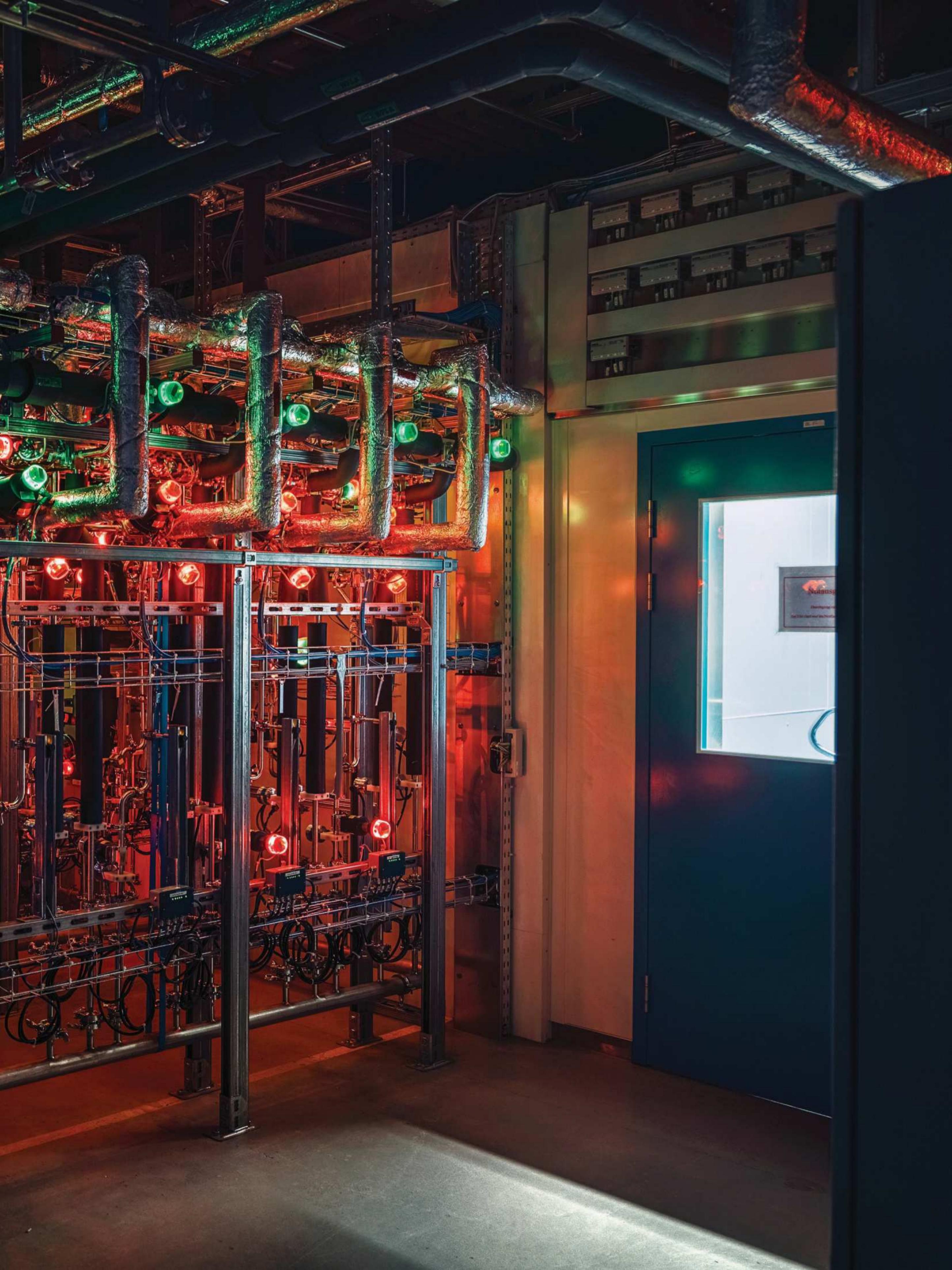


*Top right:* To keep it protected in the body, the mRNA is encased in a bubble of lipids through a process that uses pure, pressurized ethanol. Because ethanol is highly explosive, technicians must wear special static-free boots

*Lower right:* From start to finish, the entire manufacturing process flows through hermetically sealed plastic tubing. After the vaccine is pumped into bulk packaging, the tubes are sealed, then cut, to finish the process



The machinery that acts as the heart of the vaccine-manufacturing facility, regulating the flow of gas, water, electricity, wastewater and more throughout the building in Marburg, where 400 employees working around the clock produce several million doses of the vaccine each week



# World

"[Ugur] convinced all of us, including our board, colleagues and scientific teams, that this was now our calling and we have to follow this mission," says Turcic. At an emergency meeting, Sahin urged a 40-member team to "move with the speed of light" toward the company's new goal of developing a COVID-19 vaccine. The team, which grew to more than 200, worked nights and through holidays on Project Lightspeed, and after several weeks had produced 20 candidates. An unprecedented four showed promise in neutralizing the virus. "There was a clear message that this has to be the priority," says Andreas Kuhn, senior vice president of RNA biochemistry and manufacturing at BioNTech. "Whatever you're doing right now, kind of forget about it because this is the most important thing now."

With so little known about the new virus, the team turned to what was known about two related coronaviruses: SARS and MERS. Soon it had a 50,000-step process for building an mRNA vaccine against the new coronavirus, SARS-CoV-2.

**IT BEGINS** in a 50-L stainless-steel tank that more closely resembles a beer keg than what you might imagine to be part of a lifesaving bioreactor. Inside are fragments of mRNA coding for the SARS-CoV-2 spike protein, the Achilles' heel of the virus that the vaccine will exploit. The entire production process happens in a hermetically sealed system, with products from each stage transported to the next via a network of transparent plastic tubing. Even so, just to be safe, technicians routinely test the air in the manufacturing rooms for any extraneous bacteria or pathogens, and those working with the vaccine regularly tap each gloved finger onto petri dishes filled with agar that can culture for any stray microbes that might have made their way into the facility.

Because mRNA is relatively unstable, it wouldn't survive in its raw form in the human body. In order to keep the mRNA protected, it's encased in a fatty bubble using pressurized ethanol—a highly flammable substance. The process happens in one of six 50-L tanks, each in its own sealed-off room. The few people authorized to venture in and out of the rooms put on special static-free shoes to avoid generating an accidental friction spark



At the fill-and-finish facility operated by Baxter International in Halle, 120 miles north of Marburg, technicians monitor the washing and sterilization of the vials before they are filled with vaccine, then stoppered and sealed



that could set off an explosion. Five of the tanks are named for team members who were instrumental in developing the process, and the sixth is named Margaret, after the U.K. grandmother who was the first person to receive the vaccine.

Once the ethanol has done its job of creating the mRNA-containing bubbles, it is filtered out. The result is then filtered several times more, eventually ending up as a milky solution that fills 10-L plastic bags. That liquid is shunted to the so-called fill-and-finish phase, where it is purified in tanks and then squirted into sterile vials—each containing up to six doses—that are shipped to clinics around the world.

BioNTech currently produces 8 million doses of its vaccine every three to seven days at the new Marburg facility that the company purchased from Novartis last fall. (Many lab technicians, most of whom transferred to BioNTech, still wear their old lab coats with the Novartis logo, as there hasn't been time to order new ones.) Ultimately, the plant will churn out 1 billion doses a year, and BioNTech is working with Pfizer, which oversaw the final human testing that resulted in the vaccine's authorization in the U.K., the U.S. and elsewhere, to ramp up manufacturing to produce the 2.5 billion doses it committed to providing the world in 2021. Both companies are quick to point out that their work is not done. Sahin and his team are also keeping an eye on new variants of the virus starting to take hold around the world, and have already developed another vaccine to target those viral versions, and they plan to start testing it soon.

With the success of the COVID-19 mRNA vaccine, Sahin and Tureci see mRNA technology as playing a more dominant role in treating other diseases as well, and are preparing to pick up the work on flu and cancer vaccines that was interrupted by the pandemic. For now, the team is rightfully proud of what it's accomplished in a very busy year. "This is a once-in-a-lifetime project," says Alexander Muik, director of immunomodulators at the company, who was involved in the early stages of developing the vaccine. "Who can say that they're part of the solution for a pandemic? Only a few people can say that." —With reporting by JULIA ZORTHIAN/NEW YORK □





At the Baxter facility in Halle,  
220 vials can be filled and capped  
every minute. Before they  
are labeled, the filled vials go  
through one final inspection





ILLUSTRATION BY PAOLO BEGHINI FOR TIME

# American Quandary

Conspiracy theorists are winning local elections.  
Communities are struggling to fight back

By Vera Bergengruen

IN NOVEMBER, LUCAS HARTWELL, A HIGH SCHOOL senior in Grand Blanc, Mich., noticed something strange about his school district's newest board member.

Amy Facchinello's Twitter feed was full of apocalyptic images and skulls made of smoke. There were cryptic calls for fellow "patriots" and "digital soldiers" to join an uprising, and vows that nothing could "stop what is coming." In the posts she shared, the COVID-19 pandemic was cast as a dark plot engineered by Bill Gates, while George Floyd's killing was "exposed as deep state psyop." Facchinello, elected that month, was now one of seven people in charge of shaping Hartwell's education.

After a few hours of research, Hartwell had a name for her bizarre ideas: QAnon. He shared her posts on social media, directing people to a Wikipedia page about the right-wing conspiracy theory, which alleges that a sinister cabal of Satan-worshipping pedophiles is running the country. But few in Grand Blanc, a town of 8,200 outside Flint, seemed as alarmed as he was. So Hartwell, 18, decided to bring up the matter at a school-board meeting in January. Reading from a speech on his laptop, he addressed a Zoom audience that included Facchinello. Hartwell noted the FBI had identified QAnon as a potential terrorist threat. How could she serve in this position, he asked, "when it seems you represent none of the values we stand for as a community or, even more importantly, as Americans?"

There was a brief silence. "Thank you. O.K. Next," said the moderator, moving on to a question about vaccinations.

Today, Facchinello, who did not respond to requests for comment, remains in her post. But Hartwell isn't giving up. "I think for these far-right conspiracists or radicals to be infiltrating the most basic unit of American government, on an elected level, that's just really disturbing to me," he says. "And they just sort of get away with it."

It's not only happening in Grand Blanc. From Michigan to California, and Las Vegas to rural Washington State, dozens of recently elected local officials have promoted elements of the outlandish Internet conspiracy theory that views former President Donald Trump as a messianic figure battling a cadre of deep-state operatives, Democratic politicians and Hollywood celebrities who molest and murder children.

It's a symptom of how widely the QAnon delusion has spread in the U.S. In December, an NPR/Ipsos poll estimated that 1 in 3 Americans believed in some of the key tenets of the extremist ideology; another survey, by the conservative American Enterprise Institute, found 29% of Republicans agreed that Trump "has been secretly fighting a group of child sex traffickers that include prominent Democrats and Hollywood elites." On Facebook alone, QAnon groups amassed millions of members before they were shut down, according to an internal company audit in

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August. At least two dozen Republican candidates who embraced the conspiracy ran for congressional seats in 2020. Two of them won, Lauren Boebert of Colorado and Marjorie Taylor Greene of Georgia, who has falsely claimed Hillary Clinton murdered children and political opponents, dismissed mass shootings as “false flag” operations, suggested California wildfires were sparked by space lasers and voiced support for the execution of prominent Democrats.

Since Trump’s defeat, the QAnon movement has quietly entered a different, and arguably more dangerous, phase. Adherents now hold local elected offices across the U.S.—from mayors to city-council members to school-board trustees—with the power to shape policies that directly affect the lives of millions of Americans from positions that offer a measure of credibility to delusional beliefs. In some places, like Grand Blanc, the election of QAnon believers to local office has met little organized resistance. In others, it’s prompted street protests, frantic PTA meetings, tearful city-council Zoom calls, and hundreds of angry emails and petitions.

It’s impossible to estimate how many elected officials believe in QAnon or have promoted its theories in the past. No organization keeps tallies, and it can be hard to parse the point where Trumpian provocation ends and true conspiracy thinking begins. But it’s clear from more than two dozen interviews with residents of communities where QAnon-tied officials have taken office that America is only beginning to grapple with the havoc that the cultlike conspiracy theory has wrought. Almost every resident who talked to TIME about their own local official’s links to the movement also pointed out others in the area they had noticed sharing QAnon content: a state legislator, a county commissioner, a sheriff.

“The long-term impacts are really dangerous,” says Jared Holt, a disinformation researcher at the Atlantic Council. “We’re supposed to have our leaders make decisions based on shared sets of facts. If we decide that for elected officials to believe in an outlandish byzantine conspiracy theory like QAnon is O.K., then the door is effectively left open for that shared sense of understanding to further erode.”

**THE QANON CONSPIRACY** first took shape on fringe online message boards in 2017, when an anonymous poster claiming to be a high-ranking U.S. government official began to post cryptic messages about Trump’s alleged crusade against the deep-state cabal. The poster went by “Q,” a reference to a high level of government security clearance. A growing number of followers came together to attempt to decode Q’s posts, which spun together a dizzying array of old and new conspiracies. Followers believed Trump’s secret war would culminate in “the Storm,” an event in which he would finally unmask his enemies and bring them to justice.



▲  
*Lucas Hartwell,  
a senior at Grand  
Blanc Community  
High School, in the  
room he uses as  
his workspace in  
Grand Blanc, Mich.*

But it was in the chaos of the past year that the movement drew widespread recognition. Conspiracies prey on people’s fears, and fear was everywhere in 2020—of the coronavirus, of civil unrest, of government overreach, of a stolen election. All these fears were absorbed into the QAnon universe and amplified by powerful voices, including Trump himself. Over the course of the pandemic, the President retweeted QAnon-linked accounts more than 200 times, according to a tally kept by Media Matters for America, a liberal nonprofit group. Many of Trump’s allies were even more explicit. Last summer, his son Eric posted a giant “Q” and the conspiracy’s rallying cry—“Where we go one we go all”—on Instagram. When pressed, the President refused to disavow the movement, calling its followers “people that love our country.” It was a message he would echo on Jan. 6, when his supporters, many of them inspired by QAnon, stormed the U.S. Capitol in a violent assault that left five people dead.

Trump’s defeat was a turning point for many true believers of QAnon. Some were shattered by Joe Biden’s ascension. Others were driven to take matters into their own hands rather than “trust the plan” for Trump to save them, as Q had long promised.

"Wondering when we're going to realize what's really happened blatantly in front of our eyeballs and start making moves locally," one poster wrote on a QAnon message board in January. Another urged fellow patriots to begin with city councils and school boards: "to not just hold the line but make some headway into the local governments."

**IN FACT**, it was already happening. A wave of local officials with QAnon ties was elected in November, shaking up communities across the country. In Las Vegas, Katie Williams, 30, was elected to the seven-member board of the Clark County school district, which is the fifth largest in the country, with more than 300,000 children. A former Miss Nevada who claims she was stripped of her title in 2019 because of her conservative views, Williams shares the former President's penchant for provocation. (The pageant says it's because she broke its "no politics" rule for social media.) On her Twitter account, she has called COVID-19 the "China virus," belittled transgender athletes and gone viral for taunting prominent Democrats.

Williams has also been nicknamed #Qatie by her local critics for a slew of posts laced with QAnon conspiracies. "Wayfair is selling children and if you don't believe that you're probably voting for Joe Biden," she tweeted last July, one of several posts amplifying a preposterous theory that the online retailer was trafficking children inside cabinets. "Mandating masks are only helping child sex traffickers get away and hide," she tweeted a day later—another popular QAnon talking point.

Williams "wants to be the next Marjorie Taylor Greene, and this is how she's capitalizing on it," says one Las Vegas mother, who requested anonymity because her child attends school in Williams' district. Parents who have pressed Williams about her statements said she either ignored their questions or blocked them on social media, accusing them of being "bullies." Discussions about Williams' beliefs on a local parents' Facebook group grew heated, with some community members dismissing criticism of her conspiracy posts as partisan censorship.

Williams' critics concede she has been adept at channeling many parents' frustration with how schools have handled the pandemic. "There are far more people who agree with her enough on other issues that they're willing to not question her on the conspiracies," a second Las Vegas parent says. Other parents and local education officials say it's been challenging to untangle Williams' support for fringe conspiracies from her broader political activism.

While she was running for the seat, a Zoom interview with the Clark County parents' Facebook group was dominated by questions about her social media posts. Parents argued she was putting local families in danger by assailing "the China virus" as anti-Asian

hate crimes spiked in Las Vegas. With an American flag behind her, Williams spoke in measured tones, promising to respect diversity and casting her posts questioning the coronavirus as "satirical." Her posts spreading QAnon theories—which have not been deleted—were meant to be taken as a "joke," her spokesman Noah Jennings tells TIME.

Rebecca Dirks Garcia, the president of the Nevada PTA and one of the administrators of the parents' Facebook group, suspects Williams is courting attention to elevate her political profile. She notes the discrepancy between Williams' professional behavior at board meetings and her tirades on Twitter. "If you talk to her one-on-one, she is not crazy," says Dirks Garcia. "She'll be at a board meeting, she'll conduct herself appropriately, and then in the middle of the meeting she sends off this crazy tweet, and you're like, What the ...?" Dirks Garcia believes Williams' role on the school board is "clearly a stepping-stone" for bigger political aspirations.

To many parents, this is hardly comforting. "If she knows that these conspiracy theories are not true, I feel like that makes it worse," says Jennifer Kilkenny, 39, a digital-marketing specialist who has two children in the Clark County school system. "This is my kids' education. This is a serious job."

## Conspiracy brigade

Dozens of QAnon-linked candidates ran for local office in 2020. Many of them won.



**Amy Facchinello**

School-board member; Grand Blanc, Mich.

Shared dozens of QAnon posts encouraging fellow "patriots" on Twitter: "They can never break our spirit"



**Tito Ortiz**

Mayor pro tem; Huntington Beach, Calif.

Called COVID-19 "population control by the left," and sold merchandise with QAnon slogans

**TITO ORTIZ** is a bombastic former Ultimate Fighting champion and longtime Trump supporter from Huntington Beach, Calif., a city of 200,000 an hour south of Los Angeles. Last year, Ortiz, 46, ran for an open seat on the city council. Like Williams' politics, his is a mix of Trump-style goading and open support for conspiracies, including QAnon. He campaigned to "Make Huntington Beach safe again," promising to save the city from Black Lives Matter protesters and antifa. He has refused to wear a mask, calling COVID-19 a "political scam" and a form of "population control by the left." And he sold QAnon merchandise on his website, advertising shirts emblazoned with wwg1wga—an abbreviation of the same Q slogan Eric Trump posted on social media—which he modeled in beach shots, showing off his muscled physique. (Ortiz's girlfriend, an Instagram influencer, lost access to her social media accounts for spreading the conspiracy theory through her lifestyle content, a trend that researchers have termed "Pastel QAnon.")

Despite having no political experience, Ortiz received the most votes in Huntington Beach history in November's election. He's since been installed as mayor pro tem, which in the city's rotating system puts him next in line to become mayor in 2022. But he has shown little interest in doing the actual work the role requires, according to multiple city-council members. (Ortiz did not respond to requests for comment.) The council can't meet in person because he refuses to wear a mask. "We're losing businesses

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that don't want to come to Huntington Beach because they don't want to be associated with someone who's QAnon," says council member Dan Kalmick. "It's an embarrassment to have someone who is either so gullible—or so craven—representing our city in a visible way."

When news spread in late January that Ortiz could face a no-confidence vote that would strip him of his mayor pro tem title, the city council was flooded with hundreds of emails both supporting and blasting him. "Clearly I made a terrible mistake moving my children here," one resident wrote. Ortiz backers, for their part, slammed the move as "cancel culture" and "undoing the will of the people." In an emotional council meeting held over Zoom on Feb. 1, Huntington Beach residents vented frustration and anger about Ortiz's antics. "I used to be really proud of growing up here," one woman said, calling it "really disheartening" to be represented by someone pushing dangerous conspiracies. But at the end of the night, the city council decided to table the no-confidence vote after publicly reprimanding Ortiz.

A similar controversy has been playing out in Sequim, Wash., where the mayor's enthusiastic promotion of QAnon has shaken up the sleepy town of 6,600 on the Olympic Peninsula. Last August, Mayor William Armacost urged listeners of the radio program *Coffee With the Mayor* to seek out a YouTube video about the conspiracy. A local salon owner who has served as mayor since January 2020, Armacost called QAnon a "movement that encourages you to think for yourself" and praised "patriots from all over the world fighting for humanity, truth, freedom and saving children."

Sequim residents didn't know how to react. Many were already alarmed by Armacost's handling of the pandemic, which included traveling to a massive motorcycle rally in South Dakota that became a superspreader event, then refusing to quarantine upon his return. Now they realized he had been sharing QAnon posts on social media with the #WWG1WGA hashtag for months. The situation came to a head in January, when Armacost and his allies on the city council pushed out Sequim's long-time city manager, who had criticized the mayor's support for the conspiracy. More than 100 residents, wearing masks and bundled against the bitter cold, held a protest outside city hall, some toting signs reading NO QANON COUP.

As the standoff drew national attention, locals complained that being known as the town with the "Q mayor" would hurt tourism and local businesses. Others saw a deeper problem. "If you really don't accept factual reality, how can you do your job?" asks Ken Stringer, who runs a local bicycle club. Promoting "wacko" theories should not be acceptable for someone in public office, Stringer says. "He's using this position to change the form of our city



**Katie Williams**

School-board member; Las Vegas

Posted QAnon child-trafficking conspiracies on Twitter, accusing Joe Biden and Chrissy Teigen of pedophilia



**William Armacost**

Mayor; Sequim, Wash.

Encouraged residents listening to his radio show to seek out a QAnon YouTube video



**Eve Dobler-Drew**

School-board member; San Luis Obispo, Calif.

Spread right-wing conspiracies and warned followers that Melinda Gates was "satanic"

government." (Armacost told TIME that opponents were running "smear campaigns" against him, but declined an interview.)

In San Luis Obispo, Calif., as in Grand Blanc, it was teenagers who rang the alarm bells. In November, a 73-year-old retired teacher named Eve Dobler-Drew won a seat on the San Luis Coastal Unified School District's board, overseeing 7,500 students. She had previously shared QAnon conspiracy videos, called Melinda Gates "satanic," claimed that George Soros had paid racial-justice protesters and pushed disinformation about LGBTQ "conversion" therapy.

Izzy Nino de Rivera, the 16-year-old editor of the San Luis Obispo High School paper, who is openly gay, was livid. "I was so mad, and worried about my younger siblings, what they're going to be learning," she says. She joined with a friend, Drew Vander Weele, to write an op-ed protesting Dobler-Drew's election. "We're giving something like that a platform and saying that this is someone who makes decisions for the community," Vander Weele says. "How is that O.K.?" (Dobler-Drew did not respond to requests for comment.)

At a school-board meeting held over Zoom, Nino de Rivera made a public call for Dobler-Drew to resign. More than a dozen community members backed the move. "This is not a person who should be influential in making decisions regarding the education of our children," said Scott Bixby, a school parent.

But the board president urged critics to remember that Dobler-Drew had been duly elected. Since then, the city's mayor, Heidi Harmon, has been circulating a petition to gauge support for Dobler-Drew's recall, in which she calls her a "right-wing conspiracy theorist" who failed to disclose her "unhinged worldview" to voters. "We know that [San Luis Obispo] County is better than this," the petition says.

**IN THE JAN. 6 SIEGE** of the U.S. Capitol by a pro-Trump mob, allegiance to QAnon emerged as a common theme. Dozens of rioters carried flags and wore gear with Q slogans. One of the most recognizable figures was a shirtless, tattooed man who wore a fur hat with horns and became known as the "QAnon shaman." It soon became clear in court filings that many of the insurrectionists were QAnon believers who thought they were participating in the long-awaited "Storm."

The insurrection also made the conspiracy notorious, and dozens of state and local lawmakers quietly deleted QAnon propaganda or backpedaled from their embrace of the movement. But they remain in office, and efforts to dislodge them run the risk of appearing to validate a conspiracy grounded in both paranoia and the nation's cultural divide. In some communities, Republicans have argued that branding someone as "QAnon" is a Democratic tactic to "cancel" their political opponents.



In other cities, the challenges of navigating the pandemic have swamped efforts to oust an offending official. When photos emerged in January of Williams posing at several events with a member of the Proud Boys, a far-right extremist group, the Clark County school board seemed at a loss as to how to respond. Busy with school reopenings, it opted to ignore them. A Las Vegas parent who has pushed for Williams' resignation sympathizes with the board's predicament. "They're trying to get all these kids back to school," the parent says. "They can't exactly address the fact that 'O.K., one of our new board trustees is affiliated with terrorists.'" (Jennings, Williams' spokesman, says she has cut off all communication with Proud Boys members since the Capitol insurrection.)

Las Vegas parents are waiting until Williams has served the required six months before they can push for her to step down. Other communities are in a similar holding pattern. Residents of Huntington Beach are circulating petitions to recall Ortiz, one of which has more than 3,200 signatures but seems unlikely to succeed. Armacost remains in office in Sequim, where locals have formed a group called the Sequim Good Governance League to elect new candidates and block the rise of other conspiracy theorists. "This has galvanized a local movement of people who are saying, 'Well, enough is enough,'" says Stringer, who heads the league's legal committee. "This is about combatting the spread of conspiracy theories and

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*Signs with various conspiracy theories are on display at a "Save the Children" rally in Los Angeles on Aug. 22*

the effect that has on our governmental institutions."

The quandary is real. Local elections that elevate cranks to office are no less legitimate than the one that Capitol rioters were trying to overturn. On the other hand, choosing to ignore blatant conspiracy-mongering, or writing it off as protected political speech, risks cementing appeals to mass delusion as an accepted path to office. "This trend of local officials who have a lot of direct authority over decisions in their communities using disinformation as a strategy to get those positions is toxic and dangerous," says Graham Brookie, the director of the Atlantic Council's Digital Forensic Research Lab. And for many of these officials, who are able to get away with deleting old QAnon posts and dodging questions, a school-board or city-council seat may be a springboard to bigger platforms.

For now, those conspiracy theorists remain in charge of everything from children's education to city budgets to the livelihoods of members of the community. Ava Butzu, an English teacher in Grand Blanc, said many faculty members had been aware of Amy Facchinello's QAnon posts, but kept quiet out of fear for their jobs. "Everybody was terrified to speak at that first meeting," says Butzu, who thanked Hartwell, the high school senior, for being the only person brave enough to call her out. Every time Americans choose not to speak out, they're "ceding territory" to conspiracy theories, she says. "It's a battle of inches." —With reporting by MARIAH ESPADA □

Nation

# THE NEW RECRUITS

Law-enforcement agencies are struggling to get people of color to join police forces. So one HBCU launched its own academy

**By Melissa Chan**



*Students in tactical training at the Lincoln University Police Academy in Jefferson City, Mo., on March 12*

## When Tyrese Davis got accepted into Lincoln University's police academy, the first of its kind at a historically Black college or university, his instinct was to keep it a secret.

Davis, 22, prides himself on being the first man in his family to go to college, so the acceptance on Jan. 6 was monumental. It meant he was one step closer to building a future for himself amid the economic tumult of the pandemic. But it came after months of civil unrest following the death of George Floyd in police custody, and on the very day insurrectionists stormed the U.S. Capitol, where police would turn out to have been on both sides of the law.

As a Black man from Baltimore, where anger remains raw over Freddie Gray's 2015 death while under arrest, Davis worried about backlash from his community. "I didn't want to let it be known that I was joining a law-enforcement academy," he says. "I didn't want to be frowned upon."

So on Jan. 19, when the academy opened in Jefferson City, Mo., where Davis lives on campus, he didn't share the news with his hometown friends, even though he was making history as part of the first police class at an HBCU. But more than a week later, when he learned that authorities in Rochester, N.Y., had handcuffed and pepper-sprayed a 9-year-old Black girl—the latest in a string of high-profile use-of-force incidents—Davis got fed up with hiding his dreams from friends and began posting photos of himself on Facebook wearing body armor and training at the gun range.

"It's my career, not their career," he says. "I want them to realize that I'm going to make a change. That's what we need right now."

Research suggests he's right. Throughout history, police forces in the U.S. have been predominantly white and male. In 2016, the most recent year for which data is available, about 72% of local police officers were white and nearly 88% were male, according to the Bureau of Justice Statistics (BJS). About 64% were both white and male, and about 11% were Black—a profile largely unchanged since 1997. A study published in February in the journal *Science* found that Hispanic and Black officers use force less frequently than white officers, especially against Black people, evidence that diversity can improve police treatment of communities of color.

But nearly a year into the uprising against police brutality and systemic racism, when a traffic stop can still so quickly turn deadly for Black Americans, like Daunte Wright, it's harder than ever for police departments to recruit and retain officers, particularly those of color. Nationwide, fewer people are applying for the job, and more experienced cops are retir-

ing or quitting in droves, threatening public safety as major cities witness crime spikes.

"People are just resigning because they've had enough," says West Lafayette police chief Troy Harris in Indiana. "There's a cloud over law enforcement."

Harris' department, which serves some 86,000 people, saw a 75% drop in applications from July to December 2020 and had six officers retire or walk off the 50-member force last year. Of the 37 applicants that year, only one was Black, according to the chief. "If we can't keep up, it'll be a burden and a significant problem," says Harris, who worries he'll have to reassign community-outreach officers to fill patrol shifts.

In Aurora, Colo., where 23-year-old Elijah McClain died after police held the unarmed Black man in a choke hold, at least 87 people resigned, retired or were fired from the police department in 2020, compared with 54 the year before, according to the agency. Twenty more employees left the force in the first 40 days of 2021 alone—nearing the number for all of 2015—just as the city is experiencing a significant increase in major violent crimes, including assaults and robberies.

"There's no pretty picture down the road," says Los Angeles County sheriff Alex Villanueva. The sheriff says that homicides and assaults are "going through the roof" but that his agency is "probably the most understaffed" in the nation, with less than one deputy for every 1,000 residents. "It's pretty grim," Villanueva says.

**FROM 2013 TO 2016,** the number of full-time sworn officers in the U.S. dropped from roughly 725,000 to 701,000, according to the BJS. About 63% of police leaders surveyed by the Police Executive Research Forum (PERF) in 2019 reported a decrease in the number of people applying for police-officer positions over the past five years. In that time frame, 41% said their officer shortage has worsened. Job applications have plummeted about 50% in Seattle and 70% in Jefferson County, Colorado, the PERF survey found.

All that was before Floyd's death put police at the center of the largest sustained social-justice mobilization in modern U.S. history. The sense of crisis was compounded by the Capitol breach. At least 39 members of U.S. law-enforcement agencies from 17 states were found to have attended the rally, according to the Appeal, a news and analysis site. One of them was reportedly a top recruiter for the Kentucky state police. Among the Capitol Police officers, at least

### LOCAL POLICE OFFICERS

**72%**  
WHITE

**88%**  
MALE

2016 DATA

**28%**

Percentage of Black criminal-justice students who said family and friends would not approve of their being cops, in a 2018 survey

**701,000**

Number of full-time officers in the U.S. in 2016; there were 725,000 in 2013

BUREAU OF JUSTICE STATISTICS



six have been suspended with pay and 29 others are being investigated for their actions, officials said.

And although law enforcement is one of the few remaining portals to the middle class that does not require a college degree, the thousands of dollars charged by some police academies can be an obstacle, especially with no guarantee of a job.

Davis was fortunate to gain support from his family when he applied to Lincoln, but their warnings are in the back of his mind. "My mom always tells me, 'You're entering a Caucasian world,' and she just wants me to be careful," he says.

Davis is one of eight Black students—two of them women—in the academy's inaugural class of 11 students. One of the white students is Christopher Cade, a 37-year-old state parole officer who signed up for the \$6,000 course after seeing so many demoralized cops leaving the profession. "No one wants to do the job anymore," he says. It made Cade, a military veteran, want to fill their shoes. "I enjoy doing the right thing when nobody's looking," he says. "Not many people are willing to do that."

Lincoln University police chief Gary Hill hoped to attract students with that mentality and drive when he dreamed up the academy about three years ago

while working at the Cole County sheriff's department in Jefferson City. There, he came across interns from Lincoln University, his alma mater, who were eager to find an inclusive local place to learn about policing. "I thought, Lincoln has the resources, it has the students, the facilities. It would just be a great idea," says Hill, who left the sheriff's department to lead Lincoln's police force in 2016.

**DURING THE PANDEMIC**, nearly 75% of law-enforcement agencies altered recruitment and hiring practices, including canceling or adjusting polygraphs and physical-fitness assessments, according to a separate PERF survey of more than 140 agencies. In some cases, the changes succeeded in drawing applications. The Naperville police department in Illinois, which eliminated its \$45 application fee in order to appeal to low-income recruits, saw applications double at the peak of protests over Floyd's death. More than 850 hopefuls applied to join the force throughout the summer, according to Naperville police chief Robert Marshall. Of the 455 applicants who moved on to take a written exam, 34 were Black men and women, more than double the number in the previous round of recruits in 2018.

Tyrese Davis is a member of the inaugural class at the Lincoln University academy, the first police-training facility at an HBCU



**260+**  
Number of law-enforcement officers who died in the line of duty in 2020

NATIONAL LAW ENFORCEMENT OFFICERS MEMORIAL FUND

**63%**  
Percentage of police leaders surveyed in 2019 who saw job applications drop over the previous five years

POLICE EXECUTIVE RESEARCH FORUM

Jason Arres, the department's deputy chief, believes the applicants felt a "call to action," similar to what prompted him to leave his corporate career to become a police officer six days after the terrorist attacks on Sept. 11, 2001. "It's still a very noble profession," Arres says.

But unlike Naperville's, the overwhelming majority of agencies are struggling as more cops, hired during departmental expansions in the 1980s and '90s, reach retirement age. Traditional sources of new recruits, including the military and family members of current officers, are no longer filling the gap. And today's applicants, police chiefs say, are less inclined to work holidays, weekends and nights, or commit to a job that's getting harder and more dangerous.

"They want to live normally," says Benjamin Bliven, the police chief in Wausau, Wis. "We're human beings."

Police work is hard. Officers spend a great deal of their day dealing with social problems, including homelessness, mental illness and substance abuse. In tense encounters, their every move is recorded by body cameras or bystanders' phones. In 2020, more than 260 law-enforcement officers died in the line of duty, a 96% increase over 2019 and the most since 1974, according to the National Law Enforcement Officers Memorial Fund. More than half those deaths were caused by COVID-19. In 2019, the FBI says, 89 officers were killed on duty, including 48 who were gunned down or run over while making arrests, responding to disturbance calls or conducting investigations and traffic stops.

"It takes a special person at this point to say, 'Yeah, I want to do that,'" says police chief J. Darren Stewart in Stonington, Conn.

**AS A CHILD,** Ti'Aja Fairlee knew she wanted to become a police officer. She was drawn to reading crime and mystery books and was fixated on police cars, even though she had mostly negative interactions with law enforcement growing up in East St. Louis, Ill. Her father had multiple run-ins with police, who beat him, Fairlee says, and the officers who lived near her were "rude."

When Fairlee joined Lincoln University's police academy, some of her family members called her a "traitor," as did strangers on the street who saw her in her academy uniform. For a moment, the 20-year-old says, "I felt like I'm betraying my dad." But Fairlee thinks about the constant injustices that communities of color face daily and how she has never met a police officer who is both Black and a woman. As the Black Lives Matter movement exploded last year, she knew the profession needed more people who looked like her. "It kind of pushed me to do better," she says.

It's a sentiment shared overwhelmingly among students in Lincoln's academy. In 2014, when Davion Waters was a high school freshman, police detained

him, mistaking him for a robbery suspect in his first bad encounter with police. Waters says he was walking home from the library in St. Louis when two police officers pulled up in a patrol car, immediately handcuffed him and made him sit on the curb until they confirmed they indeed had the wrong person. Waters, 13 at the time, says he was "shaken up" by the incident. Later that year, he started an internship with the same police department that had detained him.

"It's about changing the whole culture," says Waters, now 22. "In my eyes, I don't think all officers are the same. I want to change that stigma."

In 2018, when Hill pitched the idea for a police academy to Lincoln University's new president, Gerald Jones Woolfolk, she greenlighted it on the spot. Hill then went to work securing the necessary state approvals and support from local leaders. When it was time to recruit students in the middle of 2020, Hill worried that societal upheaval might deter them from enrolling. The opposite happened. With just word-of-mouth advertising and some flyers, 27 students applied. Fourteen were not admitted because of financial and background-check issues, and two dropped out in January for personal reasons, Hill says.

The program runs 25 weeks, on evenings and Saturdays. Students learn how to shoot a firearm and when to use force, as well as how to respond to domestic-violence and child-abuse calls and how to deal with death encountered on the job. Hill says the academy steers away from the military-style teaching methods that traditional police academies have been criticized for using. He says that a chunk of the curriculum focuses on de-escalation strategies and that he has personally vetted the instructors, who are all local law-enforcement officers.

Recently, the students picked apart a seven-minute video of a police officer in McKinney, Texas, pushing a bikini-clad Black teenage girl to the ground at a pool party and kneeling on her back to restrain her. It's one of many now notorious police-force incidents that the class studies.

When Lincoln's seniors graduate from the academy on June 24 and pass the required state exam for a license, Hill says they'll have a leg up on competitors because of their college education, academy training and lived experiences.

"They need African-American cops," says India Stelzer, a 21-year-old academy cadet from Hayti, Mo. "I'm hopeful I'll be offered at least three jobs."

Hill hopes many of the roughly 100 other HBCUs across the nation will soon follow suit. However, many can't because of state laws that prohibit independent police academies from existing outside of official law-enforcement agencies; Washington State, for example, requires police recruits to go through its state-run Basic Law Enforcement Academy.

So far, Hill says he's working to open a branch



of Lincoln's police academy at Harris-Stowe State University, an HBCU in St. Louis. And following a 2020 executive order for racial equity in criminal justice, North Carolina's department of public safety established a paid internship program for HBCU students interested in going into law enforcement. In December, nine students from HBCUs throughout North Carolina completed the 12-week program, and an additional eight began a new internship rotation this February.

"We're forming a greater relationship with those HBCUs, because now we have more of a presence and they know who we are," says recruitment manager Dan Hill, who oversees North Carolina's program. "They can see that we are a viable career opportunity for their students."

Still, without changes in the way communities of color view police, some of Lincoln's students worry about their chances for success. Stelzer, who has four relatives in law enforcement, is concerned about being the only Black officer in her department and facing racism in and out of work. "It's honestly scary," she says. Fairlee is fully expecting this, saying that if she enters the field with that mindset, "it won't hurt as much" when it happens.

Since he stopped keeping his career goals a secret,

Tyrese Davis hasn't received as much negativity from his friends as he thought he would. Half the reactions have been supportive, and he's relieved the other half have just been ambivalent. "I didn't really have to be ashamed of it anymore," he says.

He knows the road ahead will not be easy. Davis, who grew up in a predominantly Black neighborhood in Baltimore, says he experienced racism for the first time only in 2017 after he left to attend college in predominantly white Garden City, Kans. There, he says, he was followed to the checkout line while shopping at Walmart and has been pulled over by police for allegedly playing music too loudly in his car. "It was really a shocker," he says. The experiences left Davis feeling less than human and uncomfortable in his skin.

After the events of 2020, he says, he debated whether he still wanted to enter law enforcement, but Floyd's death was the "gasoline to my flame." He thinks about all he's accomplished already. Most of his high school friends didn't go to college, but in May, Davis is set to graduate from Lincoln, where he's made the dean's list multiple times and plays offensive tackle for the school football team on a scholarship.

"I broke that recurring cycle," he says. "One young Black man can empower many other ones." □

*Lincoln University police chief Gary Hill prepares recruits for firearms training at a shooting range in Missouri on March 6*



# GOING IT ALONE

*Being single was just a part of their lives before the pandemic.  
Then it became the defining one*

BY BELINDA LUSCOMBE

“I’M A TOUCHER AND FLIRTER, AND I DON’T CARE who you are,” says Maggie Duckworth. “I will talk to a log.” Before the arrival of COVID-19, Duckworth had a pretty sweet life. An events coordinator for a waste-management company in Chattanooga, Tenn., she traveled frequently for work and for fun. She had a large group of friends, a loving family she could visit in Atlanta and a cool apartment all to herself.

In December 2019, Duckworth, 43, was on a date when she snapped her Achilles’ heel. She was told to keep off her foot and had to be confined to her home while it healed. Just as she was ready to go out again, the pandemic hit. (However long the stay-at-home restrictions have been for you, they have been about four months longer for Duckworth.)

The torn tendon was painful, but people could still visit. The isolation of the pandemic was worse. “I wasn’t having any interactions with people; I wasn’t touching anyone; I wasn’t getting to tell my funny stories,” she says wistfully. “I didn’t have anyone to hug—or even high-five—for months.” Duckworth clearly remembers her last embrace before social-distancing measures were put in place. Finally able to walk with a cane, she went out for drinks with two friends, and they all went back to her place. “We hugged, and we were like, ‘O.K., we’ll hug in a year,’” she says. “We knew that was the last great night out.”

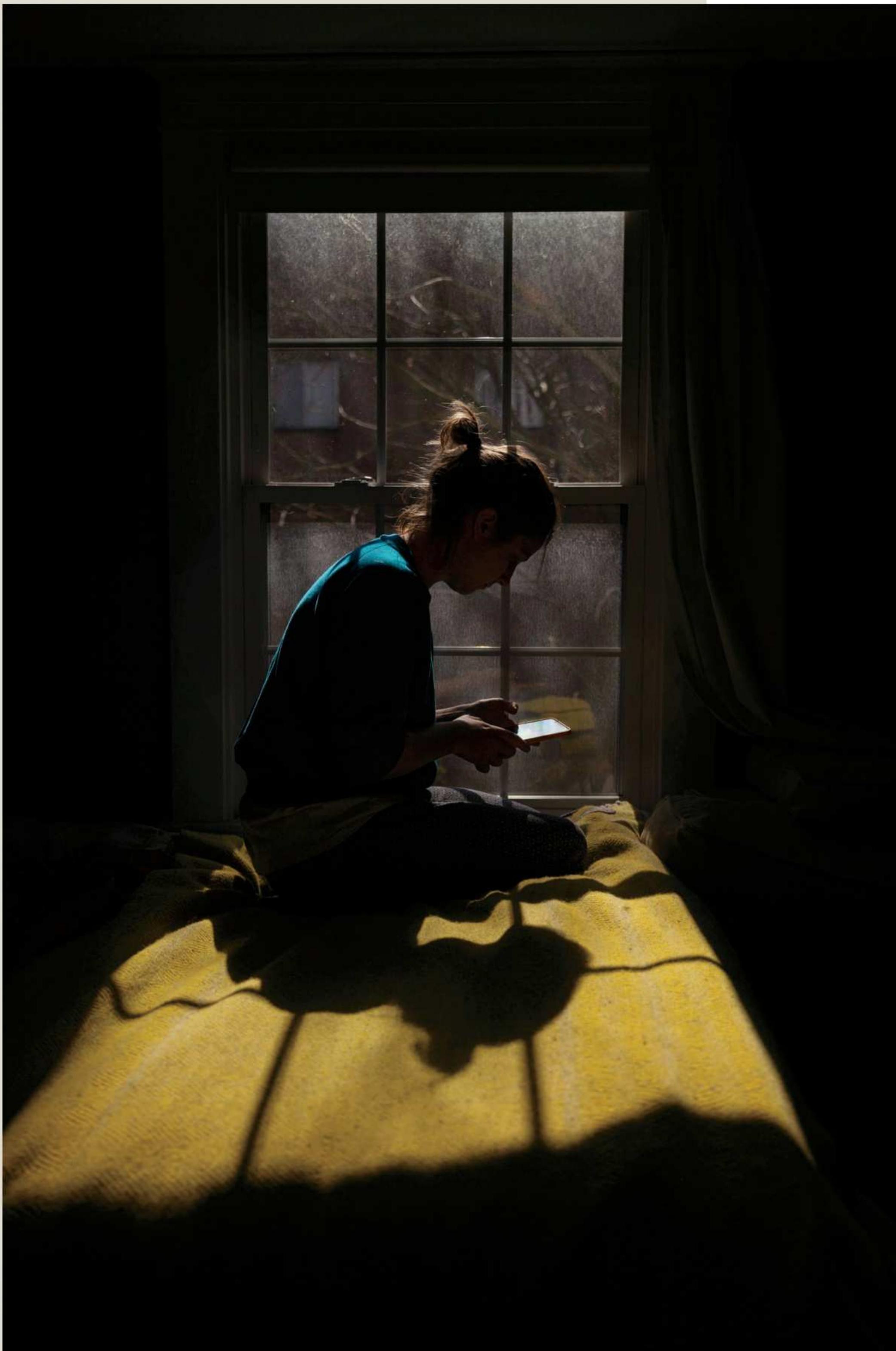
In May, Duckworth was laid off. She doesn’t blame her employer. “Who needs an events coordinator when there are no events?” she says. But that intensified her isolation. She was popular at work

and had run the women’s group. “If someone wrote me and said that they were struggling, I could send them flowers,” she says. “It gave me this really great community.” She occasionally went for socially distanced walks with a neighbor or sat on someone’s porch for drinks. Nevertheless, she lay awake at night, worrying about her rent and her health. She began to feel an old adversary, depression, creeping up on her. When a therapist’s office told her its earliest appointment was several weeks away, she burst into tears. (The office called back as soon as it had a cancellation.) For the first time in her life, she filled a prescription for antidepressant medication.

At the dawn of 2020, about a quarter of American households were made up of people who lived alone. According to the U.S. Census, the number of households consisting of only one person has jumped 10% in the past 20 years to an all-time high of 28.4% in 2019. Partly this is because people are marrying later in life (the average age of first marriage is nearing 30). And partly, sociologists believe, it has to do with money. Wealthy countries generally have a higher proportion of people who can afford to live solo. At the same time, many people don’t want to get married and raise families until they feel financially secure. In 2017, 14% of Americans told Pew Research they had no interest in getting married.

While there’s still pressure to pair up, the notion of the sad unpartnered soul has largely been banished. Single people are no longer denied such societal goodies as a full social calendar, an active sex life

## SNAPPING SOLITUDE



*When the pandemic hit, photographer Eva O'Leary found herself living on her own in her central Pennsylvania hometown. She navigated her isolation through a series of self-portraits.*

PHOTOGRAPHS BY EVA O'LEARY

# Society



**Maggie  
Duckworth**

*"The more time I've had alone, it's made me a little bit out of sorts. I've just been really anxious."*



**William  
Theriac**

*"If I were to use a metaphor, I'd say I thought I was living on a continent; now I feel like I'm living on an island."*

or a home of their own. They can take spontaneous trips, volunteer, indulge in their hobbies and go on as many dates as they feel up for. They can hang out on short notice with work buddies, neighborhood buddies, college buddies or extended family. They can spend their money and time as they wish. They can be there for friends who need them in a way those with families cannot.

The pandemic changed all that. It amped up the things that are lonely and stressful about being single and muffled the fun stuff. Mathematician-philosopher Blaise Pascal was exaggerating when he wrote in 1654 that "all of humanity's problems stem from man's inability to sit quietly in a room alone." (Either that or he didn't predict Netflix.) But even with the Internet's distractions, many single people have had more solitude in the past year than they know what to do with. As the months passed, what was once a feature of their lives became the dominant force.

While those with kids and jobs have been run off their feet and those with spouses have been forced to plumb the depths of their patience and their conversational well, those who don't live with anyone tell TIME they have had a reckoning with themselves, their choices and the direction of their lives. We spoke to five of the more than 35 million Americans who live alone, in their 20s to their 50s, in the fall and again in the spring. Some have moved, many have started therapy or taking medication, some have recommitted to finding a companion, prioritizing their social lives or strengthening bonds with family. While being single is not a uniform experience, their stories share several themes: Being single is quite different from being alone. There may be a limit to the utility of a fully remote workforce. And as sophisticated a species as we humans are, we remain an animal that prefers to herd.

**"THERE'S A REALLY ABRUPT MOMENT** when the Zoom call ends, and you go from this feeling of 'Oh, it's me and six people hanging out,' and then it's completely silent in the apartment," says Erin Tye, 30, of her pandemic social gatherings. "There isn't even the train ride home with music to transition between those mental states." Ten months before the pandemic struck, Tye moved out of the place she shared with her ex-boyfriend to one of her own. She had given herself some time off from dating, and enjoyed it: girls' dinners, happy hours, birthday parties, impulsive nights out. She was going to restart the engines at the end of February, "which it turns out," she says, laughing, "was just before the pandemic hit."

In those early days, single and nonsingle folks alike turned to creative pursuits to fill the time, but for those with partners or families, the activities usually had a social dimension. Tye took to baking but was often left with a whole cake to herself. "Cooking is an act of service, an act of love," she says. "I stopped because I felt like, 'I'm just doing this for me.' It kind of sucks." She hasn't baked in months.

Others, too, reported a spike in creativity that faded. Duckworth wrote 15-page letters to friends and practiced her ukulele. William Theriac, who had recently moved to Minnesota and hadn't quite found his social scene, perfected a 25-ingredient borscht and *kulebiaka*, a Russian fish pie. Joel Pritchow, newly separated from his wife, wrote stand-up comedy. One of his gags was about how there had been so little time to make friends between his separation and the pandemic that "it would've been nice if she decided to leave a little sooner."

Tye also threw herself into her work as a content strategist at an ad tech platform. "The workday just bleeds, it sort of overruns its margins in a way that it didn't used to," she says. "I can make dinner and get back on and work until midnight." That experience was familiar to many even before the virus, but it got amplified; a July study out of Harvard Business School estimated that employees were working an average of 48 minutes more a day during the pandemic. Employment became the scaffold against which many people leaned for some stability; when they didn't know what to do, they did their jobs. Unusual work hours, of course, were not limited to single folks—companies like Microsoft found their employees working more often at night, on the weekend and through lunch—but for those who lived alone there was often no reason to step away.

Some found ways to artificially delineate their work and home lives. Lucy Anguiano, 54, a marketing and promotions manager for a media company and a lifelong workaholic who partly attributes her singleness to her love of her job, had formerly observed a strict labor demarcation between her Manhattan Beach, Calif., apartment and her L.A. office. "I actually never brought my laptop home," she says. "I would work late and I would not leave the office until everything was done to my satisfaction. I always felt my home was sacred." After her office closed, she says, "It felt like a violation of my life that when I walk in, the first thing you see is the big computer." She decided to keep her office confined to the dining-room table.

Still, Anguiano had trouble adjusting to her new reality. Normally very sunny, she had crying jags, especially after work when there was nobody to talk to. She went for long walks and began video-chatting with her family in Guatemala. But she was worried about losing her job and fell into a depression. In June, she started seeing a therapist via Zoom. "The

situation brought out so many things that I knew I could not fix on my own,” she says. “I needed help.”

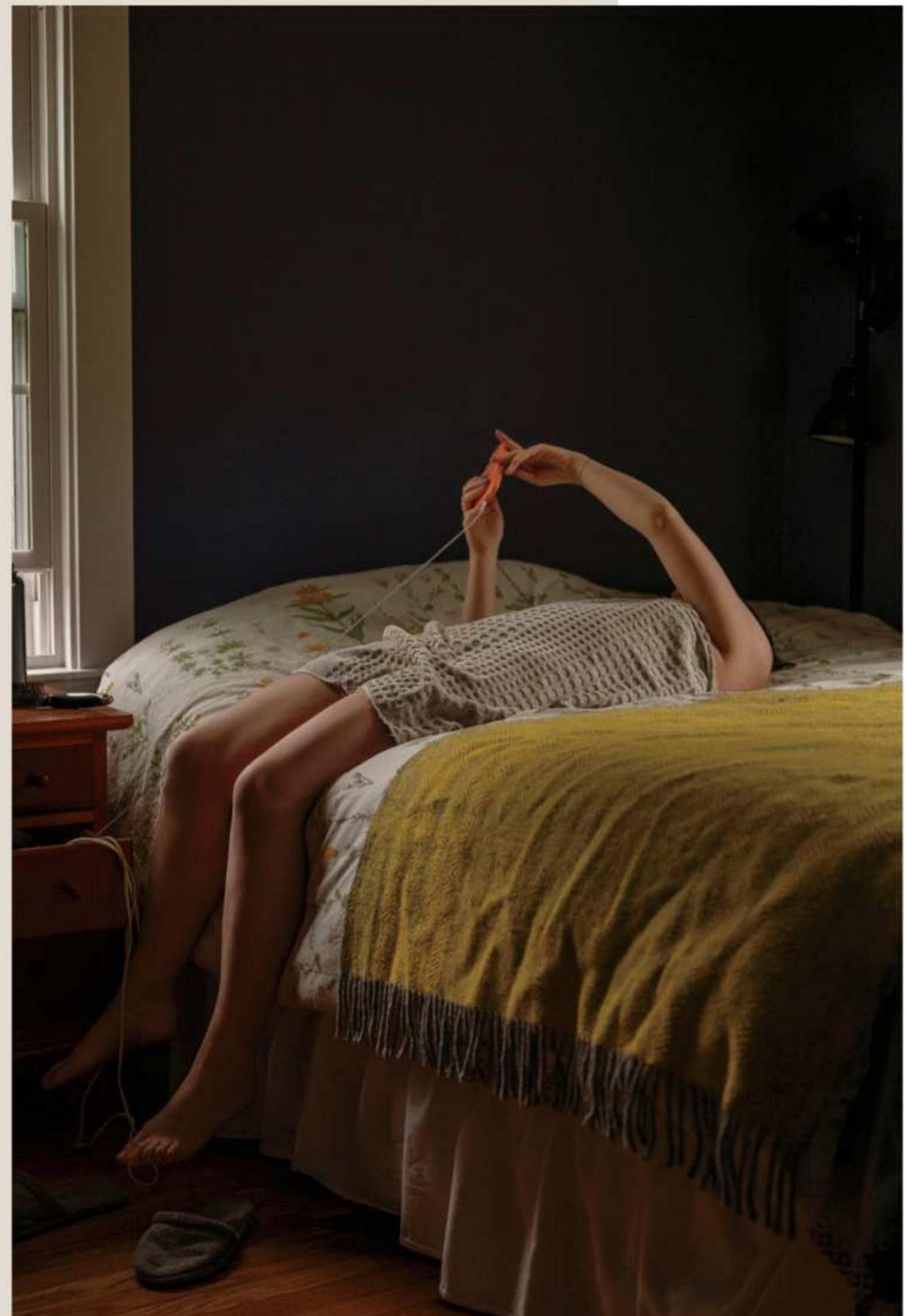
This would not be surprising to those who study social isolation. Loneliness has long been believed to increase people’s vulnerability to such mental disorders as depression, anxiety, chronic stress, insomnia and even dementia. After a lockdown in Hong Kong, an August 2020 study there found that two-thirds of respondents to a questionnaire reported clinical levels of depression, anxiety or stress, and more than a fifth showed signs of psychosis risk. A July 2020 study out of Israel found that older people were no more likely than normal to be depressed or anxious during the pandemic—unless they were lonely.

Of course, Anguiano, Tye and Duckworth all had friends and family whom they could call up anytime. And they made the most of the social options they had. Tye celebrated her 30th birthday with a picnic instead of the big bash she had planned. She signed up with a wine club and Zoomed a lot. Anguiano joined a Saturday-night online movie-and-wine group, and on Valentine’s Day hand-delivered goodie baskets to her fellow members’ doors, with a card that thanked them “for being my date every Saturday.” But seeking companionship can require an admission of vulnerability that not everybody (even the recently separated) is prepared to make. “I’m 45; all of my friends are married, and they have kids,” says Pritchow. “It’s not easy to say to someone, ‘Hey, I’m alone on Tuesday night, and I really don’t want to be. Can somebody come over and hang out with me for a couple of hours?’”

Pritchow, who works in IT for a health care company, was born with a deformed aortic valve, which meant that catching the virus could be fatal. So he had to keep his social circle small. Besides, some of his friends told him their wives were too worried about their kids or elderly parents to allow hanging out at his place. After six months, he says, he ran out of home-improvement projects, his baseball-card-collecting habit got too expensive, and his dog was sick of being walked. “There’s time after work where I just go lay down for a while, because I’m like, ‘What am I gonna do for the next seven hours?’” He’d been seeing a therapist since his split, but after a few months alone, he started taking an antidepressant.

None of the single people blame their married friends for not checking in on them more; they have sympathy for the grind of homeschooling or never seeing anyone but your partner. “My married friends with kids are saying, ‘Yeah, my wife and kids are driving me nuts. You’re so lucky you just get to sit there and play video games,’” says Pritchow. “And I’m like, ‘Hey, at least you got people to talk to.’”

For Theriac, 26, an IT project manager at a construction company, anxiety would hit him, and he couldn’t tell why. “I’m not behind on anything. I’m not worried about anything,” he says. “And then I’m

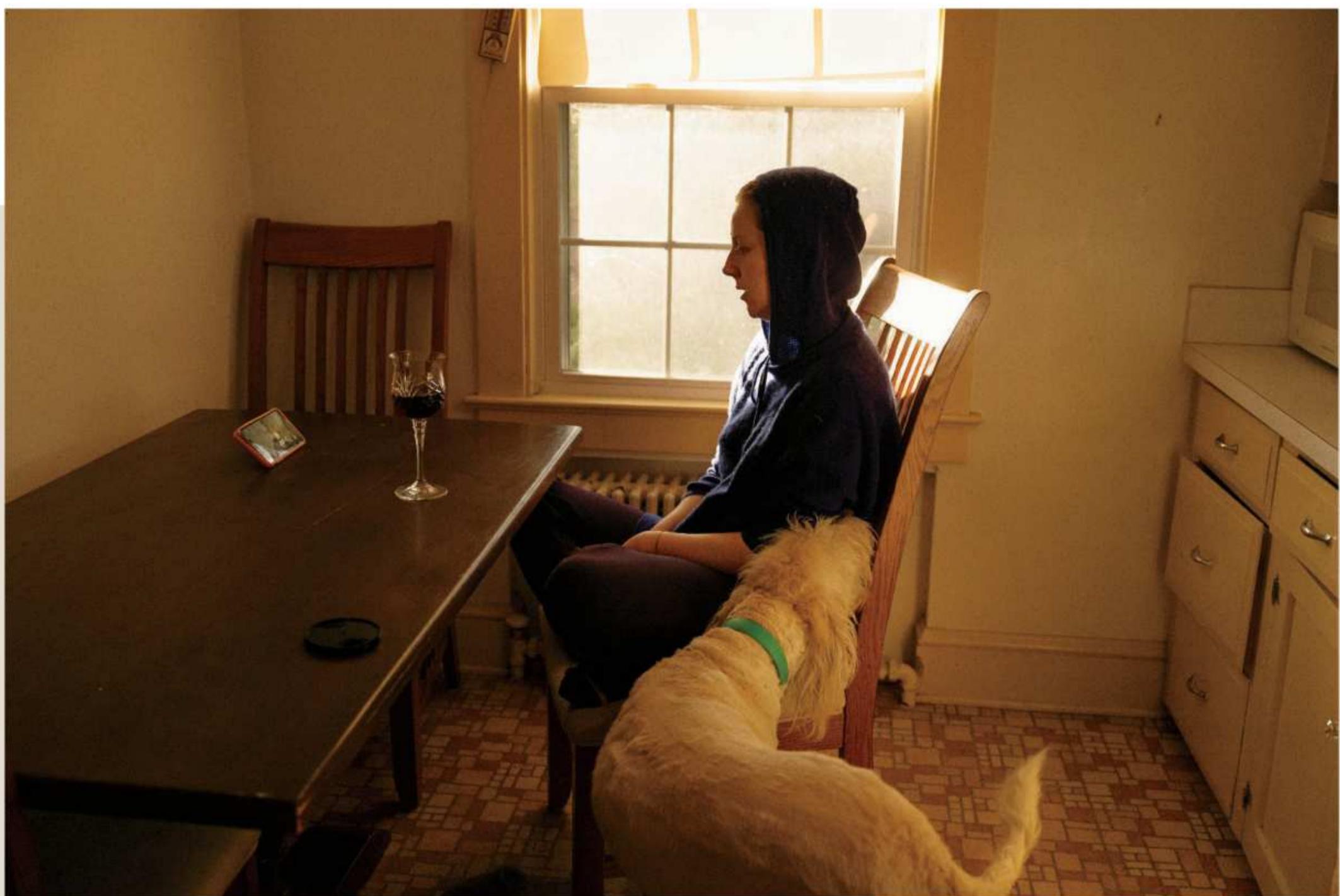


#### IN THE STILLNESS

*After moving nonstop for several years, O’Leary was forced to stay put during lockdown. Setting up her camera became a way to endure moments that felt intolerable.*

## A COPING RITUAL

O'Leary thought the photos would be a private way to process the emotional intensity of the experience.



like, ‘Oh, it’s because I don’t have any social plans.’” Theriac moved to Minneapolis just a few months before George Floyd was killed. He was unemployed at the time, so he would check the news often, which added to his stress. He tried to grab some sleep during the day because the helicopters and popping tear-gas canisters kept him awake at night. “I feel like emotionally I’m dealing with three or four national crises at once, and that’s just too much to do alone,” he says. His mother stayed with him at various times, but there wasn’t enough privacy. As friends moved away, “I realized I’m nobody’s No. 1 priority,” says Theriac. “It was that moment where it just got super intense, and I was like, ‘This is extraordinarily lonely.’”

Anguiano says she’s been surprised by who among her friends has looked out for her and who has disappeared. “I try not to take it personally,” she says. “I don’t know what they’re going through.”

**IN WAYS BOTH BIG AND SMALL,** the pandemic has given these five single people ample time to reflect not just on how they got to where they are but on what direction they want their lives to go. The long months on their own sparked in most of them a realization that although living alone had its merits, they didn’t want to do it forever.

Just before Christmas, Theriac took a risk and moved in with a person he had never met. “The restless loneliness is gone, and I feel more calm, settled and less anxious about every COVID-statistic upturn,” he says. Duckworth went back to her parents’ house in Atlanta after her lease ran out. It has been better than she feared. “My worst-case life scenario was being single in my early 40s, living in my

childhood home. I really thought I’d be suicidal,” she says. “But this has actually been a huge blessing, and I don’t feel depressed at all.” She has a car. She formed a quarantine bubble with her nephew, sister and brother-in-law. Recently her father had to be hospitalized, and the family has told her they would never have managed without her.

Tye also moved to her parents’ house, in Florida, but returned to her apartment in New York City after three months. The period of enforced singleness has made her rethink her inattention to her dating life. “It has just reinforced what the actuality of being single is,” she says. She hopes to “stop giving myself excuses for not going out and talking to people and not being on apps.” Pritchow has stayed put, but is seeing someone—carefully, mindful not just of the pandemic but also that he might have gotten married too fast twice before. He has been vaccinated, and as restrictions have lifted in Washington State, they’ve been able to have some dates at restaurants.

At first glance, Anguiano’s life seems unchanged—same job, same home—but she feels transformed. “I learned so much about me,” she says. “It’s just ridiculous, the amount of self-reflection—like a huge mirror that I had to look at. It was not a one- or two-day process, and I think that’s the reason why we don’t take the time to do it.” She realized she had been ignoring a lot of needs amid the bustle of her life. She was not making time for the things that brought her the most joy: her family, her friends, other people. When the pandemic is over and more offices open up, Anguiano will be eager to go back to hers. But she’s never going back to being the person she was before. □

# CLIMATE IS EVERYTHING

→ As the world emerges from the COVID-19 pandemic, it's becoming clear: in every aspect of what comes next—how we plan, build, sell, educate, legislate, move, create—the shared ingredient is addressing climate change

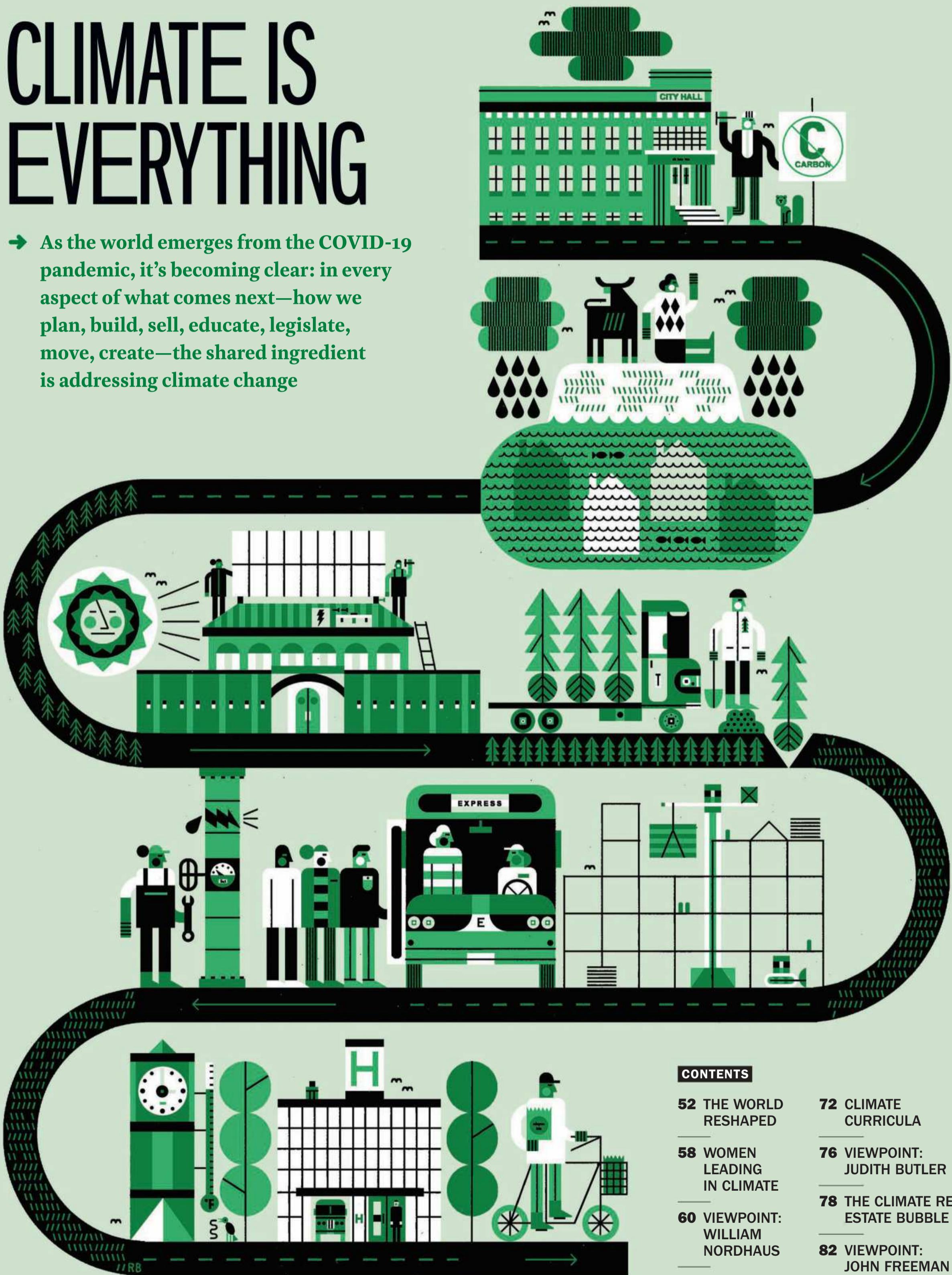


ILLUSTRATION BY  
RAYMOND BIESINGER  
FOR TIME

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# FORCE OF NATURE

The pandemic remade the economy.  
Now, it's the climate's turn

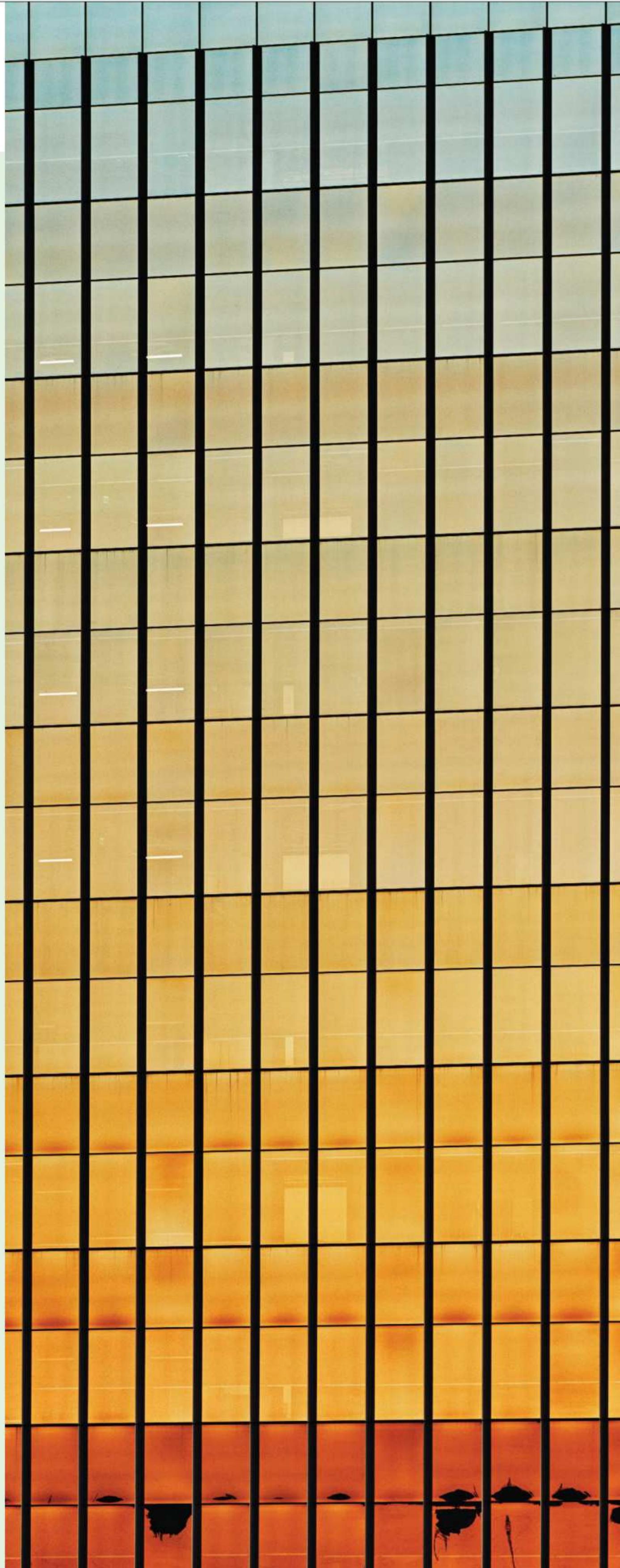
By Justin Worland

ON HER THIRD DAY AS THE Secretary of Housing and Urban Development, Marcia Fudge phoned the White House. She had taken over an agency with a role to play addressing a range of crises as the lack of affordable housing in U.S. cities has left hundreds of thousands homeless and millions more in financial straits. She connected with Joe Biden's climate team. Fudge and Gina McCarthy, Biden's national climate adviser, talked about addressing climate change and the affordable-housing shortage at the same time. Three weeks later, the Administration announced plans to provide for more than 1 million resilient and energy-efficient housing units. "People are actually, from every agency, knock-

ing on our doors," says McCarthy, "wondering how they can be part of what is essentially a hopeful future."

From her perch in the West Wing, McCarthy has been charged by Biden with overseeing a dramatic shift in the way the U.S. pursues action on climate change. Instead of turning to a select few environment-focused agencies to make climate policy, McCarthy and her office are working to infuse climate considerations into everything the Administration does. The task force she runs includes everyone from the Secretary of Defense, who is evaluating the climate threat to national security, to the Treasury Secretary, who is working to stem the risk that climate change poses to the financial system.

The approach "affords us the opportunity to be more than greenhouse-gas accountants," says Ali Zaidi, McCarthy's deputy. "We can tackle the breadth of the climate challenge and the opportunity if we map the intersections with housing policy,





and the intersection with racial justice, and the intersection with public health.”

For decades, the idea that climate change touches everything has grown behind the scenes. Leaders from small island countries have pleaded with the rest of the world to notice how climate change has begun to uproot their lives, in areas from health care to schooling. Social scientists have crunched the data, illuminating how climate change will ripple across society, contributing to a surge in migration, reduced productivity and a spike in crime. And advocates and thinkers have proposed everything from a conscious move to economic degrowth to eco-capitalism to make climate the government’s driving force.

Now, spurred by alarming science, growing public fury and a deadly pandemic, government officials, corporate bosses and civil-society leaders are finally waking up to a simple idea whose time has come: climate is everything. It’s out of this recognition that the E.U. has allocated hundreds of billions of euros to put climate at the center of its economic plans, seemingly unrelated activist groups have embraced environmental goals, and investors have flooded firms advancing the energy transition with trillions of dollars. “The world is crossing the long-awaited political tipping point on climate right now,” says Al Gore, a former U.S. Vice President who won

◀  
**AN OFFICE  
PARK ON THE  
OUTSKIRTS  
OF AUSTIN**

the 2007 Nobel Peace Prize for his climate activism. “We are seeing the beginning of a new era.”

The course of climatization—the process by which climate change will transform society—will play out in the coming years in every corner of society. Whether it leads to a more resilient world or exacerbates the worst elements of our society depends on whether we adjust or just stumble through. “We are at the point where climate change means systems change—and almost every system will change,” says Rachel Kyte, dean of the Fletcher School at Tufts University and a longtime climate leader. “That understanding is long overdue, but I don’t think we know exactly what it means yet. It’s a moment of maximum hope; it’s also a moment of high risk.”

**THE BASIS** for human civilization was laid roughly 10,000 years ago when, after tens of thousands of years of unpredictable weather, the earth’s climate stabilized: weather extremes became more manageable, and humans began to practice agriculture. The global population grew from fewer than 10 million people 10,000 years ago to more than 7.7 billion today. We have a buzzing global economy measured in dollars and cents, but our economic system has failed to account for the role a stable climate played in creating it.

For decades, scientists, activists and economists

have warned of growth without concern for the consequences. Simon Kuznets, the Nobel Prize-winning economist who conceptualized GDP, warned in the 1960s that “distinctions must be kept in mind between quantity and quality of growth, between its costs and return.” Gore cautioned in his 1992 book, *Earth in the Balance*, that humans need to make the “rescue of the environment the central organizing principle for civilization” or risk losing everything. And in 2006, *The Stern Review*, a groundbreaking report from a group headed by former World Bank chief economist Nicholas Stern, found that climate change could drive a 20% decline in global GDP. Still, climate change remained a marginal concern for most.

Over the past three years, that has begun to change, at first slowly and then suddenly. In 2018, the U.N. climate-science body published a landmark—and chilling—report warning of a looming catastrophe if the world didn’t accelerate the pivot to a low-carbon economy. Protesters took to the streets around the globe. First in Sweden and then on the global stage, Greta Thunberg decried the pursuit of growth without concern for the environmental consequences. In the U.S., the Sunrise Movement, a youth activist group, called for a Green New Deal that would put climate at the center of the American economy, melding action on climate change with progressive priorities. When COVID-19 hit, the climate conversation at first took a back seat as hospital beds filled. But in the midst of the crisis, interest seemed only to grow as the pandemic reminded people of the risk of ignoring

### BIDEN’S \$2.65 TRILLION JOBS PLAN



SOURCE: COMMITTEE FOR A RESPONSIBLE FEDERAL BUDGET

science and the world’s interconnectedness. Ahead of the U.S. presidential election, polls showed American voters more concerned about climate change than ever before, and as the pandemic devastated economies, leaders around the world promised to rebuild with climate change in mind. “People are suddenly reflecting: What kind of society, what kind of world, what kind of economy are we living in?” says Achim Steiner, head of the U.N. Development Programme. “Climate change suddenly has become a vehicle of green recovery.”

Many countries have yet to match the rhetoric with action. A February report from the U.N. found that emissions would decline just 1% by 2030 with nations’ commitments, though that estimate notably didn’t include countries like the U.S. that had yet to share their plans. But the understanding that halting warming will require considering climate across the economy is now all but universally accepted on the global stage. Unthinkable just a couple of years ago, political leaders have bet their countries’ economic futures on climate-fighting measures. “Action on climate is not only necessary for the future of our lives and livelihoods,” says Stern. “Climate action is the main engine of growth; it’s the growth story of the 21st century.”

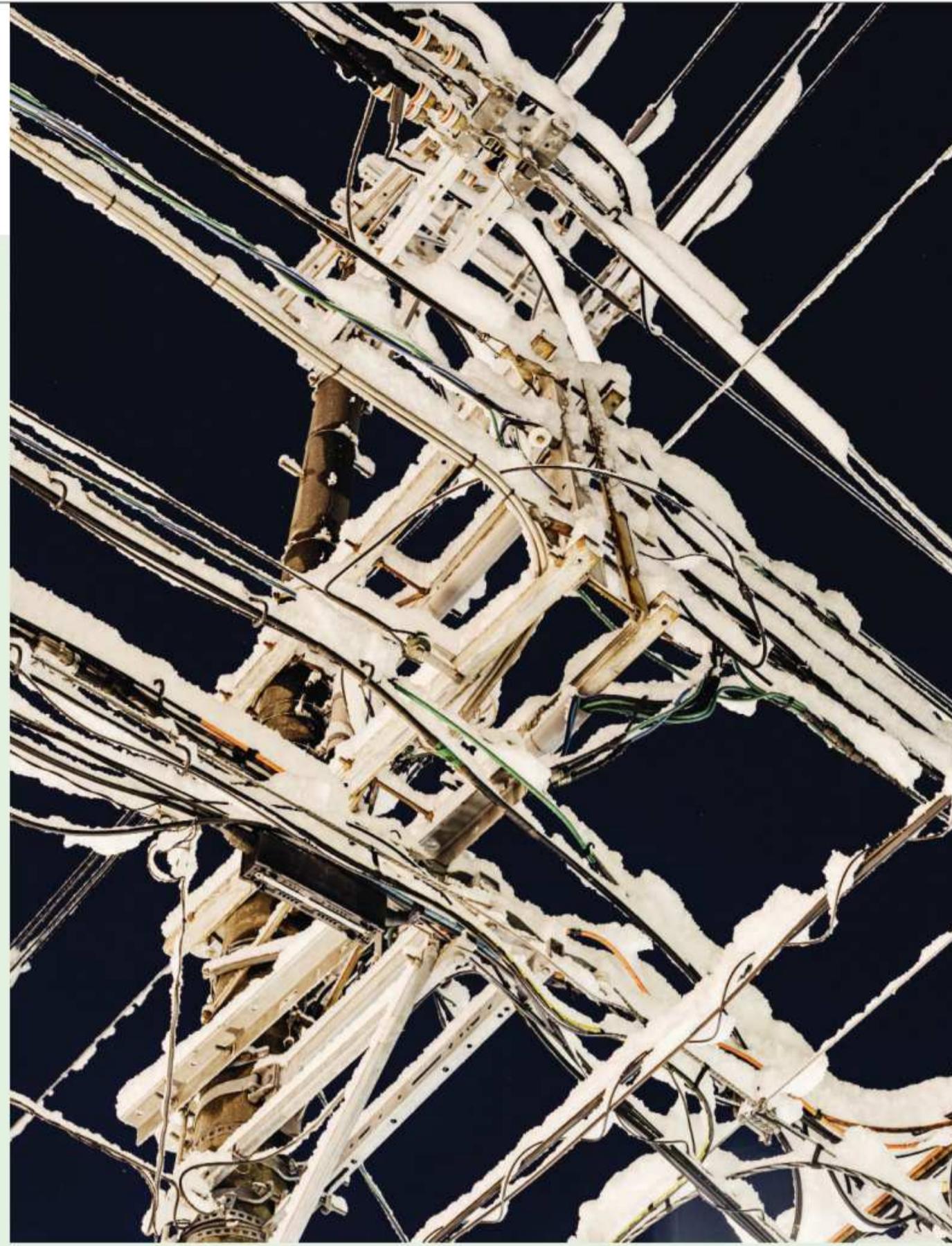
There is no doubt that the



sharpest turnaround is in the U.S., where a President who denied climate change was replaced by one who has made it an organizing principle of economic policy. The Biden Administration’s proposed \$2.65 trillion infrastructure package, intended to lift the U.S. out of its COVID-driven recession, calls for \$174 billion to “win” the electric-vehicle market, \$35 billion for climate-related research and development, and \$100 billion to advance clean energy on the electric grid. Even aspects of the plan that seem unrelated to climate—roads and bridges, housing and broadband—have a climate angle. Transportation infrastructure will be built with resilience to climate risks, new affordable housing will be energy-efficient, and broadband will aid low-carbon industries. More than half of the spending is “clean

**‘Climate action is...  
the growth story  
of the 21st century.’**

—NICHOLAS STERN, ECONOMIST



and climate-friendly,” according to a World Resources Institute analysis.

Crucially, a slew of initiatives apart from the infrastructure package seek to address the economic costs of climate change. Flood-insurance premiums are set to rise to reflect flood vulnerability. Financial regulators have begun pushing new rules to require companies to disclose climate risk. In a far-reaching move, the Administration is calculating a new figure to represent the economic cost of each ton of greenhouse-gas emissions. That figure—which could double the level set by Obama—will inform government spending, requiring the rejection of some programs in which the climate costs outweigh economic benefits. “The output of good economic policy is good climate outcomes,” says Zaidi.

↑  
**LEFT:** A TRAFFIC  
INTERSECTION IN SEOUL;  
**RIGHT:** SNOW-COVERED  
POWER LINES IN KYOTO

In the E.U., top officials recount awakening to the need to embrace climate change as a development framework while they prepared for the 2015 climate negotiations that delivered the Paris Agreement. As the European Commission—the bloc’s executive body—searched for a path to eliminate the E.U.’s carbon emissions, officials convened a process in which each country dug into its own emissions. They concluded that to cut emissions on the scale required meant incorporating climate across all facets of government. “It permeated down from the top governmental level to all other departments, to the societies, to the industrial stakeholders,” says Maros Sefcovic, a vice president of the European Commission who ran the process.

Five years later, the COVID-19 pandemic has given the E.U. the perfect

opportunity to accelerate the remaking of its economic agenda with climate at its core—what Sefcovic calls the “new economy of the 21st century.” The European Commission framed its pandemic-relief program around a so-called Green Deal that aims to invest hundreds of billions of euros in everything from zero-emission trains to growing renewable-energy capacity. But its true aims are more ambitious than any line item. “If you want to succeed, you have to successfully transform all sectors,” says Jeppe Kofod, Denmark’s Foreign Minister. “I call it a climate union.” A successful centering of climate would place the E.U. at the center of the global economy, setting standards for the world.

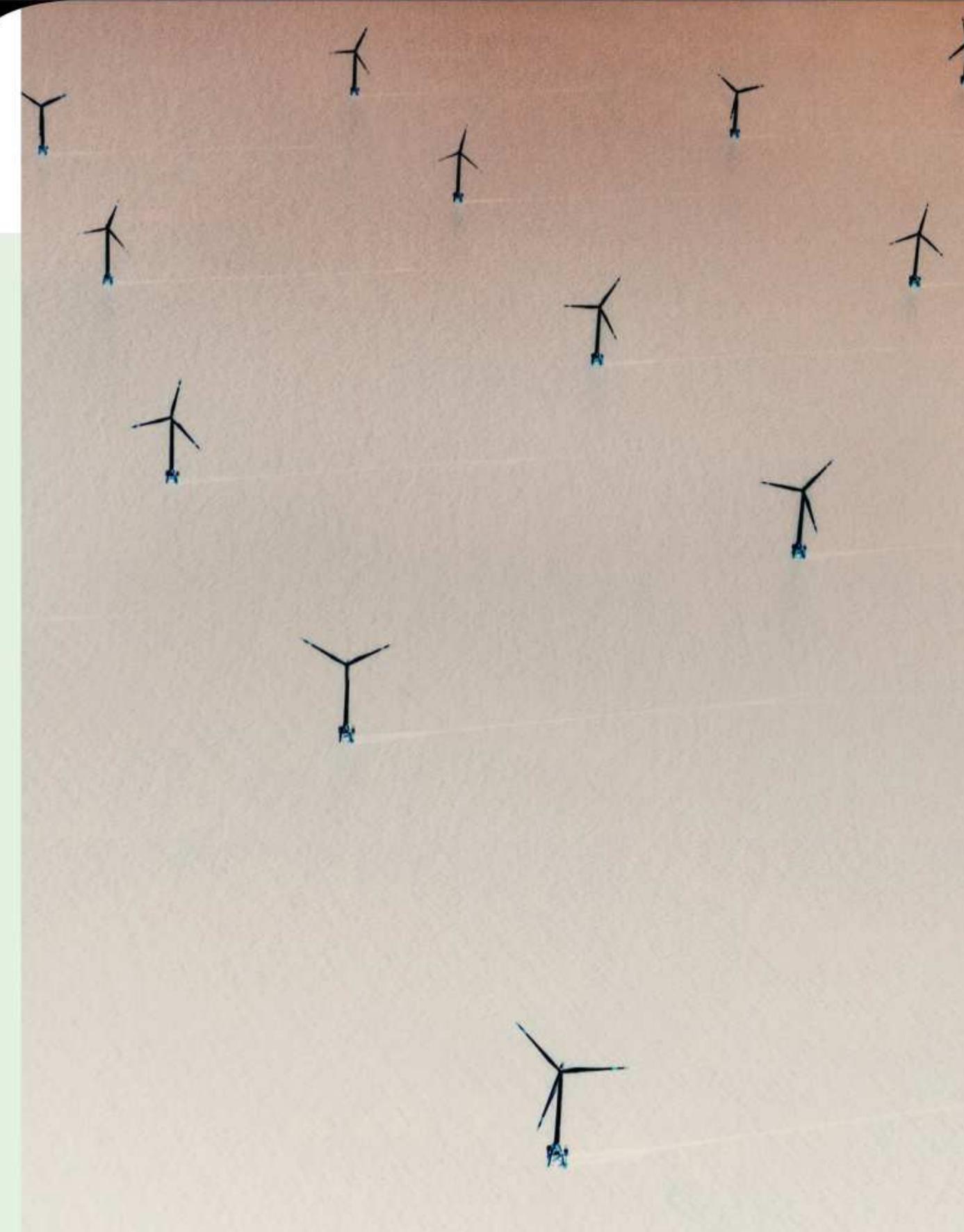
Still, the climatization path is not universal progress. Countries can simultaneously invest in a clean economy and continue to prop up polluting industries. In China, the world’s largest emitter and second largest economy, officials have made the transition away from high-carbon industries central to development, spending hundreds of billions of dollars to build manufacturing capacity for electric vehicles, solar panels and other clean-energy technology. Recently, it has focused on growing services and the Internet economy—rather than carbon-heavy industry. Still, the country continues to finance fossil-fuel development abroad, potentially leaving debtor countries stuck with coal plants and oil pipelines.

These differing approaches to climatization have created a new vector for collaboration as well as conflict. One country’s efforts to reduce emissions matter only if the whole world

moves, and so as countries prioritize climate change in their own economic planning, pressure has grown to ensure others follow suit. The E.U. has begun the process of linking its climate and trade agendas with a tax on high-carbon imports, penalizing countries slow to act on climate change. Biden has elevated the issue as a diplomatic priority. "Every dialogue that we have, we're trying to drive ambition," says John Kerry, Biden's climate envoy and a former U.S. Secretary of State. And many of the multilateral financial institutions that fund economic programs in developing countries have required projects to adapt to new climate realities while addressing other needs. "If we are going to bail out a private-sector organization or company, they should commit to using those resources in a way that is climate-friendly," says Ngozi Okonjo-Iweala, the head of the World Trade Organization and a former Nigerian Finance Minister.

The intertwining of the economy and climate change promises to shape global politics and society for the foreseeable future. "This is going to be the topic that dominates everything," says John Podesta, the longtime political operative who served in both the Clinton and Obama administrations. "The effects on the natural world that result from climate change are going to be central to both the political conversation and how we organize ourselves as a society for at least the next 30 years."

Since World War II, the pursuit of economic growth has driven politics. In democracies, citizens look at their bank accounts as a proxy for quality of life, rewarding



politicians in boom times and voting them out when times get tough. In authoritarian countries, slow economies have doomed regimes. Political consultant James Carville, who advised President Bill Clinton, put the dynamic simply, before the 1992 election: "It's the economy, stupid." People will undoubtedly continue to prioritize their own bottom line—thinking about jobs, investments and retirement. But as the effects of climate change increasingly shape economic outcomes, we may soon be saying, "It's the climate, stupid."

**WHEN STEVE SCHRADER** began pitching his company's latest electric truck to potential clients, he focused on the bottom line: a Workhorse rig would save \$170,000 per vehicle over 20 years. But his potential customers wanted to hear about emissions. In



LEFT: AN OFFSHORE WIND FARM NEAR SHANGHAI; RIGHT: URBAN SPRAWL IN LOS ANGELES

a survey, customers ranked the vehicles' environmental impact as their top concern. "That kind of surprised us," says Schrader, Workhorse's chief financial officer. "We thought people kind of paid lip service to it, but apparently it's very important to them."

Though climatization is just beginning, its effects are already spreading. Companies are scrambling to remake supply chains, unions are bracing for a change to the labor market, and activists are grappling with how climate change will reshape their long-standing missions. For these groups and many others, this adjustment brings enormous promise as climatization offers an opportunity to rethink the way things work for the better. But there's no guarantee, and the uncertainty brings peril too.

That's especially true in the transportation sector.



Throughout the Trump years, automakers fought Obama-era fuel-efficiency regulations. Within a few months of Biden's election, automakers dropped their fight and committed to going electric. This has far-reaching implications for an industry that employs close to a million workers manufacturing cars in the U.S. and millions more selling and repairing them. Electric vehicles look largely the same as their gas-powered counterparts, but they are different machines. Auto companies have searched urgently for software engineers, while internal-combustion-engine experts have had to pivot. Unions and the local communities that the industry has called home for decades are now bracing for the transition. On the one hand, climatization for the auto industry will bring new investment.

On the other, workers may be displaced because electric-vehicle manufacturing is less labor-intensive.

Similar transformations are happening across the economy. Driven by a mix of government pressure, client sentiment and investor demand, companies are rethinking operations to adapt to a climate-changed world. Construction firms have begun adapting buildings to protect against climate impacts while grappling with pressure to build sustainably. Some oil and gas majors have begun to shift billions of dollars toward natural gas, plastics and renewables while their core oil business struggles. Major technology firms are seeing a spike in demand from their corporate clients to build climate into their products. "It's a core customer issue now," says Michelle Patron, director of sustainability policy at Microsoft. "We've seen sustainability and climate come out over the last few years, from the [corporate social responsibility] space and the compliance space to really be mainstreamed across the business."

The shift for advocacy and activism may be just as profound. On a slew of issues, from immigration to housing, activists have been working slowly but surely for decades to make progress around key plans, proposals and laws in their areas of focus. But in recent years, climate change has become unavoidable.

Jacqueline Patterson hadn't positioned herself as an environmentalist when she was asked to lead the NAACP's climate-justice program in 2009. A former Peace Corps volunteer, Patterson had spent much of her career working on gender and health, but climate change just kept coming up. She worked with communities vulnerable to extreme weather in Jamaica and saw the disproportionate impact of Hurricane Katrina on the Black community in New Orleans. When she took the NAACP job, she thought she would launch the program and then leave. A decade later, she's still there, and the NAACP has embraced climate action as part and parcel of racial justice. Patterson lists a dizzying number of programs the organization runs at the intersection of the two issues: an initiative to help the Black community access the green economy, another to look at the effect of fossil-fuel pollutants on children's educational performance and another to study the use of prison labor to fight climate-related disasters. "Economy, food, housing, transit—all of these are civil rights issues," says Patterson. "And climate issues intersect with every single one."

Institutions across the world of advocacy and philanthropy have woken up to these connections. Oxfam is centered on ending global poverty. It also works on

climate change. UNICEF provides aid for children around the world. It also works on climate change. The Kaiser Family Foundation targets health policy. It also works on climate change.

**ON MY LAST** reporting trip before COVID-19 took hold, I took the train to Philadelphia to observe a focus group designed to glean views on climate change in the local Black community. At first, participants largely avoided talking about the issue—instead focusing on racial justice, crime and employment. But over the course of 90 minutes, participants started to consider how warmer temperatures might lead to a spike in crime, citing their own experience with crime on hot days. They talked about their worsening allergies, speculating that allergy season had lengthened. And they noted the solar panels popping up across the city. These observations aren't the textbook examples of climate change—the rising seas, record storms and giant wildfires—but they are results of climatization. Allergy season is indeed getting longer because of warmer weather, research has shown rising temperatures will likely drive increased crime, and obviously the move to renewables to stem emissions has led to policies to promote solar panels. In the end, many left the focus group saying they wanted to learn about the Green New Deal, fracking and environmental justice.

Many who oppose climate policy would undoubtedly take issue with the notion that climate should be addressed in all elements of our economy and society. For years, that rejection was rooted in a denial of climate

**'It's a moment of maximum hope; it's also a moment of high risk.'**

—RACHEL KYTE, ACADEMIC AND SUSTAINABILITY EXPERT

science. But in recent years, as public understanding of climate change has grown, that position has become increasingly untenable, and opponents of climate action have offered their own vision of climatization. In a 2019 op-ed, Senator Marco Rubio of Florida, for example, acknowledged that flooding would increase in the state and cited predictions that the “30-year mortgage will die out” in some parts of Florida because of climate risks. He proposed adapting, to “buy time.” That same year, then U.S. Secretary of State Mike Pompeo celebrated new trade routes that would open in the normally frozen sea as a result of climate change. “This is America’s moment to stand up as an Arctic nation,” he said. In these visions, climate change is taken for granted—and we are all left to play a game of survival of the fittest.

Such a game wouldn’t just pit countries against one another—it would also pit humans against the planet. And the planet would win every time. In a 2010 study, researchers looked at the ancient city of Angkor, the capital of the Khmer Empire (in modern-day Cambodia), for some 600 years beginning in the 9th century. Angkor was a sophisticated city with hundreds of thousands of residents—until its collapse. Since then, accounts have attributed the decline primarily to conflicts with a neighboring kingdom and shifting trade patterns. But recent research suggests that climate—specifically, a decades-long drought as well as monsoons in the 15th century—needs to be considered among the other challenges. “We can be tempted to look at the historical record and be like, ‘Those guys didn’t

know what they were doing, but we are super sharp now,’” says Solomon Hsiang, a professor of public policy at the University of California, Berkeley. “I’m pretty sure those guys thought the exact same thing.”

Hsiang’s recent research has shown the subtle effects of climate change—increased crime, lost labor productivity and increased mortality, to name a few—would devastate society, slashing economic output and leading to something like a permanent recession. “A lot of ways in which climate change is really bad are like death-by-1,000-cuts situations in which we don’t realize we’re being affected by the climate,” he says.

Back in D.C., McCarthy and Zaidi tread carefully when asked about the costs of climate change, which both note are piling up, before shifting the conversation to a more positive vision. “That’s why so many people are getting interested in the issue of climate change,” says McCarthy. “Because it’s now being presented as an opportunity. It’s now being presented as a hopeful message.” Two things can be true at once, and the future brought about by climatization may very well include elements of both visions: crushing economic effects as well as opportunities for rejuvenation. Indeed, as the effects of climate change become more apparent and the response becomes more urgent, it’s almost inevitable. But both must be considered; only by recognizing how climate will seep into everything can we tilt the scale toward something a little better.

*—With reporting by LESLIE DICKSTEIN and ALEJANDRO DE LA GARZA/NEW YORK*

## CONVERSATION

## A CRISIS IN LEADERSHIP

### WOMEN’S VOICES NEED TO BE AT THE CENTER OF CLIMATE DISCUSSIONS

→ The climate crisis, like the pandemic, is amplifying existing racial and gender injustices in our society. TIME editors Naina Bajekal and Elijah Wolfson moderated a conversation with two women working to create a more inclusive climate leadership space: U.S. author and strategist **Katharine Wilkinson**, and Colombian activist **Maria Alejandra Escalante**.

**TIME:** Women are more likely to work in the industries impacted by the pandemic—70% of the health workforce is female; over 70% of global caregiving hours are given by women and girls. How should we address similar disparities in the climate crisis?

**ESCALANTE:** The climate crisis is already generating disparities. For example, when extended droughts happen, women, especially young women, in rural areas—who are usually the main care-

takers of the home—must fetch water from farther away, which affects their overall well-being and safety.

Just like the pandemic, the climate emergency is also hitting the same communities more harshly. Women, young people, gender minorities—especially those who are Black and Indigenous and from the Global South—have been marginalized from the centers of decisionmaking for far too long. A 2014 report showed that only 0.2% of foundation funding

**‘Patriarchy, spotlighted by the pandemic, is bad for inclusive climate leadership.’**

—KATHARINE WILKINSON



North, what is already fraying in our social and economic systems—the cracks already present in our global house. It's a reminder that social policy and safety nets more generally are critical climate infrastructure.

Will these realizations translate into meaningful change? I'm not sure. The material and psychological toll of the pandemic means lots of folks aren't showing up for the work of transformational change, which is what is required this decade, with their full superpowers.

**Given that our collective attention and energy is majorly sapped, where should we direct what energy remains?**

**WILKINSON:** To me, the bottom line is that the climate crisis is a leadership crisis. If we want to grow a life-giving future, we need an abundantly leaderful climate movement. We should center and support the work and wisdom of women, especially women of color, leading at the grassroots, in elected office, in media and communication, and beyond. Just like there are no silver-bullet climate solutions, there is no single sector of leadership that will get the job done. Our

best chance is to grow the biggest, strongest team possible.

**ESCALANTE:** Amid the uncertainty of the past year, women have stepped up. In the Eldoret slums of Kenya, with the help of a young feminist group, a community of over 100 incarcerated women—including trans women and sex workers—are growing organic food in their own homes as part of an agribusiness program. This speaks to our capacity to shift from chaos to solutions in times of crisis.

Energies need not be channeled in only one direction. Governments, donors, academia, institutions and the media should lift up the knowledge, voices and experiences of those who have not participated in shaping this faulty world—radical political leaders, inclusive women and youth-led movements pushing for justice. The pandemic has shown us that we can adapt and prioritize when needed and urgent.

If we don't do this now for the climate crisis, then when?

focuses explicitly on women and the environment. To see systemic transformation, we need more resources placed in the hands of gender minorities.

**WILKINSON:** I agree, and that's why we need to design climate solutions to advance equality alongside reducing greenhouse gases—what [Climate Interactive co-director] Beth Sawin calls “multisolving.” We can't do the latter without the former.

It's worth noting that many of these women-dominant industries are low-carbon industries. We think about “green jobs” as installing wind and solar power, but care jobs are also green jobs. A care economy is a green economy. So there are climate reasons to strengthen these industries, including ensuring good wages and labor protections.

Patriarchy, spotlighted by the pandemic, is bad for inclusive climate leadership. The U.S.

is a hard place to be a mother on a good day, in particular given lack of adequate maternity leave or affordable child-care and abundance of unwaged domestic labor, and those good days have been hard to come by in the last year.

**Care industries have historically been “feminized,” and tend to be perceived as less valuable to society. Will the pandemic change this?**

**ESCALANTE:** In Latin America, inequalities are only stretching further because of the pandemic. At the same time, it's raised global alarm by showing us that societies and ecosystems are on the verge of collapse. Drastic, radical, systemic change is what the moment is calling for.

**WILKINSON:** The pandemic made visible to more people, specifically people of privilege, especially those in the Global



**Maria Alejandra Escalante**

The Colombian queer feminist activist is the climate and environmental justice advocacy officer at FRIDA, a fund that supports young feminist organizers



**Katharine Wilkinson**

The American author, strategist and teacher co-founded and leads the All We Can Save Project, to nurture a leaderful climate community

## VIEWPOINT

# THE NINTH CIRCLE OF CORPORATE IRRESPONSIBILITY

REASSESSING THE IMPACT BUSINESSES HAVE ON THE PLANET BY WILLIAM NORDHAUS

In an earlier era, green referred to grass and trees and jealous eyes. But over the past half-century, green has taken on a life of its own. The Green movement deals with the collisions and contagions of the contemporary world—how to view them, and how to cure them.

The book from which this essay is excerpted, *The Spirit of Green*, examines a wide array of social, economic and political questions from a Green vantage point. These questions include established areas such as pollution control and global warming. But they also involve new frontiers such as Green chemistry, taxes, ethics and finance. The example that follows concerns an approach to large corporations, or what is called social responsibility.

One of the major developments in corporate management is corporate social responsibility,

which is the projection of Green philosophy into the business world. The idea is that corporations are more than moneymaking machines that buy steel, produce cars, and fight tooth and claw to enrich their owners. Rather, corporations are also societal citizens that have certain legal, economic and ethical obligations.

Corporate responsibility goes beyond obeying the law. It involves voluntary actions in which a business monitors and ensures its compliance with the spirit of the law, with ethical standards, and with national or international business

norms. Moreover, responsibility recognizes that profits—which are a central goal of business—are sometimes a misleading compass that needs to be corrected.

If you study the literature on corporate responsibility, or look at corporate websites, you will find a tangle of confusions. The reason is that corporations generally want to portray themselves as responsible while satisfying the profit orientation of their shareholders.

The Green view sharpens the focus of corporate responsibility by emphasizing spillovers, or what are technically known as “externalities.” These are the unintended consequences of industrial activity. In an earlier era, such spillovers would include air pollution, toxic wastes and greenhouse gases. Over the past year, we faced a deadly pathogen that was passed unknowingly and invisibly among people.

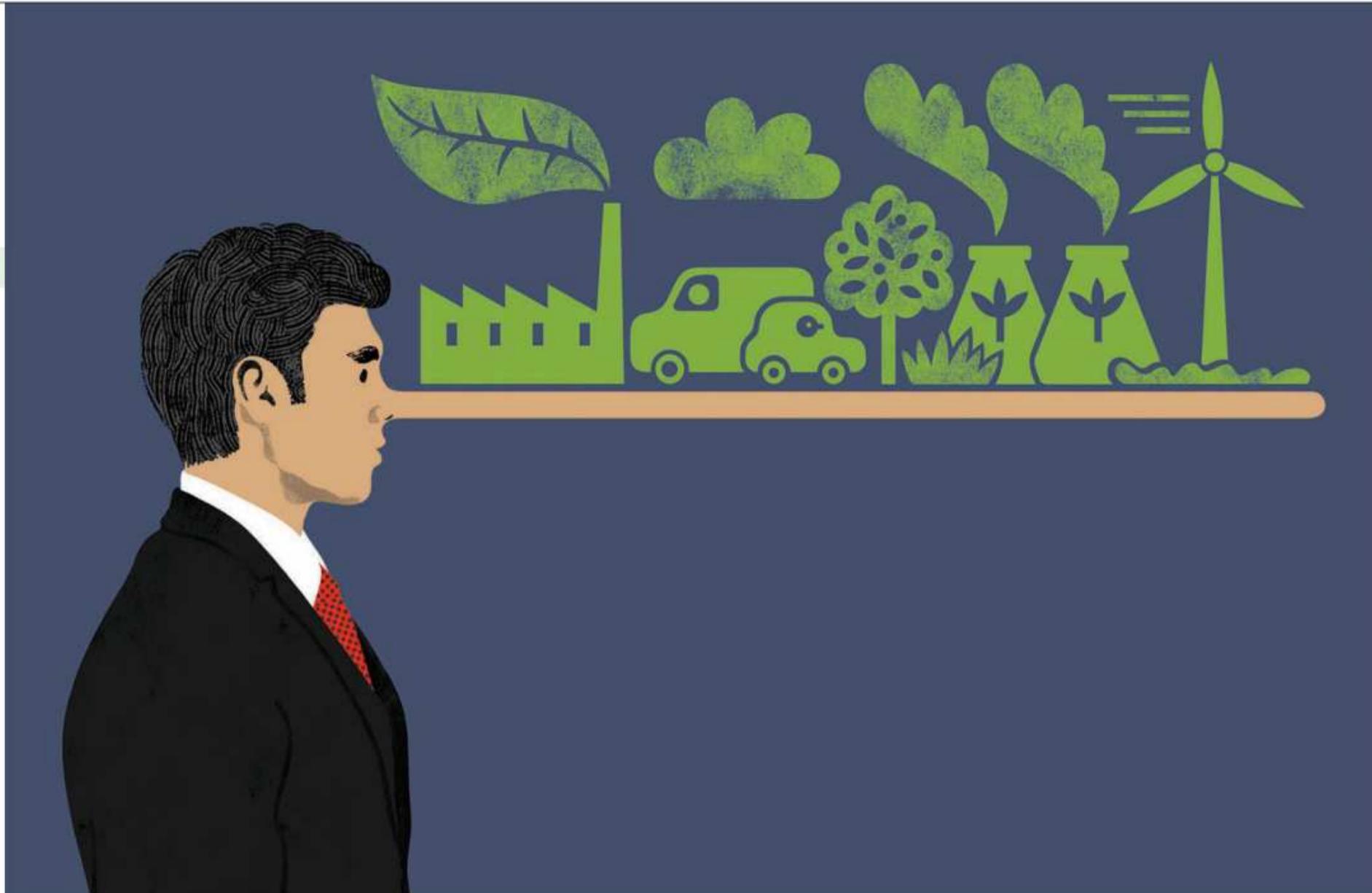
Why should private corporations become involved here? The reason is that our political processes are unable to prevent all these spillovers and compensate those who are harmed. The lack of social protections might come because of scientific uncertainty

or vested interests or partisan politics or international free riding or a weak social safety net—or all of the above. One clear example of political failure is that most countries have not moved forcefully to slow climate change.

Responsibility becomes particularly important in the presence of technological uncertainties. How harmful are asbestos and tobacco? How addictive are opioid medications? What are the emissions of new automotive technologies? What is the threat of fossil-fuel use to future climate change? Companies producing these products are the most knowledgeable about the properties of their activities. From tobacco through opioids and asbestos to emissions of sulfur dioxide and carbon dioxide, firms engaged in these sectors have a special responsibility to society to inform and protect.

**MOST OF THE FOCUS** in business schools and academic writing is on corporate responsibility: do this, do that, measure this, and report that. The list of responsible actions is endless, and most firms can find several areas where they excel.

**These firms know about their dangerous products and withhold that knowledge**



A more fruitful approach looks at corporate irresponsibility. Important areas include environmental issues (such as hazardous waste releases), corporate governance (such as excessive executive compensation) and production of harmful products (alcohol, tobacco and fossil fuels).

We can imagine a modern-day Virgil leading us through the various circles of corporate misconduct. Perhaps the first circle is for greed and populated by overpaid executives, the second circle contains the polluters, the next for lobbyists for special tax breaks and another for those involved in regulatory demolition.

At the ninth circle, we find the most egregious forms of corporate misconduct—companies who provide misleading or fraudulent information about their own

products. Such behavior is a risk to the public that the company is uniquely positioned to understand. It is worse than simple thievery because those who are most knowledgeable use their knowledge to mislead their customers.

When Dante wrote *Inferno*, he described the ninth circle of hell as the deepest one, where treachery resides and where hosts betray their guests:

*By effect of his malicious thoughts,  
Trusting in him I  
was made prisoner,  
And after put to death.  
(Inferno, Canto XXXIII)*

So it is with companies in the ninth circle. We are indeed prisoners when we unwittingly trust malicious companies who invite us as guests into their showrooms. These firms know about their

dangerous products, withhold that knowledge, subvert science to advance their narrow commercial interests and put their guests to death.

A recent egregious example is Volkswagen, which not only hid the emissions of its diesel automobiles and fabricated the results but designed equipment to falsify the results. It did this to save money on the production of purportedly “clean” diesel engines. How many people died as a result? How many people bought VW cars believing they were Green? The behavior was not only illegal but earned VW a prominent place in the ninth circle of corporate irresponsibility.

As we pass through the ninth circle, we find other corporations languishing in their ethical filth:

- ▶ Philip Morris, which destroyed research showing the lethal

ILLUSTRATION  
BY LO COLE  
FOR TIME

nature of smoking while increasing the addictiveness of its cigarettes

- ▶ ExxonMobil, which, while fully aware of the dangers of climate change, suppressed the science and funded climate deniers

- ▶ Johns Manville, for knowledge and denial of the dangers of asbestos for years before lawsuits ferreted out the truth

- ▶ Purdue Pharma, for conspiring to foster use of OxyContin without legitimate medical reasons while aware of its addictive properties

- ▶ Facebook, for selling people’s personal information without their consent, including to groups who used it to target voters and sow political discord

As we emerge from the ninth circle, we reflect that justice for its inhabitants is imperfect. All of the companies took financial hits, and some did not survive. Yet others slither along and continue to thrive on their flawed business models. They should not be forgotten or forgiven.

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*Nordhaus is a Yale University professor and the recipient of a 2018 Nobel Prize for his work in economic modeling and climate change. His new book, The Spirit of Green, will be published May 18*

# DEEP WATERS

Flooding in Kenya is turning thousands  
of residents into climate migrants.  
Can cities cope with the influx?

BY ARYN BAKER/KAMPI YA SAMAKI, KENYA  
PHOTOGRAPHS BY KHADIJA M. FARAH FOR TIME



WHEN LAKE  
BARINGO ROSE,  
FAMILIES IN THE  
AREA LOST THEIR  
HOMES AND  
GRAZING FIELDS



# When he was a child, James Owuor loved hearing the elders talk about the way life used to be.

So it comes as something of a surprise that at 38, he is now the one tasked with the job of describing the Before Times in Kenya's Rift Valley. Before Lake Baringo started to rise, before it flooded and stole everything he knew.

"At the beginning, we just thought it was a bad rainy season, that the water would recede when the dry season came. It didn't," he says ruefully, peering over the edge of his motorized canoe at what used to be houses below the milky brown waters. Over the past decade, an unprecedented increase in annual rainfall—widely attributed to climate change—has raised the lake by 40 ft. (12 m), inundating nearly 22,000 acres and destroying homes, businesses and Roberts Camp, the lakeside resort where Owuor has worked for most of his adult life.

In 2014, he watched the waters overtake the two-story-tall shorefront lodge. The restaurant went next,



FESTUS AND VERONICA PARKOLWA STAND AT THE ENTRANCE OF THEIR FORMER HOME BY LAKE BARINGO IN NOVEMBER

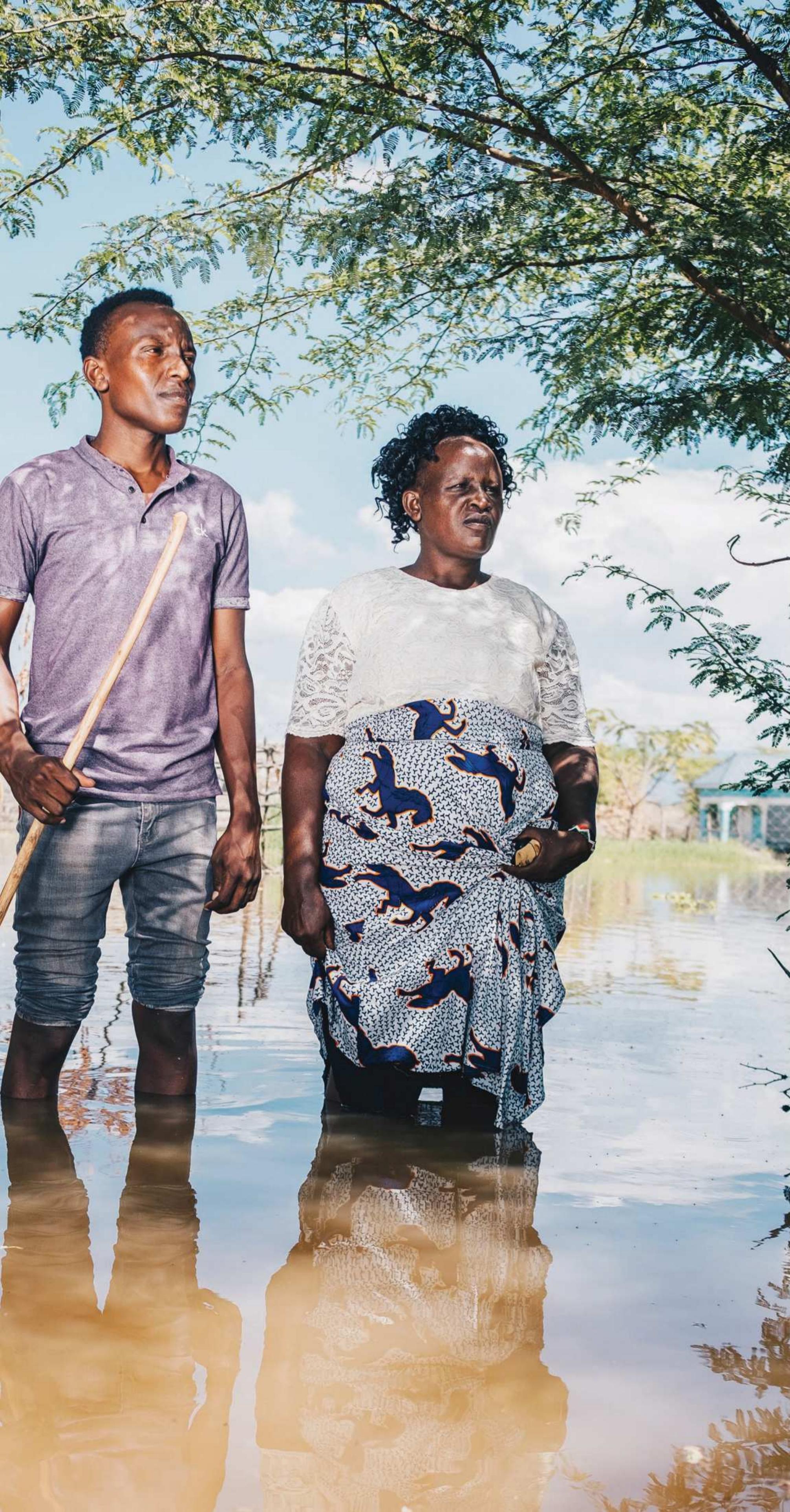
then the bar. In September, the resort's entrance gate on the road to the nearby town of Kampi Ya Samaki went under. Navigating through the drowned remnants of downtown, Owuor points out the remains of a fish factory's roof. A crocodile paddles past the submerged rooms of the Lake Breeze Restaurant and Bar while a hippo grunts from the nave of a flooded church. Water laps at the third-floor balconies of the luxury Soi Safari Lodge, an 80-room resort that once employed 300 locals.

Eventually, he says, "people will have to leave this place and find somewhere else to live. If they were running a business, that means they probably will not have that business anymore. Life is drastically going to change."

An even bigger threat looms. The nearby alkaline Lake Bogoria is also rising. Twice as salty as seawater, and home to more than a million flamingos, Lake Bogoria is on the brink of breaching its own natural barriers. If the waters rise up by another 4 m, says Professor Simon M. Onywere, a geologist at Kenyatta University's department of environmental planning, it could flood freshwater Lake Baringo with a deadly spill of alkaline waters. The two lakes used to be 12 miles (20 km) apart. Over the past decade, climate change has nearly halved the distance.

The merging of the two lakes would be devastating, says Paul Chepsoi, an environmentalist and advocate for local Indigenous rights from the area. "It's not just a worst-case scenario. It's an ecological and human disaster." More than 100,000 people depend on Baringo for income, from either fishing or agriculture. A saltwater





influx would destroy both industries. "It means that livelihoods will be affected for generations to come," Chepsoi says, standing in the middle of a paved road that once led to the gates of Bogoria's national park. Water laps at his feet. A nearby lakeside lodge, like the park entrance sign behind him, is mostly underwater.

Nothing short of a catastrophic drought—the kind that would also destroy livelihoods—will stop the rising waters. "The people here will have to leave," says Chepsoi. Many, he says, are already being forced to migrate to neighboring towns and cities largely unprepared for the influx. "The pressure of so many new arrivals will overwhelm the services providers," he worries. "They are not prepared with housing, water, health care facilities or police." Migration may be inevitable, but if the destination cannot absorb the new migrants, they may find themselves even worse off.

**IN SOME PARTS** of the world, climate change brings drought. In Kenya's Rift Valley, it has brought torrential, out-of-season rains over the past decade, which, combined with deforestation, have resulted in rising waters in all of the valley's eight lakes. Some have nearly doubled in size, drowning pastureland, farms, homes, schools, churches, clinics and businesses in what Elizabeth Meyerhoff, an American social anthropologist who studies Rift Valley communities, calls a "slow-motion tsunami." By the end of 2020, one of Kenya's wettest years on record, Baringo had risen by several meters, and had claimed 34 sq. mi. of land.

The local ward administrator says that a health clinic, a technical college, five schools, seven churches, 48 shops and 1,250 houses—home to nearly a third of the population—have been destroyed. Thousands in the Rift Valley lakes region have been forced from their homes. They are part of a new, global movement of refugees fleeing not conflict but climate change.

"If you just lose your income that is one thing, because you can adapt. You find another job or another field," says Meyerhoff. "But once you lose everything—your home, your school, your clinic, your road, your church—then it's an impossible situation. You become an environmental migrant because you have to find those facilities in some other place." She is no detached observer; her own home for the past 40 years is just a few inches away from being swallowed by Baringo's rising waters. In her notebook, she carries a photo of her teenage children leaping from her garden's cliffside edge into the lake 40 ft. (12 m) below. Now in their 30s, they could sit in the same spot and dabble their feet in the water. They are begging her to pack up and leave; if she does, she will need to get a boat—the road to her house is already underwater.

Some 24 million people—more than three times the number fleeing armed conflict—are displaced each year by ecological disasters such as floods, droughts, hurricanes, heat waves and rising sea levels, according to an October 2020 analysis by the Institute for Economics and Peace, a global think tank headquartered in Sydney. In the next 30 years, some 1.2 billion more

people could be displaced if greenhouse-gas emissions continue on an upward trajectory, accelerating global warming and amplifying climate impacts, particularly in rural areas where livelihoods are dependent on the kind of agriculture most affected by changing weather patterns.

For a long time, experts have seen this kind of migration as flowing from the failure of carbon-spewing nations to rein in their emissions, along with the inability of poorer governments to protect their citizens through adequate adaptation measures. But that view is changing: there comes a point where no amount of infrastructure can hold back the sea, bring back the seasonal rains or cool the global climate. At that point, "migration becomes the adaptation strategy," says Vittoria Zanuso, executive director of the Mayors Migration Council (MMC), a global organization that works with cities to develop comprehensive urban-migration programs. For many of these climate migrants, cities and towns will be their final destination.

Wealthy countries are not exempt. A 2018 study, published in the University of Chicago's *Journal of the Association of Environmental and Resource Economists*, predicts that climate change will push 1 in 12 Southern and Midwestern residents of the U.S. to move to less affected areas in the Northeast

and Northwest over the next 45 years. "It's no longer a question of if climate migration is happening but rather who, how much, where and when," says Alex Randall of the U.K.-based Climate and Migration Coalition. "Up until now, the focus has been on stopping people from migrating in the first place. Now the focus needs to be on how to make them an asset rather than a burden for the places they are going."

Cities need migrants in order to grow, but chaotic, undirected migration can be as disruptive as an influx of salt into a freshwater lake. That means preparing towns for a new generation of climate migrants by building up infrastructure and increasing services from sanitation to education and health care—often a pricey undertaking for cash-strapped municipalities. New York City's annual budget per resident is approximately \$9,500; Nairobi's is around \$74.

Several cities—including Orlando; Dhaka, Bangladesh; and Freetown, Sierra Leone—have launched programs to build climate resilience while making sure new arrivals have opportunities for both safe housing and fair employment. These programs are usually funded by the municipality, but in order for them to expand, more investment is needed. International climate funds should play more of a role, says Randall. "Once you accept that moving is a form



of adaptation, we would potentially get to a point where climate-adaptation finance could be spent on helping people move safely, or making sure cities had the necessary infrastructure for coping with rapid growth."

As part of the discussions that led to the Paris Agreement, wealthier nations committed to contribute \$100 billion a year to help poorer countries combat climate change through loans, grants, cash and private investments. The Green Climate Fund, as it is known, is the world's largest fund dedicated to addressing climate change, but so far, only 20% of global contributions have gone toward adaptation, with the rest largely going to greenhouse-gas-reduction projects—despite a stated goal of 50-50 allocation. (Donor nations make

## Some 24 million people are displaced each year by ecological disasters



the final decision on project financing.)

To developing nations that typically bear a lesser responsibility for the climate crisis, it's an egregious oversight. "When it comes to a country like Bangladesh or Kenya, where our emissions are small to start with, telling us to use the money to reduce emissions doesn't make sense," says Saleemul Huq, director of the Dhaka-based International Centre for Climate Change and Development (ICCCAD). "We need the money for adaptation; that should be the priority." Zanuso, of the MMC, estimates that urban-adaptation projects—enabling cities to absorb migrants in a way that helps them and their host communities flourish—receive only 3% to 5% of the adaptation funding that has been made available.



THE REMNANTS OF KILIMO ESTATE BY LAKE NAKURU ARE NOW ONLY ACCESSIBLE BY BOAT

**WHEN THE RISING WATERS** of Lake Nakuru, 85 miles (137 km) south of Lake Baringo, claimed the rural settlement of Mwariki in September, Evelyn Ajuang, a 41-year-old widow with close-cropped dark hair, had nowhere to go. She had just spent her entire life savings building and furnishing a four-bedroom house and had nothing to fall back on. So Ajuang took a single room in a low-income neighborhood in the middle of Nakuru town. She sold her goats and chickens to cover three months' rent—besides, the concrete warren of crammed shacks offered no space for livestock. Now, unable to sell the eggs, milk and vegetables that once provided a steady income, she fears the uncertainty ahead.

Ajuang, like most of us, has only a vague understanding of how rising carbon

emissions could trigger the rains that have flooded the Rift Valley lakes, but she knows enough to blame it for destroying her life. "Climate change is why I don't think I will ever return to my home," she says, eyeing the four rooms' worth of furniture stacked to the ceiling of her rented room.

Ajuang has been thrust unprepared, and unsupported, into urban life. Every market day, she goes to the wholesale market across town to buy the vegetables she once grew in her own garden, which she sells for a slight profit in her new neighborhood. But transport is expensive, and competition is high. Most months, she can't even make her \$30 rent. So far, 153 families from Mwariki have lost their homes; another 174 farmers have lost their fields. Most are sheltering with family or charity organizations in town. While Kenyan authorities say they are looking into the matter, the former residents of Mwariki say the government has yet to distribute any substantial aid or even broach a resettlement plan, leaving victims in agonizing limbo. At least one has committed suicide, says community organizer David Kahoro; several have suffered heart attacks, and many are facing destitution. But it doesn't have to be this way.

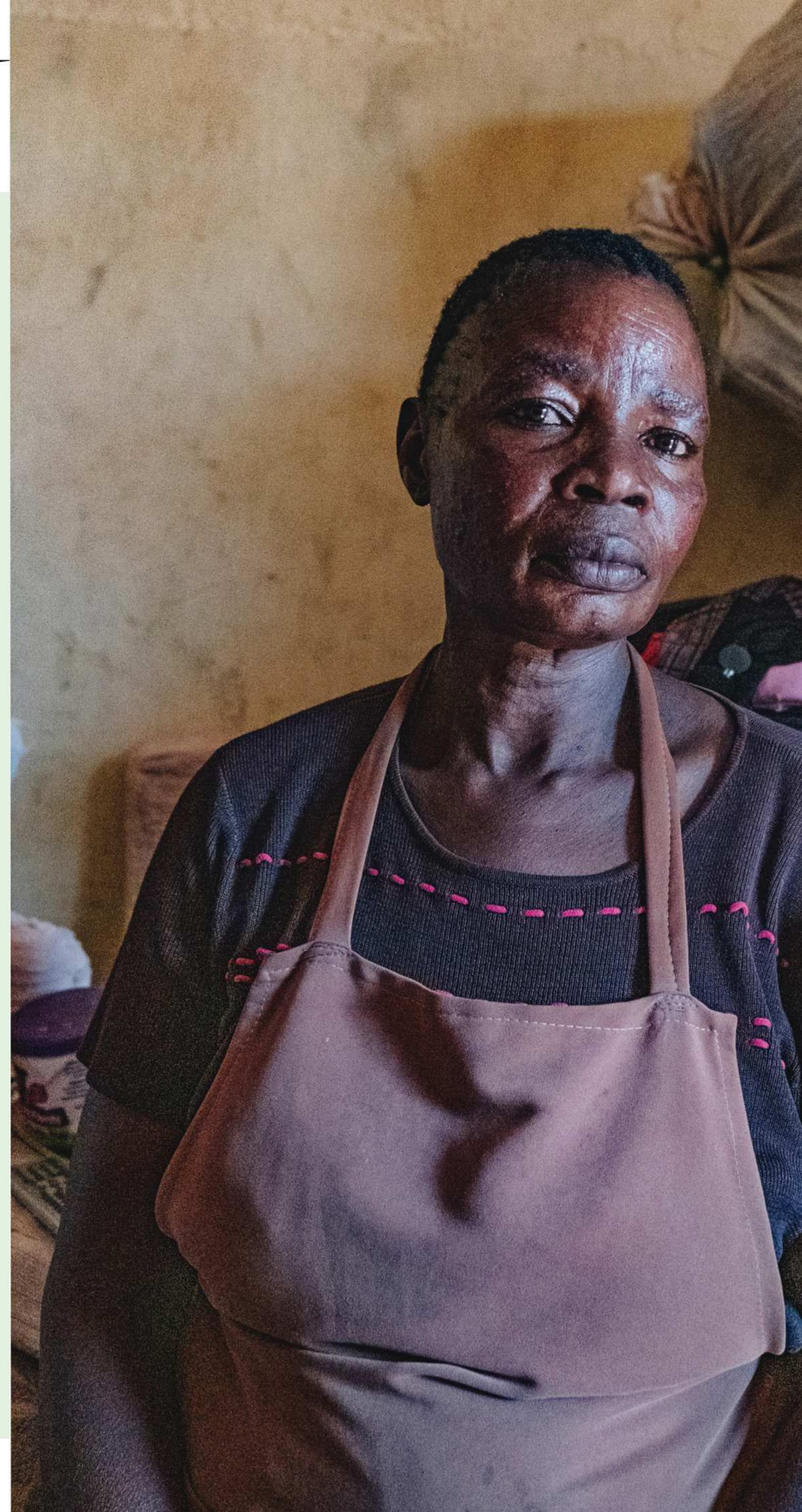
Sub-Saharan Africa is already one of the fastest urbanizing regions, with around 450 million city dwellers. That number is expected to climb to 621 million by 2030, the equivalent of adding two New York Citys to the continent each year. Climate change has been a major driver of this urbanization and is likely to increase the pressure on

city infrastructure and resources, says sociologist Marc Helbling of Germany's University of Mannheim. Helbling has tracked 50 years' worth of urbanization trends in 133 countries and found that rising temperatures consistently lead to higher levels of rural-to-urban migration.

Done right, urbanization can foster economic growth. No modern country has ever reached middle-income status without urbanizing first. But uncontrolled, it can result in slums, mismanaged sprawl, poor public health and rising insecurity for residents—a city that is less inclusive, less productive and less sustainable. An influx of climate migrants could drive the development of several African megacities (population 10 million or more) into global powerhouses within the next decade and a half—but it could also create unprecedented megaslums.

"If cities don't start planning now for climate migrants, this will certainly increase all the problems that come with uncontrolled urbanization—overpopulation, increased pollution, sanitation challenges—and it means that they won't be able to pre-empt the negative or indirect impact of those migrants," says Linda Adhiambo Oucho, executive director of the Nairobi-based African Migration and Development Policy Centre.

That means doing something that few governments are good at: preparing for a crisis that hasn't yet happened. Urban planning is a slow science, says Oucho. "We don't want to get to a situation where we are talking about what to do about mass displacement when climate refugees are already streaming into the city; we need to start addressing it now while





it is still manageable.” In part, that means expanding schools, health clinics, sewage systems and transport networks, but it also means making sure that the new arrivals move into safe areas where they won’t be exposed to additional climate hazards, like the flooding and storm surges that already threaten the low-income neighborhoods usually found in low-lying areas.

Most important is making sure that rural migrants are able to transition to urban livelihoods. “We don’t want to see cattle herders begging on street corners because they don’t have the skills to thrive in the city,” says Ocho. “The only way climate migrants can become a positive factor in urban growth is if they have the re-training and skills transfer that will allow them to adapt and survive and find new opportunities.”

**WHILE KENYA IS ONLY** just starting to see the impacts of climate migration, some countries have had years of experience and can offer a template for urban-adaptation solutions. Bangladesh, with its population of 163 million relatively poor residents residing on a flood-prone delta threatened by rising sea levels, was once the global symbol for climate-change victims. But over the past decade,



**EVELYN AJUANG, 41,  
WAS FORCED TO MOVE  
WHEN LAKE NAKURU'S  
RISING WATERS  
FLOODED HER HOME**

the nation has embarked on a multipronged adaptation strategy that is now starting to show results. “We are still very vulnerable,” says Huq of the ICCCAD, “but that vulnerability isn’t the story anymore. It’s how we deal with the vulnerability.”

The key, says Huq, is long-term thinking. Even as the adult population is taught to adapt by switching to salt-tolerant rice, or to farm shrimp instead of vegetables, younger generations are offered an education that will allow them to eventually flourish in an urban setting. “The second order of adaptation is preparing people to move by their own volition, not being forced to move [by climatic conditions] but being enabled to move and resettle in towns with greater protection.”

Huq’s center, which focuses on climate change and adaptation in developing countries, also works to divert migration streams away from the Bangladeshi capital, Dhaka, one of the fastest-growing cities in the world, toward secondary cities better prepared to absorb the

flows. The center identified some 20 target towns on the basis of their ability both to withstand climatic changes and to offer employment and education opportunities for newcomers. The most overlooked part, he says, is what he calls the “software” that accompanies the “hardware” of infrastructure development: working with civil-society organizations to “help residents understand that there will be climate migrants coming in and that they need to be welcomed and supported so they can settle in and become citizens of that town.” Otherwise, he says, conflict between groups could derail progress.

To a certain extent, every place will have to keep its own unique geography in mind. The state of New Jersey, for example, has worked with Rutgers University to map out the areas most likely to flood as sea levels rise in the coming years in order to forestall risky development projects. That kind of thinking should be more widespread, says Randall, particularly when it comes to the poorer urban areas where climate migrants are most likely to settle. “What we are seeing at the moment is people leaving a rural area affected by drought, for example, and moving to a city where they’ve managed to find work but are living in an informal settlement that is vulnerable to flooding. They may have moved, but they have traded one kind of climate risk for another.”

And in some cases, a proactive climate-adaptation policy may mean helping whole communities start all over again. In Louisiana, government officials are spending \$48.3 million to relocate several dozen households

## **‘We don’t want to see cattle herders begging on street corners.’**

—LINDA ADHIAMBO OUCHO, AFRICAN MIGRATION AND DEVELOPMENT POLICY CENTRE

from the low-lying Isle de Jean Charles to higher ground 40 miles away, as part of the first federally funded, climate-change-induced community resettlement project in the U.S. Construction on the new houses started in May 2020.

Wholesale community relocation is expensive and best used as an option of last resort, but Ajuang, who lost her home to the rising waters of Lake Nakuru, can't help wondering how different her life would have been if the government was able to offer her another property. She doesn't think victims of the floods should get money, but having a safe place to land

→  
**LOW-INCOME HOUSING  
IN LANGA LANGA, NAKURU,  
WHERE AJUANG WAS FORCED  
TO RELOCATE BECAUSE  
OF RISING WATER LEVELS**

and the resources to start over would have helped. She worked for years to buy her own house to be self-sufficient in retirement and is desperate to regain that autonomy.

Wading hip-deep past what used to be her front porch one recent afternoon, she shoos away a pelican stalking fish in her old goat pen. Referring to the hustle that helped her get her own home, she says she would happily do it all over again, given an opportunity. She just needs a dry piece of land to start. "Without somewhere to go, the dreams I had for my future and my life will end just like that." —With reporting by BILLY PERRIGO/LONDON and SANDRA MUTUKU/NAIROBI □





# CLIMATE 101

The subject is finding its way into unexpected corners of the academic world **By Ciara Nugent**

IN 2018, SCOTT MCCAULAY had a “Wizard of Oz moment.” He was a final-year architecture student at the University of Strathclyde in Scotland when the U.N. published a report warning that the world had 12 years to transform society to avoid catastrophic, irreversible climate change. Buildings, the report said, account for 20% of energy-related global greenhouse-gas emissions, and the architecture and construction sectors needed to rapidly overhaul their practices. Sitting in classes, McCaulay had a sinking feeling: his professors, the wizards behind the curtain, had no magical solution.

“We’re talking about an unprecedented societal transformation, but sustainability was treated like an optional extra in my degree,” says the soft-spoken 25-year-old. “I realized that the people who were teaching me just didn’t get the urgency.”

After graduating in 2019, McCaulay formally launched

an educational initiative on architecture’s role in stopping climate change: the Anthropocene Architecture School, which takes its name from the geological age scientists say we entered when humans became the dominant force impacting earth. So far McCaulay has delivered lectures to staff and students at 15 universities in Britain, Canada and the Netherlands. He is far from alone in his concern. In March, the U.K.’s Architects Climate Action Network launched a campaign to help students across the country mobilize for changes to their courses. Almost 80% of the 110 students who responded to the network’s survey felt their courses were not preparing them for future work in a world of climate breakdown.

The British educational establishment is finally taking steps forward. In September, the Royal Institute of British Architects (RIBA) published a new Climate Framework,





which will for the first time make climate-literacy components mandatory across its 109 accredited schools and course providers in 23 countries (including 58 of the 61 in the U.K.), while the Architects Registration Board, the regulator, is preparing guidelines on how universities should teach climate.

The debates playing out in British architecture schools reflect a wider reckoning unfolding across higher education globally. “Studying climate change was for decades a matter for natural sciences, and then later, engineering and other science-based design subjects,” says Walter Leal, head of the Climate Change Management department at the Hamburg University of Applied Sciences in Germany and author of books on climate change and global education. Until very recently, if climate appeared at all in humanities, social sciences and the arts, it was as a concentration or post-grad degree. But as the effects of climate change have become more visible in recent years, and the breadth of the transformation needed to fight it has become clear, law schools, med schools, literature programs, economics departments and more are incorporating climate into their undergraduate curriculums, grappling with how climate will transform their fields and attempting to prepare students to face those transformations in the labor market.

Many students still don’t learn about climate in their degree programs, and hurdles remain to deliver the kind of universal climate requirements that activists like McCaulay demand. Leal cites a lack of expertise and confidence among teaching staff

unaccustomed to teaching climate change, as well as the time pressure within already crowded curriculums. Without mandatory requirements, he says, many university departments won’t feel comfortable adding climate to the curriculum. “There are few programs which train university staff, and people will think, Maybe I’ll have a question I’m not able to answer.”

But climate education is still expanding rapidly, Leal says, noting that political scientists should look at climate migration and poverty, ethicists should examine rising inequality because of climate change, and economists should discuss the impact of extreme weather events on national economies. “It is inevitably becoming mainstream, no matter what field, because the connections are so clear now: climate change permeates everything.”

**IF YOU ARE** in Ada Smailbegovic’s English-lit class at Brown, you get some unusual assignments. For *Earth Poetics: Literature and Climate Change*, students spend time following squirrels and sparrows around. They sit and observe seasonal changes and record their thoughts in blogs. They also watch films and read poems about fishing communities in the U.S. and Canada, comparing patterns of human migration to the life cycle of salmon and the movements of the tides.

Smailbegovic herself studied biology and zoology before moving into literature, and started teaching

the course this year, drawing students from English and other majors, some of whom “have clearly structured their education to find these kinds of courses,” which tackle climate from a new perspective. She says human-triggered climate change is dissolving a barrier between the human and the earth built up in Western culture over the past 150 years. “I think we’re shifting to models in which we’re maybe less interested in the idea of nature as a space of fixity, or something that can be set apart from human culture and humanity.”

That renewed understanding of human life as inextricable from the environment is reshaping education across the arts and humanities. Economics students in Buenos Aires are studying the financial cost of environmental degradation. Philosophy students in London are debating individual responsibility and the debts owed to future generations around climate. Media-studies students in Boston are analyzing climate narratives. Law schools have introduced climate electives for undergraduates, and Bond University in Queensland, Australia, has gone even further, launching what it believes to be the country’s first undergraduate law degree entirely built around climate law—likely to be an increasingly important area.

Studying a topic as large as climate change in one module, when it’s not ingrained in traditional understandings of a discipline, can be challenging, says Johannes Stripple, a politics professor at Sweden’s Lund University, who has co-led a course on climate change for politics undergraduates since 2015. “It’s

quite demanding compared to other kinds of courses that we teach, because we’re looking at how climate appears at all levels of politics, so we’re constantly changing the point of departure,” Stripple says. Students study how politicians and governments frame their response to climate and its future impacts, local initiatives and the politics of climate refugees, and read works of climate fiction. Despite the demanding program, Stripple says, “our course is always oversubscribed. It has really seemed to resonate with what students are concerned with.”

**FOR DECADES** at most universities, science, design and technology-based courses, which deal directly with the physical environment, have included information on sustainability and the environment. But in these fields, which stand to have a big impact on efforts to lower emission and adapt to climate change, climate advocates are pushing for more than extra modules. In chemistry, for example, over 70 higher-education institutions, from São Paulo to Minnesota to Bangkok, have signed up to a Green Chemistry Commitment since 2013, to overhaul curricula.

“Earth’s life-support systems are changing at an exponential rate, but education is changing at the rate at which a glacier moves.

We teach much the same content that we did 50 years ago,” says Peter Mahaffy, a professor of chemistry at King’s University in Edmonton, Alberta, and a member of the education committee at the International Union of Pure and Applied Chemistry (IUPAC), which sets standards for primary, secondary and higher education around the world. In late 2020, IUPAC launched a three-year project to reorient chemistry education globally toward “systems thinking for sustainability,” to help the world reach environmental and development goals. Mahaffy is co-chairing a task force on standardizing sustainability literacy, creating guidelines for how all students should learn to understand their fields as part of a much wider environmental challenge. “Part of the issue is we’ve become so good at specialization in STEM education, that we divide knowledge into smaller and smaller pieces, and we understand those little pieces exceptionally well,” he says. “But it’s not enough. We need to equip citizens and scientists to think bigger, to think outside and across the boundaries of their disciplines.”

In the U.K., engineering and architecture industry bodies are working with the Climate Framework initiative to develop climate requirements for their schools. Mina Hausman, the initiative’s leader, helped RIBA

to set its new rules. “These make at least a base level of knowledge around sustainability mainstream, mandatory. At the moment, sustainability and climate focus are still treated as a specialism, an optional sort of added-on element.”

That also tends to be the case in U.S. architecture schools, according to Jesse Keenan, a professor of real estate in the architecture department of Tulane University. He says that while some schools have a special focus on climate and an abundance of electives, there is no core curriculum that ensures all students get the knowledge and skills needed to lower emissions and keep buildings standing in an increasingly unstable climate. He has proposed a new “climate core” covering a range of subjects—including climate change’s impact on material degradation, life-cycle analysis, carbon analysis, more sophisticated risk assessments, critical skills for dealing with uncertainty—that he considers “the minimal standards of what we should be teaching students when they learn how to design and build buildings.”

As British architects are learning, though, new requirements won’t transform education overnight. It will be a challenge for the U.K.’s architecture schools to meet the RIBA’s new framework for climate, says Lorraine Farrelly, head of architecture at the University of Reading and chair of a body representing heads of schools of architecture across the country. “We’re being asked to look at a very broad set of issues, some of which have never been addressed by architectural education before,” she says, citing the

## ‘We need to equip citizens and scientists to think bigger.’

—PETER MAHAFFY, KING’S UNIVERSITY, CANADA



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circular economy and water pollution, as well as dramatically expanded engagement with concepts like sustainable sourcing, energy efficiency and protecting biodiversity.

But the challenge has to be met if students are to be prepared for careers in an era of climate change and action, says Peter Exley, president of the American Institute of Architects. “I am admitting that we are not quite ready in our schools. We’re not producing students that have all of the skills [to build in the climate crisis] when they graduate. Students want more.”

Exley says a wave of youth activism around climate since 2018, as well as the past year’s global reckonings on racial justice, health and inequality, have made the current generation of students increasingly insistent that their curriculums confront a fast-changing world. “You can see their singular commitment to justice through climate and equity. They won’t kick the can down the road on these things,” Exley says. “Universities have to adapt faster.”

**GOVERNMENTS SHOULD** be helping, education advocates say, and recent months have brought a flurry of activity. On March 27, Argentina’s lower house voted overwhelmingly to approve a law creating a national strategy on environmental education “at all levels and in all educational forms.” In France, Parliament is debating a climate law that includes a plan to modify the education code to feature requirements on the environment “throughout school training, in a manner adapted to each level and each specialization,” while

a separate law on higher education will include a new duty for institutions to “raise awareness and train [students] to deal with the problems of the ecological transition and sustainable development,” according to the higher-education minister. It comes after pressure from French student unions, which found in a March survey that 69% of students in courses not traditionally linked to the environment have heard very little or nothing about climate issues during their studies.

In Spain, lawmakers have amended a climate law moving through congress to mandate a “cross-cutting” approach to climate education, meaning all subjects should incorporate climate from their perspectives, rather than having a separate climate-change subject. The latter is the approach in Italian high schools, which since September have been obliged to teach one hour a week on environmental issues in every grade. Though Spain’s law is still months from a final vote, Serafín Huertas, an educator at Valencia’s Center for Environmental Education, says advocates are thrilled that the cross-cutting approach is winning out. “If climate change is presented as a separate subject, we run the risk that students won’t relate climate change to their daily lives and their professional fields,” he says. “Right now we’re in a situation where natural scientists are learning the science of climate change, but engineering students in Spain are still learning about the internal-combustion engine as if it were still viable in a few years. If we’re not all focused on this, our economies won’t change.” —With reporting by MADELINE ROACHE/LONDON □

## VIEWPOINT

## TOWARD A SHARED SPACE

**LEARNING TO DISMANTLE RIGID FORMS OF INDIVIDUALITY WILL DELIVER US BACK TO THE WORLD BY JUDITH BUTLER**

→ However differently we register this pandemic we understand it as global; it brings home the fact that we are implicated in a shared world. The capacity of living human creatures to affect one another can be a matter of life or death. Because so many resources are not equitably shared, and so many have only a small or vanished share of the world, we cannot recognize the pandemic as global without facing those inequalities.

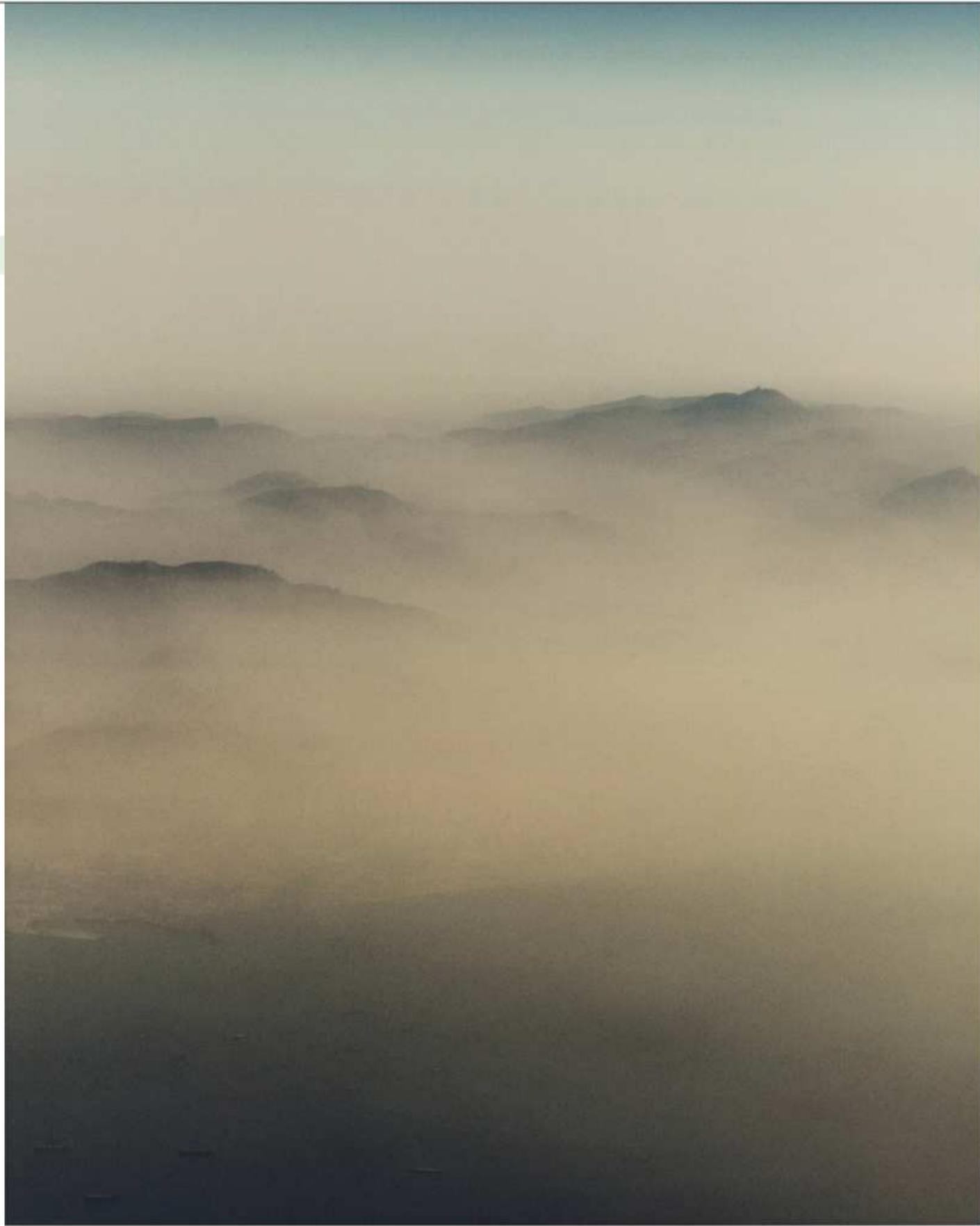
Some people work for the common world, keep it going, but are not, for that reason, of it. They might lack property or papers, be sidelined by racism or even disdained as refuse—those who are poor, Black or brown, those with unpayable debts that preclude a sense of an open future.

The shared world is not equally shared. The French philosopher Jacques Rancière refers to “the part

of those who have no part”—those for whom participation in the commons is not possible, never was, or no longer is. For it is not just resources and companies in which a share is to be had, but a sense of the common, a sense of belonging to a world equally, a trust that the world is organized to support everyone’s flourishing.

The pandemic has illuminated and intensified racial and economic inequalities at the same time that it heightens the global sense of our obligations to one another and the earth. There is movement in a global direction, one based on a new sense of mortality and interdependency. The experience of finitude is coupled with a keen sense of inequalities: Who dies early and why, and for whom is there no infrastructural or social promise of life’s continuity?

This sense of the



interdependency of the world, strengthened by a common immunological predicament, challenges the notion of ourselves as isolated individuals encased in discrete bodies, bound by established borders. Who now could deny that to be a body at all is to be bound up with other living creatures, with surfaces, and the elements, including the air that belongs to no one and everyone?

Within these pandemic times, air, water, shelter, clothing and access to health care are sites of individual and collective anxiety. But all these were already imperiled by climate change. Whether

or not one is living a livable life is not only a private existential question, but an urgent economic one, incited by the life-and-death consequences of social inequality: Are there health services and shelters and clean enough water for all those who should have an equal share of this world? The question is made more urgent by conditions of heightened economic



#### A HAZY VIEW OF THE APPROACH TO DUBAI INTERNATIONAL AIRPORT

precarity during the pandemic, exposing as well the ongoing climate catastrophe for the threat to livable life that it is.

*Pandemic* is etymologically *pan-demos*, all the people, or perhaps more precisely, the people everywhere, or something that spreads over or through the people. The “demos” is all the people despite the legal barriers that seek to separate them. A pandemic, then, links all the people through the potentials of infection and recovery, suffering and hope, immunity and fatality. No border stops the virus from traveling if humans travel; no social category secures absolute immunity for those it includes.

“The political in our time must start from the imperative to reconstruct the world in common,” argues Cameroonian philosopher Achille Mbembe. If we consider the plundering of the earth’s resources for the purposes of corporate profit, privatization and colonization itself as planetary project or enterprise, then it makes sense to devise a movement that does not send us back to our egos and identities, our cut-off lives.

Such a movement will be, for Mbembe,

“a decolonization [which] is by definition a planetary enterprise, a radical openness of and to the world, a deep breathing for the world as opposed to insulation.” The planetary opposition to extraction and systemic racism ought to then deliver us back to the world, or let the world arrive, as if for the first time, a shared place for “deep breathing”—a desire we all now know.

And yet, an inhabitable world for humans depends on a flourishing earth that does not have humans at its center. We oppose environmental toxins not only so that we humans can live and breathe without fear of being poisoned, but also because the water and the air must have lives that are not centered on our own.

As we dismantle the rigid forms of individuality in these interconnected times, we can imagine the smaller part that human worlds must play on this earth whose regeneration we depend upon—and which, in turn, depends upon our smaller and more mindful role.

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*Butler is a professor emeritus at the University of California, Berkeley, and the author, most recently, of The Force of Nonviolence (Verso, 2020)*

## The water and air must have lives that are not centered on our own



# CLIMATE'S HOME FRONT

**Americans keep buying houses at risk of fire and flood. What happens to the economy when their values plummet?**

By Justin Worland/Charleston, S.C.

1171 SHOREHAM LOOKS much like it did when Anna Zimmerman lived there: modest but presentable. A good starter home for Zimmerman and her husband when they bought it in 2005, for a while it provided an idyllic existence in suburban Charleston, S.C., a community of friendly neighbors for their young child, a quaint backyard and even space for Zimmerman's mother-in-law. Then, in 2015, the first flood hit, taking most of their property with it after a heavy

PHOTOGRAPHS  
BY LYNSEY  
WEATHERSPOON  
FOR TIME



rain. This came as a shock; no flood risk had been disclosed when Zimmerman bought the house. But, determined to turn lemons into lemonade, she used the insurance money to fix it up just as she liked. “I would have been happy living in this house into retirement,” she says now, looking up at it from across the street.

Then came Hurricane Irma in 2017. Water inundated the house, destroying virtually everything up to the waist. The insurance adjuster declared the home a total

loss, and Zimmerman was left with two options: use the insurance payout—and a considerable amount of her own money—to rebuild, or collect the cash and sell the house to any one of a bevy of real estate investors eager to flip it.

Zimmerman couldn’t fathom rebuilding when she knew the home would flood again, and selling it to a flipper felt wrong, because eventually it would just end up in the hands of another unsuspecting buyer enticed by a newly refurbished home. So she began the long process of trying to unload the property in a manner that she considered ethical. She unsuccessfully pursued a government program that buys out homes prone to flooding, and even explored razing the home herself, but abandoned that idea when she realized she would have to settle the mortgage, take out a loan to tear down the house and still pay taxes for the vacant lot. Defeated, she let it go into foreclosure.

It was all in vain: today, the home, owned by Fannie Mae, is listed for sale. The walls—on which Zimmerman had painted warnings like MOLD IN WALLS—have been painted over, and a local broker’s listing offers no mention of a flooding problem. The real estate agent declined to comment; a Fannie Mae spokesperson said the company is working to assess how climate change will affect its business, and pointed to

“insurance options and risk mitigation tools to protect homeowners, creditors and our company.”

Most of the homes on Shoreham Road look charming, with fresh paint and attentive decoration. Zimmerman walks me down the street, house by house, telling stories of former neighbors, almost all of whom have relocated. There’s the old man who had little family of his own and enjoyed when Zimmerman’s father visited; the neighbors whose kids would play with her child; and the home bought by a recent college graduate. But for all the variety in the lives of the people living in them, there’s a sameness to the stories of many houses: flood, hasty sale, repeat. Annual flood days in the city increased 750% from 1980 to 2020, according to data from the National Weather Service, and there are tell-tale signs all over. In wealthier neighborhoods, historic homes are discreetly being elevated at costs that can run to several hundred thousand dollars. Elsewhere, a careful eye can make out the watermark from a previous storm several feet off the ground on the walls of some homes.

So, how much is Zimmerman’s old house worth? Fannie Mae listed it for \$210,000 before reducing it to \$199,900, and Zillow says it’s worth up to \$221,000. A comparably sized home across the street sold for



**ZIMMERMAN OUTSIDE THE CHARLESTON HOME SHE OWNED FOR 12 YEARS BEFORE HURRICANE IRMA SEVERELY DAMAGED IT**

\$231,000 last year, and others on the street have sold for more in recent years. But, at the same time, the house next door was recently bought by the city and razed because of flood risk.

These may sound like parochial concerns specific to Shoreham Road and Charleston, but they actually reflect the types of questions homeowners around the U.S. may soon be asking. Millions of American homes are vulnerable to flooding, wildfires and storms, and they will only become more exposed as the effects of climate change worsen. There’s no universally agreed-upon estimate for the total value of real estate at stake, but experts agree that the number is enormous. Research from the First Street Foundation, a nonprofit research group that studies flood risk, estimates that flooding alone already results in \$20 billion in property loss annually and that this figure will grow to more than \$30 billion in 30 years. A report from reinsurer Swiss Re found that last year extreme weather caused a total of \$105 billion in insured losses in North America. In California, \$2 trillion worth of real estate sits in areas most at risk of wildfires, according to real estate brokerage firm Redfin.

Increasingly, experts see a collective threat to the U.S. economy. As the risks of owning a home in places affected by climate change stack up, economists and policymakers say climate-

## The house next door was bought by the city and razed because of flood risk

induced flight from threatened areas could shock the U.S. economy as home prices plummet, lending dries up and the local tax base diminishes in hard-hit regions.

"The degree of capital reallocation and the speed of that is going to be larger and happen more quickly than most market participants expect," Brian Deese, President Joe Biden's chief economic adviser, told TIME last year when he was the head of sustainable investing at BlackRock. Zimmerman calls herself "the canary in the coal mine." She may be one of the first, but if the U.S. doesn't heed her warnings, she won't be the last.

**THE FIRST MESSAGE** real estate investor Derick Herring sent to Zimmerman came via text. "Do you own 1171 Shoreham Rd? If so my partner and I are interested in buying it. Got any interest in selling?"

Zimmerman was honest from the beginning. She told him that it had flooded multiple times, cited an estimate from a structural engineer that it would cost \$180,000 to elevate and said that a lawyer had advised her that selling would expose her to legal liability. "Someone is going to get stuck with a serious lemon," she texted back.

"I am still interested," he replied. Eventually, despite never meeting in person, he sent her a written offer and a contract. Herring wasn't the only one, but he was one of the most aggressive. In 90 pages of text messages and emails shared with TIME, Zimmerman batted back attempts to buy her home from close to a dozen flippers.

A similar pattern has played out in the wake of disasters across the country. Homes are destroyed, but



buyers are undeterred—whether because of the influence of home flippers, a lack of reliable information about a home's risk, or simple carelessness. The net result is that threatened homes keep changing hands each year, leaving buyers, the banks that lend to them and the federally backed entities that guarantee them vulnerable to a climate-driven crash.

In Houston, for example, real estate agents worried in the immediate aftermath of Hurricane Harvey that the storm would depress the city's real estate. But data from the Houston Association of Realtors show that instead of driving people away, sales surged in the months following Harvey. The stabilization is at least in part the result of the \$1 billion that, according to the *Houston Chronicle*, investors had planned to pour into the city's real estate market post-Harvey—from individuals buying up single homes to institutional

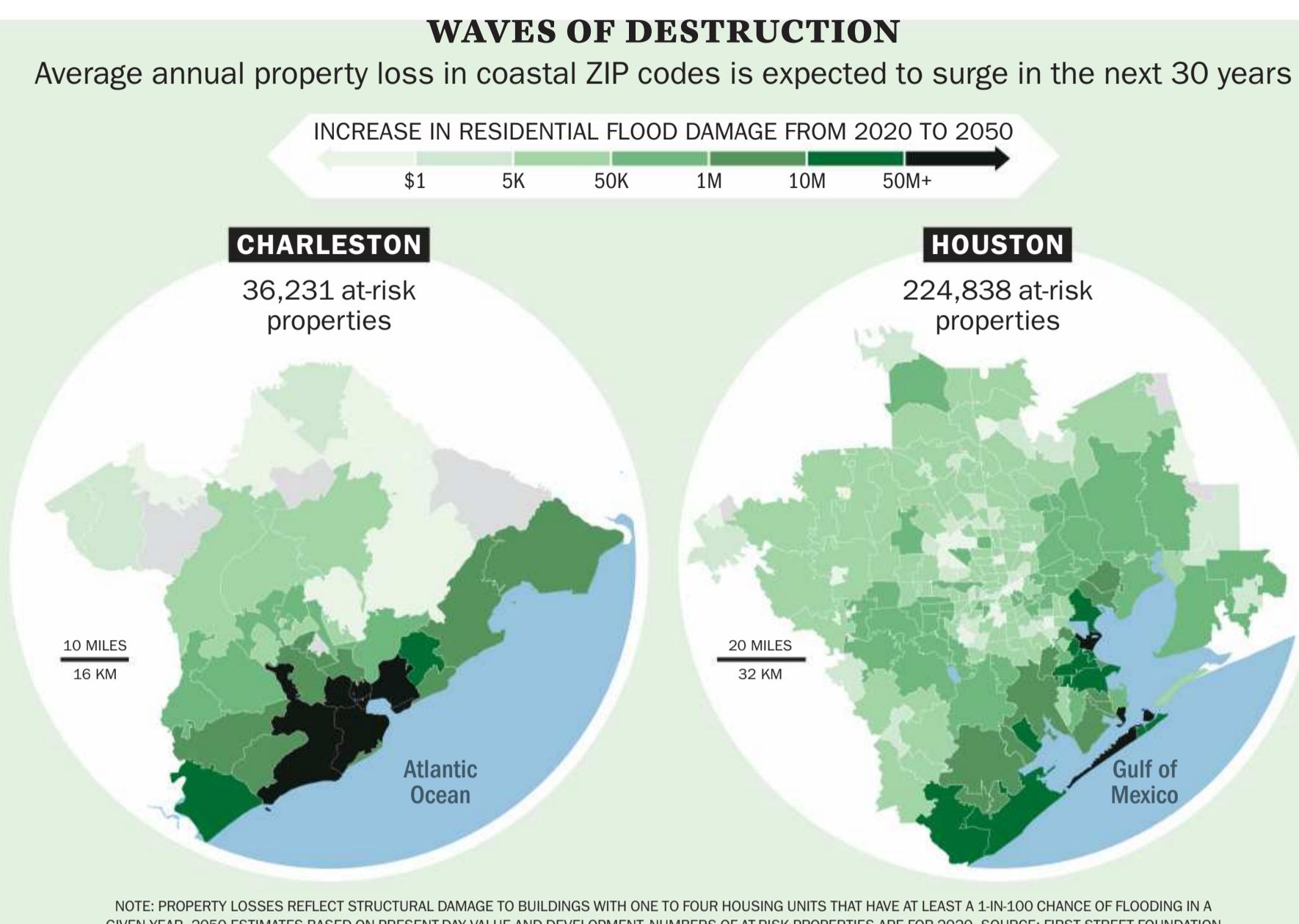


A HOUSE IN DOWNTOWN CHARLESTON THAT WAS RAISED TO MITIGATE DAMAGE FROM FUTURE FLOODS

investors based elsewhere.

"Hurricane Harvey was enormous," says Brian Spitz, president of Big State Home Buyers, which buys distressed homes in Texas. "We probably tripled or quadrupled our volume for a short period of probably four months."

Even without the home-flipping business, buyers often struggle to ascertain a property's vulnerability to climate risk. No national rule guides climate-risk disclosure. A patchwork of state and local guidelines of varying strength set the rules. Even in places that do mandate disclosure—like Texas—complicated terms like *100-year floodplain* and *regulatory floodway* can confuse buyers. (Some 21 states don't have disclosure rules at all, according to the Natural Resources Defense Council.) The result is that many underestimate their risk: a 2017 study published by the National Bureau of Economic Research (NBER),



for example, found that nearly 40% of Rhode Island residents living in a flood zone weren't worried about flooding even as odds of flooding during the life of their mortgage topped 25%.

An even more confounding challenge is that climate-related risks are occurring in places where they haven't in the past, and their range will only grow in the future. A would-be home buyer might look at FEMA flood-zone maps that were last updated decades ago and think they are in the clear, but scientists say flood risk has increased markedly. And it's not just in coastal states. Flood risk

has increased in every U.S. region, according to federal data. At the same time, wildfires now threaten many communities that seemed safe. Even drought could threaten home values.

Experts say it's only a matter of time before people wake up en masse to the risk. Data advances have provided new insight into flood risk, and a range of entities, like the website Flood Factor, run by the First Street Foundation, have sought to make that information accessible. In some places that have been hit over and over again by extreme weather in recent years, like Houston,

anecdotal evidence suggests many are on the verge of hitting their breaking point and leaving for good.

"You really can't underestimate the fact that there are households that have been impacted by two to three floods, a pandemic, a winter storm and random hurricanes across the last five years," says Kyle Shelton, deputy director at Rice University's Kinder Institute for Urban Research in Houston. "It's really just an unimaginable burden for many."

While the median real estate price in Houston has risen nearly 20% since Hurricane Harvey, according to data from the Houston Association of Realtors, the growth has not been even. Last year, a report from Freddie Mac found that homes in flood-affected parts of Houston sold for 3.1% less than those in other parts of the area post-Harvey. In low-lying parts of Florida, where flooding is a regular

occurrence, home prices declined by about 5% from 2018 to 2020, according to research published last year by NBER. More than 25% of Americans say natural disasters have made them consider moving, according to a 2020 Redfin survey.

And this might be just the tip of the iceberg, experts say. In the future, more homeowners could default on their mortgages, driving down prices in communities even for those whose homes are less vulnerable. Banks might stop lending, depriving the community of the capital to recover. "Potentially, we're looking at a wave of mortgage defaults that would be similar to the subprime crisis in how it would play out," says Michael Craig, an economist at the Department of Housing and Urban Development. As disaster unfolds, homeowners in cities across the country might start considering their own climate risk and run for the hills.

**IN JANUARY 2020**, just before the COVID-19 pandemic set in, I met with Deese on the sidelines of the World Economic Forum meeting in Davos, Switzerland. He offered a warning about the risk climate change poses to the financial system and mortgages specifically. "When you talk about physical risk, usually the conversation immediately pivots to sort of far-off, long-term risks," he said. "Those risks, while they do accelerate out into the future, are more pressing on the market today than most market participants understand."

For years, climate risk in real estate has been a "known unknown." Think tanks and nonprofits have published research, and policy wonks have discussed it at conferences.

**'We're looking at a wave of mortgage defaults similar to the subprime crisis.'**

—MICHAEL CRAIG, HUD ECONOMIST

Some places have tightened disclosure rules and are considering adaptations to prepare, but at the federal level, things have moved slowly.

That's changed since the Biden Administration entered office. In March, the Securities and Exchange Commission issued a request for input on the potential for new rules that would require firms to evaluate and disclose the risk climate change poses to their balance sheets. Treasury Secretary Janet Yellen has said climate change poses "an existential threat" to the financial system, and created a "climate hub" at her department. FEMA restarted an initiative, known as Risk Rating 2.0, to make the cost of flood insurance better reflect the risk. The rule, which had been halted by the Trump Administration, is expected to raise the cost of flood insurance for nearly 80% of policy holders and, in turn, discourage investment in risky homes.

The day before Biden took office, the Federal Housing Finance Agency (FHFA)—which oversees Fannie Mae, Freddie Mac and other financial institutions that provide more than \$6 trillion in financing for mortgage lending—published a request for advice on new climate policy. The results have been overwhelming, with organizations calling for everything from more transparent disclosure to new policies to ensure risky loans don't end up on the federal balance sheet. "I think it's fair to say there may be no part of our financial system that's more vulnerable to climate and natural disasters than our mortgage-finance system," said FHFA head Mark Calabria at a March 4

listening session.

Many experts remain skeptical that the federal government will have the political buy-in to take on these issues with the focus they require. True reckoning requires hard choices: homes and communities will need to be adapted, while others will need to be abandoned altogether. Some communities have tried to embark on this path. In Scituate, Mass., a town of 18,000 with one of the highest flood-insurance claim rates in the state, officials have laid out a detailed plan that includes elevating roads and homes. On one beach, the town spent \$10 million on a sea wall. Another beach was deemed unfit for such protection, leaving the town to manage a retreat from the waterfront.

Back in Charleston, the cost of flooding is adding up: an analysis from the First Street Foundation suggests that flood damage is expected to cost \$744 million this year. The hard news has started to sink in for some—but not so much for others. Consultants have recommended buying out and demolishing hundreds of properties; thousands more will need modifications. Driving through the West Ashley neighborhood west of downtown, I spot the occasional vacant plot of land, where the city had purchased the property and demolished the home because of frequent flooding. The most startling sight is an empty patch that was once the site of 32 townhomes. Today, there are hardly any signs that the 4.5 acres of grass was once inhabited, save for an errant light pole. The city paid \$5 million for the townhomes. How many more can it afford to buy?—With reporting by BARBARA MADDUX/NEW YORK □

## VIEWPOINT

## A NEW NARRATIVE

**COVID-19 HAS SHOWN HOW DRAMATICALLY WE CAN SHIFT GEARS** BY JOHN FREEMAN

→ Forty years ago, as I was leaving my friend's house to throw a baseball outside, his father stopped us for inspection.

"Where are you going?" Peter's father asked. "When will you be back?" And most pointedly: "Have you done your homework?" Peter had, but I had not. "I'll get around to it," I said.

"Ah, well, here you go." Peter's father put a small round disk in my hand. I turned it over, and on the back printed in green was the word *Tuit*. "You said you'll get a round *Tuit*," he laughed, every bit the corny dentist he was, "now here you go." I still have my *Tuit*. It sits on my bookshelf, gathering questions. Did Peter's father go to a woodworker to have these printed? Did he keep a bag in his car and refresh his pockets daily? Did anyone ever give it back?

I wish there were more *Tuits* in the world, reminding us of what we have yet to do. We'd all have a few. All of us would have received a

few when it comes to climate action. After all, when scientists told us the planet was heating up in the 1960s, killing off species and threatening the delicate balance of the planet's ecosystems, much of the world said, *I'll get around to it*.

When trackable data suggested the warming was increasing, we said it again. Even in recent years, as catastrophic weather events—floods, tsunamis, heat waves, droughts—increased as a result of this warming, many of us and our governments said one more time, *I'll get around to it*.

Across these years, instead of handing out *Tuits*, the world rewarded our laterism with soothing stories. For decades, the energy industry, using paid-for climate deniers, sowed disinformation. Their story was: *It's not as bad as they say*. Or worse: *It's a hoax*.

It has not been open for debate that we are in the middle of a species-threatening

climate crisis for a long time. The buildup of CO<sub>2</sub> in the atmosphere as a result of human activity has already warmed the planet by about 1°C above preindustrial levels, and as a result of this warming, we've seen impacts on a scale not witnessed before in human history. Hurricanes, wildfires, floods. They'll get worse.

Still, even as we stare hard facts in the face, a host of excuses disguised as stories—a whole bag of Tufts—remain in the cultural narrative atmosphere, propping up the magical thinking required to keep delaying action. They included tales like Someone Else Will Fix This (as in *I didn't do this; let the experts deal with it*), Nature Is Meant to Change (as in *So what if we don't have polar bears?*), The Economy Can't Afford It (as in *Going green will wreck our way of life*) and We're Already Doing It (as in *We can recycle and carbon-capture our way back to planetary health*). If you look at them even for a brief moment, all of these tales deserve a Tuit. They have, however, been highly effective at one thing: allowing us to do nothing drastic.

And here we come to the most destructive story of all to emerge in recent years, one that



many who believe the climate crisis is existential often tell. It says: *We are not capable of drastic change.*

Around the world, but especially in the U.S., this story tells us human civilization cannot make rapid adjustments to the way we live, and survive those changes. If you live in the U.S., this feeling is

ILLUSTRATION  
BY ELLEN  
WISHART  
FOR TIME

entirely justified. Film of unarmed Black civilians being shot by police cannot lead to the conviction of officers? During a pandemic, billionaires' wealth grew by astonishing amounts, but a minimum wage guarantee is too expensive?

Change matters. Study after study shows that if sustained long term, a sharp reduction in carbon emissions will have immediate effects. If we can globally get to net-zero carbon emissions by 2050, we can keep temperature increases across the world to 1.5°C. To

reach these targets, though, we don't simply need change, but drastic change.

There is an example of this. During the pandemic, businesses, governments and people made sudden, severe changes to stay safe. People stayed indoors for weeks. Some for months. They didn't hug or shake hands. They wore masks. They worked a job and taught their children. Here was an immediate threat to life, and were it not for these drastic changes, scores more would have died. We face a similar threat, but one with a much longer lead-up. If we do not reduce the amount of carbon in the atmosphere, big parts of the world will be uninhabitable in our lifetimes.

There are not enough Tufts in the world to allow us to stay out of this one. But there is one story staring us in the face. We can change, we can change rapidly, almost overnight, altering almost entirely our way of life. It would be good if our leaders reminded us of this, and made the case scientists know well: it's not too late.

*Freeman is the editor of Tales of Two Planets: Stories of Climate Change and Inequality in a Divided World*

## Even as we stare hard facts in the face, a host of excuses remain

FICTION

# WHEN THE RAIN STOPS

BY BRYAN WASHINGTON

Washington is a writer from Houston and the author of *Lot* (2019) and *Memorial* (2020). He wrote this work of fiction for TIME.

→ WE HEARD ABOUT THE STORM A WEEK before the rains. Manny figured they wouldn't be a problem. Jae disagreed. The news called it a minor inconvenience—a flash flood at most—but we'd learned not to lean too deep into forecasts.

In the morning, Houston felt sticky. Our heels slapped across the floorboards. We plodded around the house, yawning and stretching and tugging at our boxers. Manny went straight for the vegetable garden, but Jae took his time with breakfast, stirring a pan of eggs, slipping everything inside pieces of toast. Between mouthfuls of sandwich, he swore we'd end up packing everything growing out back anyway—there wasn't really a point to tending them now.

Our state's seen 11 straight years of record-breaking hurricanes. Houston's caught like eight of them. And even though the government calls it cyclical, locals know better. Rains start earlier. Winds only ever increase. If you're in the Loop, then you'll likely end up halfway underwater. And if you've got cash, then you're probably safe, but if you actually had money, then you'd already probably left.

Still, though. We prepared. Boarded the cauliflower shed and packed the cucumbers that we could. Manny drove into town for water, because Jae hated the highway, and I stooped beside him boxing and boarding the beans and the broccoli and the kohlrabi.

A few hours later, we hunched over the season's spread. I asked Jae if he thought this would be a big one or the Big One or

just another one, and Jae shrugged before he asked me if it honestly even mattered.

But we'll manage, he said, rubbing a turnip, and this is when Manny pulled into the driveway, blasting his music, yelling about the traffic on 59-North.

I MET JAE AND MANNY ACCIDENTALLY. Years back. I'd gone out for a drink in Montrose, before another storm, cruising for sex before everything shut down, and after I ended up following them home the rain started falling and it just didn't stop for like nine days.

The couple put me up for the night. One night became two. A week later, I thought they'd kick me out, or that things might turn jealous and cold—but they didn't. And they weren't. Manny and Jae made space at their dinner table. Tossed me cushions on their sofa. I'd lean barefoot over their sink, waddling naked from their bathroom to their bedroom and back—until, one day, eventually, they felt as much of a part of my life as anything else.

They'd been farming in Alief for nearly a decade. Manny's family owned a tortilleria in the Heights. Jae had fled a tech gig up in Austin. In bed with the two of them, we fit together like matchsticks, and Manny snored, loudly, so I buried my ears in Jae's chest.

When the rain stops, I said, I'll go home, and the two of them laughed.

Good luck with that, said Manny.

Really, said Jae.

THE FORECAST WORSENERED the next few days. At first, we sat just out of the storm's way. Then its trajectory found us. The storm widened until it became a tropical threat, and then a hurricane, and then a deadly one—the morning before it reached land, Houston stood square in the center.

So Manny joined Jae and me in the yard, grumbling under his breath. And some neighbors dropped by too, congregating before the first clouds fell: Fernando leaned against the fence, asking what we thought about the rains. When Julie passed by, dropping off a jar of broth, she and Jae gossiped in Korean while Manny and I fondled tomatoes. Mabel brought





ILLUSTRATION  
BY HOKYOUNG  
KIM FOR TIME

us a casserole plate—which she traded for a set of jumper cables—and Leticia offered us extra batteries, which we accepted, gratefully. Eventually, Mai’s son called out from the sidewalk, asking if we had extra water, and Jae mumbled about that under his breath, but Manny always made sure to spot their family an extra case.

This was another thing that had changed: back when I was a kid, everyone in the city weathered the storms on their own. You made it through or you didn’t. Rebuilt with what you could. But with storms only getting worse, working together became a necessity—it was how you made it to the *next* storm—and we didn’t have to ask our neighbors for help. It was just something that we did.

That night, the wind picked up. Our house began to shiver, and the sidewalk started to patter. But it wasn’t long before Mai’s son rang the doorbell, again, holding Tupperware full of warm che choui, as a thank you. Before the kid could sprint back home, Jae asked if he wanted to share it—and the four of us stood in our doorway, spooning bites from the plastic tin and grinning under the drizzle.

**RAIN ARRIVED GRADUALLY**, blanketing the block. Then it simply didn’t move, cascading

across the city. We heard the wind and we saw the water and it didn’t rise or fall—it simply never stopped. No one knew when it would.

In bed, the three of us huddled together, whispering. At some point, our snores and the rain became indistinguishable. We’d eaten stewed pinto beans that evening, tucked inside of the hallway, half-listening to the radio and flexing our toes against the rug. We all knew that living in the bayou was a contract: if you wanted to enjoy the city, then you had to deal with its woes. Manny said we’d find a way through the worst of the storms to come, and Jae called it inevitable that we’d have to leave one day.

But I knew that either way, the problem wasn’t *if* but *when*. There would be no in between. Eventually, there wouldn’t even be a question at all.

#### AND THEN THE WATER stopped falling.

A few hours later, I tiptoed across the patio. Saw the usual debris: mangled branches and overturned plants and stray piles of trash strewn across the road. The air was almost unbreathable. You couldn’t help but inhale bales of humidity. Walking down the block, I waved at Mabel, and I saw Julie staring at her porch, taking stock of the damage. Mai and her son walked the block too, and I waved their way, and they waved back. I wandered through the neighborhood, and patches of folks popped up from street to street—we all wore the same face, a blend of awe and disbelief.

When I made it back home, Jae and Manny were outside rummaging. The shed leaned from the brunt of the wind, but despite everything, it stood upright. Jae reached through the door, searching for vegetables to salvage, and Manny told him to relax because we’d been lucky considering. But Jae kept digging, until, eventually, he pulled a plant from the rubble.

It looked a little ugly. But still—it was a miracle. A bright, shining thing. And despite myself, I cheered. And Manny did too. Jae held the tomato up, beaming for the sun, urging it to grow. □

**CHINA WATCH**

PRESENTED BY CHINA DAILY

中国日报

# A PEEK BEHIND THE MASKS

Freshly unearthed treasures will help answer questions about mysterious ancient culture

BY WANG KAIHAO



**FROM TOP:** A grand bronze mask unearthed from No. 2 pit in 1986.

WANG KAIHAO / CHINA DAILY

A bird-shaped gold foil recently discovered at the Sanxingdui site.

JIANG HONGJING / XINHUA A part of a broken ivory statue unearthed from No. 5 sacrificial pit.

PROVIDED TO CHINA DAILY

Archaeologists dream of having the chance to excavate something like this, so for Lei Yu this is the ultimate prize.

Lei, chief archaeologist in charge of the Sanxingdui Ruins site in Guanghan, Sichuan province, dating back more than 3,200 years, thought it would have long ago offered up all of its most stunning artifacts. The accidental discovery of two "sacrificial pits" — at least, considered as such by most scholars due to the smashed and burned objects there — in 1986 was incredible.

Then, more than 1,000 artifacts were recovered from the No. 1 and No. 2 pits of Sanxingdui, including numerous bronzeware items with exotic markings, as well as figurines, human face masks with protruding pupils and an exquisite 3.95-meter-tall (13 ft.) "divine tree", believed to have been worshipped as a ladder to heaven.

Sanxingdui was discovered in 1929, and the first scientific excavation was carried out in 1934. It was led by David Crockett Graham, a scholar from the United States. He was also a museum director in Chengdu. But decades of upheaval that followed interrupted work on the site, and its significance was not recognized until the discovery in the 1980s.

"Our archaeological investigations in Sanxingdui



A newly found 28-centimeter-tall gold mask from No. 5 pit at the Sanxingdui site.

JIANG HONGJING / XINHUA

have never stopped," says Lei, a researcher with the Sichuan Provincial Cultural Relics and Archaeology Research Institute. "But no one really believed there could be more sacrificial pits."

Ruins of city walls, foundations and tombs have been continuously unearthed within the 12-square-kilometer (2,965 acres) area of the Sanxingdui site — the biggest prehistoric city ruins on the upper reaches of Yangtze River — which resulted in archaeologists switching their focus to look for a high-level mausoleum.

Sanxingdui, though, had more to offer.

From 2019 to 2020 six more pits (No. 3 to No. 8) — ranging from 3.5 square meters to 19 square meters — were found near the original pair and since October about 500 artifacts have been unearthed in a detailed excavation.

As soon as Lei's team announced the discovery in Chengdu, Sichuan's capital, on March 20, China's social media was abuzz with public enthusiasm.

Lei's team has uncovered a long list of possible national treasures, and while the bulk of the recent findings have mainly come from pits 3, 4 and 5, the tips of some objects have begun to peek through the dirt in the other three.

A gold mask unearthed from No. 5 pit, sporting similar exotic features to those of the previously unearthed bronze face masks, is one of the highlights of the newly excavated items. Bronze masks and divine trees continue to appear, along with more than 100 ivory tusks. Charred sculptures and jade may add further proof to archaeologists' speculation as to the sacrificial status of the pits.

"The quality of the bronzeware could be even better than the items found in 1986," Lei says.

But newly found types of bronzeware raise more questions. For Lei, further study is still required to explain, for example, an animal decoration with an ox's head and a dragonlike body.

A 1.3-meter-tall artifact, a kneeling human figurine carrying a vessel over its head, is also a puzzle.



**“THESE MIXTURES REFLECT ANCIENT SANXINGDUI DWELLERS’ BRILLIANT IMAGINATION.”**

**LEI YU,**  
CHIEF ARCHAEOLOGIST IN  
CHARGE OF THE SANXINGDUI  
RUINS SITE IN GUANGHAN,  
SICHUAN

“These mixtures reflect ancient Sanxingdui dwellers’ brilliant imagination,” Lei says.

When the exotic and mysterious artifacts were first discovered in 1986, myriad theories captured the public imagination, none so compelling as that claiming extraterrestrial influence on Sanxingdui culture.

“New archaeological findings could guide the public back to a scientific approach to figuring out the origins of Sanxingdui culture,” said Zhao Congcang, a professor at Northwest University in Xi’an, Shaanxi province.

“Cultures are created by people. If we can answer some questions about the people of Sanxingdui, the mysterious parts of their culture may be more easily decoded.”

So who were these people?

For researchers, the closest answer may be the ancient state of Shu, which lasted for more than a millennium until it fell to the powerful Qin state during the Warring States Period (475-221 B.C.). The Shu state left many legends but the historical recordings are insufficient.

An academic project was undertaken to gain a more comprehensive understanding of the ancient Shu state (Sichuan is still sometimes colloquially called Shu today). If it were not for that project, the abundance of artifacts in the news today would probably still remain unknown.

Foundations were also recently found nearby, Lei says.

“That helps us to have a basic understanding of the layout of the sacrificial zone. Our next step is to unveil their ritual system.”

In the newly found pits, objects similar to those dug up in the two pits dug in 1986 were found. Small items of bronzeware were at the bottom, with larger bronze items above, and the upper surfaces were paved with ivory.

Sun Hua, a professor at the School of Archaeology and Museology at Peking University, says it is possible that deeper study of the pits, their construction style and foundations will offer an insight into the interior of a prehistoric shrine.

“Religious rituals often represent the highest-level ceremonies. We’ve seen constructional remains of contemporaneous shrines in the rest of world, but they are empty now.

“If we can recover a whole set of ceremonial artifacts used in sacrifices that date back more than 3,000 years, that will be an exceptional reference from which to comprehend the religion of the Shu people and their view of the universe.”

New discoveries may connect mythology passed down for generations to more facets of a prosperous civilization through details of the lives of the Shu people.

Due to the mountainous landscape surrounding Sichuan, in ancient times the region was considered to be relatively isolated. In a stanza written by the great Tang Dynasty (618-907) poet Li Bai, he describes the road to Shu as “even more difficult than stepping into heaven”.

Nevertheless, the findings in the Sanxingdui pits indicate the connection between the region and the outside was commonplace.

### Timeline of discoveries

**•1929**

Site discovered by Yan Daocheng, a villager who accidentally uncovered jade and stone artworks when digging a ditch.

**•1934**

U.S. archaeologist and anthropologist David Crockett Graham, director of the museum of West China Union University (today part of Sichuan University), leads the first archaeological dig at the site.

**•1956**

Site investigation confirms it is roughly from the time frame of the Shang Dynasty (c.16th century-11th century B.C.) to the Western Zhou Dynasty (c.11th century-771 B.C.).

**•1964**

A team of scholars from Sichuan Museum finds a pit of stone artifacts near the first site discovered in 1929.

**•1980**

An independent “Sanxingdui Culture” is certified by academia for the first time following further excavation, which finds tombs and remains of small-scale construction.

**•1986**

The discovery of No. 1 and No. 2 sacrificial pits, with a hoard of unearthed artifacts, is a milestone in the research of Sanxingdui Ruins.

**•1988**

City walls of Sanxingdui Ruins located. The ruins are listed as a national-level key heritage site.

**•1997**

Sanxingdui Museum opens to the public.

**•2001**

Numerous items of pottery as well as stone figurines and jade artifacts are found during a large-scale excavation.

**•2012-17**

A comprehensive survey of Sanxingdui Ruins is made by the Sichuan Provincial Cultural Relics and Archaeology Research Institute with follow-up excavations of city walls and graveyards.

**•2020**

Six sacrificial pits found near No. 1 and No. 2 pits. Excavations continue.

**•2021-25**

Formal excavation reports on Sanxingdui Ruins will be published.

**Wang Kaihao**

TIME



# It's not just you

Big-hearted advice for anxious times



BY SUSANNA  
SCHROBSDORFF

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# Time Off

ALL THAT GLITTERS  
How Oscar gold got democratized by our pandemic reality

INSIDE

ARE CELEBRITY MEMOIRS  
GETTING BETTER?

KATE WINSLET COMES TO  
THE SMALL SCREEN

ILLUSTRATION BY BETH WALROND FOR TIME

*Time Off* is reported by Simmone Shah

# TimeOff Opener

MOVIES

## The year the Oscars came down to earth

By Stephanie Zacharek

**Y**OU CAN PRETEND NOT TO CARE ABOUT THE Oscars, but even the most hardened souls secretly thrill to their glamour. The sometimes heartfelt, sometimes pretentious speeches; the occasional surprise underdog winner; and for sure the gowns—the tradition of the event still means something.

But this year's Academy Awards ceremony, on April 25, has demanded some imaginative compromises on the part of both attendees and producers—one of whom is Steven Soderbergh, head of the Directors Guild task force on COVID-safe film production. Last year, in the midst of pandemic uncertainty, the Academy pushed the awards from their scheduled date, in February, to late April. The initial hope was that the pandemic would be well under control by then, and that movie theaters in all states would have reopened. We all know how *that* went.

And now our strange year of movie watching—one year, plus, of having to watch movies designed for big screens on small ones—will be celebrated in a similarly unconventional Oscars ceremony, a sort of live event-Zoom hybrid. Everything about the upcoming ceremony has felt uncertain, a little improvisational and therefore a little more thrilling. The vibe this year is different, not just in terms of the reformulated ceremony, but also in the choice of nominees. It's as though the Academy, like so many of us, somehow recognized it needed to change not just its way of watching, but also of *seeing*. Hollywood, arguably the most ego-filled industry in the world and run largely by control freaks, has been humbled—if only temporarily—by a public-health crisis it had no way of controlling. If the glamour of the Oscars has always been presented as aspirational, this year it's meeting us on our home turf: a world where we must compromise on certain things we can't change, even as we force change on the things we can no longer live with.

The Academy Awards will be one of this year's first major entertainment ceremonies to be conducted at least partially live, taking place on two sites in Los Angeles: Union Station and the awards' usual venue, the Dolby Theatre. Strict protocols will be observed; the event will be treated as a COVID-compliant movie set. (Soderbergh isn't fooling around.) Attendees will be limited to nominees and their guests and presenters. Originally, Zoom attendance wasn't even an option, although the organizers have since loosened that restriction. Presumably, there will be some form of red carpet, and casual attire—that means you, sweatpants—has been strongly discouraged.

No one knows what our next new normal will look like, but the Oscars are determined to set one bejeweled sandaled foot into it, no matter what. This is strangely heartening. Who among us hasn't had to rethink almost every



Alexander Nanau's *Collective* is nominated for Best Documentary Feature and Best International Feature

Frances McDormand in Chloé Zhao's Best Picture contender *Nomadland*, nominated in several categories

routine this year? Similarly, the lead-up to the awards has been low-key but also more intimate. And this year, unlike other years, just about anyone who cares to see the nominated movies—and can find the time—can mostly do so from home. That alone could make the event more egalitarian and engaging for most people. At the least, it should give them more favorites to root for.

**BECAUSE MIRACULOUSLY ENOUGH,** the quality of the movies on offer this year didn't suffer because of the pandemic. Obviously, most of the releases were completed well before it kicked in. But the postponement of certain big-ticket releases—among them *No Time to Die*, *West Side Story* and *In the Heights*—didn't mean we saw fewer good movies. It simply meant that a different type of good movie was more likely to grab the Academy's attention. The most glittering example is Romanian filmmaker Alexander Nanau's *Collective*, a superb documentary about the aftermath of a



◀ The late Chadwick Boseman earned a Best Actor nomination for his role in *Ma Rainey's Black Bottom*



▲  
Lee Isaac Chung's *Minari* has nominations in several categories, including Best Picture

deadly 2015 nightclub fire in Bucharest. In any normal year, *Collective* might have attracted attention in the Documentary Feature category, but this year, it has been nominated for International Feature as well. That's unusual for any documentary, but even more so for a Romanian one dealing with an intense subject that may seem—although it isn't—remote from American interests.

Our strange viewing year has changed the awards landscape for fiction features too. For years, the classy, grownup *A Beautiful Mind*-type movies have generally flowed into theaters beginning in early fall. This year, those prestige-movie slots were filled by Netflix releases: *Mank*, David Fincher's paean to *Citizen Kane* screenwriter Herman J. Mankiewicz, and *The Trial of the Chicago 7*, Aaron Sorkin's 1960s-set historical drama,

have both been nominated for Best Picture, among other categories.

But if it's not surprising that the Academy would notice attention-grabbing Netflix releases like these, some of the other Best Picture nominees tell a different story. This year marks the first time two pictures by Asian or Asian-American directors—Lee Isaac Chung's *Minari*, a semiautobiographical drama about Korean immigrants starting a farm in 1980s Arkansas, and Chloé Zhao's *Nomadland*, a fictional story set against the real-life backdrop of “houseless” Americans living on the road—have been nominated for Best Picture. What's more, Zhao is the first woman of color to be nominated for Best Director.

**THIS IS GOOD.** But let's not give the Academy too much credit just yet. We'll know more when we see what they choose to honor next year, and the year after that. Yet for now, the nominees across all categories show more imagination than usual—albeit with some enigmatic Academy logic thrown in. Shaka King's potent and timely historical drama *Judas and the Black Messiah*,

which tells the story of Black Panther leader and activist Fred Hampton, has earned nominations in several categories, including Best Picture. Even so, the categorization of two of the film's award nominees represents typical Academy weirdness: Daniel Kaluuya's portrayal of Hampton and LaKeith Stanfield's performance as William O'Neal, the FBI informant who betrayed him, have both been recognized in the Supporting Actor category, although these actors are indisputably the movie's co-leads. As the Oscars remind us every year, you can't have everything.

But incremental change is better than no change at all. In another milestone, this is the first year the Best Director category has included two women, Zhao for *Nomadland* and Emerald Fennell for her candy-colored feminist polemic *Promising Young Woman*. (Both films have been nominated in the Best Picture and screenplay categories as well.) And across all acting categories, the Academy recognized great performances by Black actors, including a posthumous nomination for Chadwick Boseman, for his portrayal of an ambitious, dazzling jazz trumpeter in *Ma Rainey's Black Bottom*, and for Andra Day, who, in *The United States vs. Billie Holiday*, gave us a portrait of the revered singer as a woman who was as defiant as she was fragile. What's more, Steven Yeun, a gifted but long underappreciated actor, has finally earned Oscar attention for his leading role in *Minari*, as a Korean-born aspiring farmer striving to build a life for his family.

Do these shifts in the Academy's thinking mean that its voters, like many of us, are trying to reckon with a radically changed world, one shaken not just by a pandemic but also by explosive racial injustice and violence? It's hard to measure any group's thinking across a span of only a year, and change so often creeps in, over time, from the margins. It might be wiser to look at these nominees in the context of how, after our pandemic year of watching, we're different, rather than how they're different. If we've somehow opened ourselves to a wider range of experience, in a year when we could barely leave our living rooms, that has to count as a silver lining. □

# TimeOff Books

FEATURE

## The radical honesty of celebrity memoirs

By Cady Lang

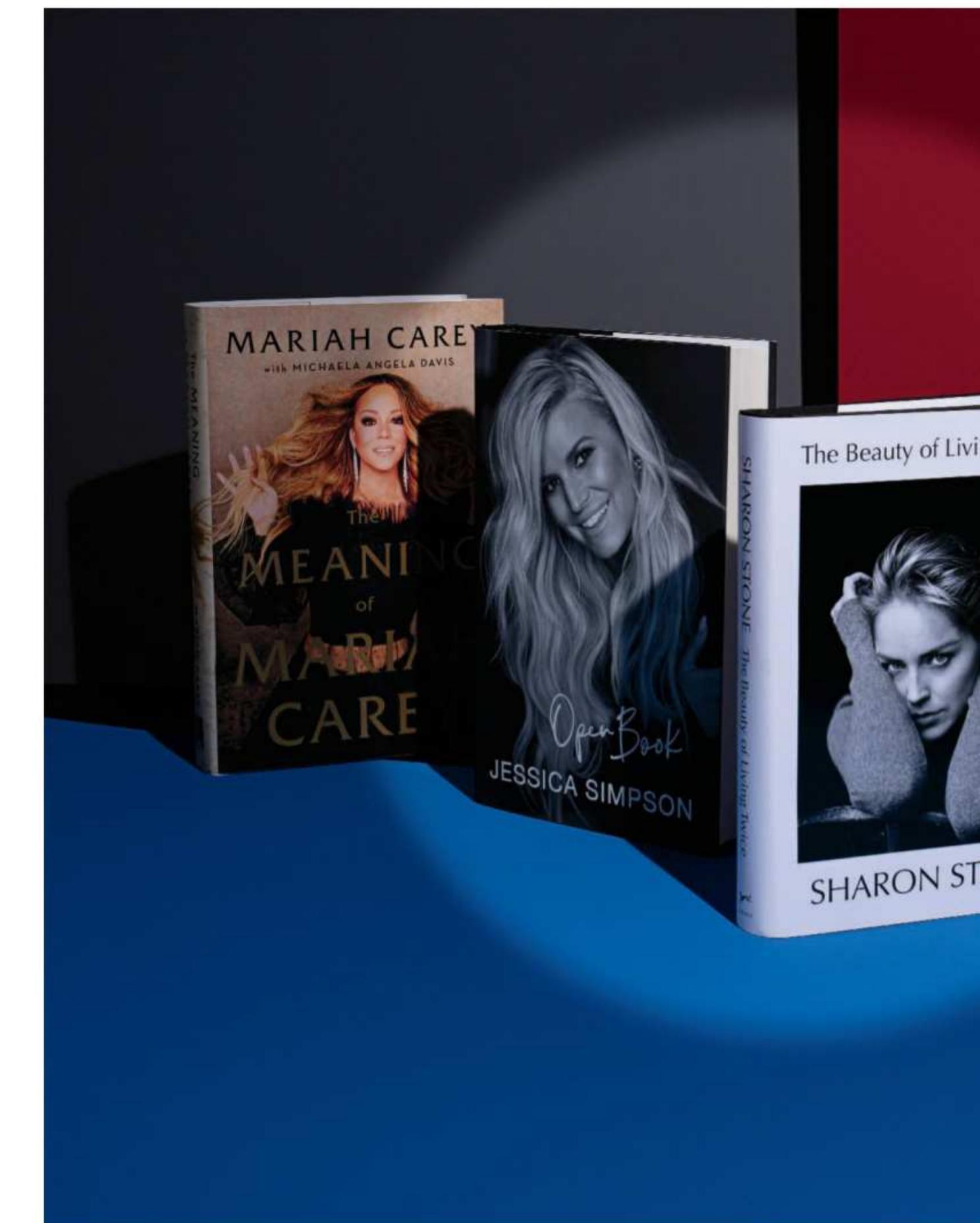
**S**HARON STONE WANTS YOU TO KNOW THAT she's a survivor. And it would be easy to assume that her new memoir, *The Beauty of Living Twice*, draws its title from its opening passage—which describes her 2001 hospitalization after suffering a brain hemorrhage and stroke that left her with a 1% chance of survival. But the book contains an entire lifetime marked by beating the odds.

Stone details miraculously surviving near-decapitation, being struck by lightning and walking away from her totaled car after skidding on black ice. The most compelling passages, however, are the clear-eyed, and at times brutally honest, recollections of how she's persevered in the wake of trauma inflicted not by nature or accident but by other people, ranging from the physical and sexual abuse she experienced as a child to the many ways her consent has been undermined at work and beyond.

In spite of Stone's four decades in the industry, *The Beauty of Living Twice* is far from the glitzy account of Hollywood that readers might expect. Instead, it shows a woman who's spent the majority of her years in the public eye seizing the opportunity to tell her story entirely on her own terms.

And Stone is not alone—her book is one of a handful of recent celebrity memoirs that are refreshingly rich counterparts to the more traditional glossy offerings of the genre. Celebrities have long tended to treat publishing so-called tell-all as a means to revive a fading career, reach fans in a new way or simply develop another revenue stream—all while staying within the bounds of delivering flattering self-portraits and a few carefully considered personal revelations designed to spark media attention. But a new group of megafamous women have recently set their intentions on a new goal: writing truly compelling books. From Stone's new release to Jessica Simpson's delightfully sincere *Open Book*, Mariah Carey's witty and revealing *The Meaning of Mariah Carey*, and Demi Moore's unflinchingly raw *Inside Out*, the new era of celebrity memoirs is defined by no-holds-barred honesty.

**ONE WAY TO EXPLAIN** this shift is fairly simple: the move toward unfiltered storytelling tracks with the dominance of social media, a tool that has undeniably transformed the celebrity landscape. Gone are the days of the inaccessible, mysterious A-lister of the tabloid era, whose public perception was determined largely by the whims of paparazzi. Now, with platforms like Instagram, access to public figures and the inner workings of their lives are just a screen swipe away—and firmly within their control, making authenticity (or at least the performance of it) the



▲  
*In the new era of  
celebrity memoirs,  
raw honesty outshines  
star power*

key to attracting a loyal audience.

Danny Pellegrino, host of the pop-culture podcast *Everything Iconic*, draws a straight line between the accessibility of celebrities on social media and their understanding of the need to be more forthcoming on the page. "We can't just get the usual fluff, like we could back in the '90s or early 2000s," he says. "We just know too much."

This shift also comes at a crucial moment of reckoning with the destructive consequences of early-aughts tabloid culture and its relentless scrutiny—and particularly, a re-evaluation of the misogynistic narratives spun around women during this time. Recent documentaries about Britney Spears and Paris Hilton show just how much damage constant and oftentimes cruel media coverage caused



them as they were coming of age. Meanwhile, the people who reinforced toxic narratives about young women in public have begun reflecting on their complicity; following the release of the Spears doc, Justin Timberlake wrote a public apology to both Spears, who was blamed for their 2002 breakup, and Janet Jackson, who was scapegoated after their infamous 2004 Super Bowl halftime performance.

It's telling that Simpson—whose career as a singer was often overshadowed by gossipy, belittling narratives—found resounding success last year with her earnest and entrancing memoir. Readers eagerly ate up her candid revelations, no names withheld, about what she experienced on the other side of the coverage that perpetually made punch lines out of her persona, her love life and her body. By sharing her side of the

story, Simpson rewrote her legacy in pop culture, raising essential questions about the ways in which, as a society, we've both constructed and consumed women in the spotlight.

One of the most apt examples of this approach to taking back control of the narrative, and an early example of this rising trend, may be Demi Moore's 2019 memoir, *Inside Out*. The prototype of an A-lister during the tabloid era, the actor was committed to laying bare even the most painful moments of her life in service of telling her full story, making for a read that was not only compelling but also nuanced in its bracing honesty.

To write her book, Moore re-examined the headline-making parts of her career—like once being the highest-paid female actor in Hollywood, and her highly scrutinized relationships with Bruce Willis and Ashton Kutcher—but she also explored intensely private aspects of her history: her turbulent childhood, her parents' substance abuse, a heartbreakingly miscarriage, her own on-and-off struggle with addiction.

"If I really wanted to be authentic, I needed to share my real experience," Moore tells TIME. "To do that kind of glossy version would have cheated me out of the really cathartic and healing experience that it was."

**THIS NEW APPROACH** to celebrity memoirs extends to the writing process itself. Ghostwriters, typically the faceless forces behind many books by famous nonwriters, are now becoming more visible, with celebrities openly teaming up with high-profile professionals. It's a move that aligns with the hunger for realness from the people whose images appear on the books' covers.

Pellegrino, a celebrity ghostwriter himself who worked with reality-television stars Ariana Madix and Tom Sandoval on their book, encourages that candor. "It's best when a celebrity is honest and open about who they're

working with for their memoirs," he says. "The audience knows that—it just helps the celebrity seem more authentic."

Optics aside, a good collaborator can also elevate a project. Although Mariah Carey is notable for her prolific songwriting, she turned to veteran editor and writer Michaela Angela Davis for help with crafting her 2020 book, *The Meaning of Mariah Carey*. The choice was fitting: Who better to co-write a memoir that explored Carey's racial identity and time in the music industry than Davis, a former editor for *Essence* and *Vibe*? The result was a book that effortlessly channeled both Carey's balladic songwriting style and her trademark humor in telling the story of how a chaotic childhood helped shape the superstar.

Likewise, Moore reached out to Ariel Levy, a journalist at the *New Yorker*, to work on *Inside Out*, noting that because

she wanted to ensure that her memoir would be a "good book," she wanted a collaborator with experience. That Levy had also lost a pregnancy, which she wrote about in her own 2017 memoir *The Rules Do Not Apply*, provided a point of deep connection and trust for the pair, both of whom consider the book to be a true collaboration. For Levy, Moore's opportunity to reclaim the narrative was one of the highlights of the work.

"Anybody who's had a public persona knows that they're not in charge of it," Levy says. "But with this story, she was calling the shots. It was thrilling to work on it with her because she knew that it was her story—she was really brave and really went there."

That sentiment gets at the heart of why this new crop of books has resonated with both those who are pop-culture-obsessed and those who are simply in it for a good read. The appeal lies not in tabloid-style nuggets of gossip, but rather within the wholly relatable power of sharing your story on your terms. □

**'To do that kind of glossy version would have cheated me out of the really cathartic and healing experience that it was.'**

DEMI MOORE

# TimeOff Television



ESSAY

## When talking heads stop making sense

By Judy Berman

ON MARCH 22, MIDWAY THROUGH A SERIES OF GUEST-hosted shows, *Jeopardy!* fans revolted. Their target was Dr. Mehmet Oz, the latest celebrity to fill Alex Trebek's venerable shoes. As viewers fumed on social media, *Variety* called his appearance a "black eye" on the show and some 600 former contestants signed a letter protesting that he "stands in opposition to everything that *Jeopardy!* stands for." Indeed, Oz had been blasted for pushing weight-loss scams, spreading COVID misinformation, and hosting anti-vaxxers and "ex-gays." That didn't necessarily disqualify him from a two-week gig reading trivia questions and making small talk. But at a time when the idea of objective facts has been so catastrophically eroded, if you can't trust the host of *Jeopardy!*, whom can you trust?

It's not as though Trebek independently verified each answer. Yet in 36 years as host, while the public square grew increasingly polluted by mercenary hucksters and partisan spin doctors, he came to symbolize a respect for pure knowledge. Now, *Jeopardy!* feels sacred because it represents a beloved but endangered aspect of a cultural conversation starved for intellect and insight.

Maybe that explains why we're seeing so many heated controversies emerge among the talking heads who populate game shows and daytime chat programs. Also in March, CBS's *The Talk* panelist and metal first lady Sharon Osbourne exploded when co-host Sheryl Underwood pressed her about defending Piers Morgan against accusations of racism. (In his own on-air meltdown, Morgan had stomped off *Good Morning Britain*

AT A TIME WHEN THE IDEA OF OBJECTIVE FACTS HAS BEEN ERODED, IF YOU CAN'T TRUST THE HOST OF JEOPARDY!, WHOM CAN YOU TRUST?

amid questions about his public disdain for Meghan Markle.) Soon, former *Talk* colleagues were alleging that Osbourne had a history of making racist and homophobic comments. By the end of the month, she'd exited the show.

**MEANWHILE**, on ABC's *The View*, Meghan McCain was tangled in her own racial doublespeak. On his show *Last Week Tonight*, John Oliver had contrasted her recent "Stop Asian Hate" tweet (a response to the mass shooting in Atlanta) with an earlier claim that she didn't have a problem with calling COVID "the China virus." McCain apologized. Then she drifted back to sanctimony. In 25 years on air, she said, *The View* has had only one Asian-American co-host. "Does that mean that one of us should be leaving at some point because there's not enough representation?" she asked. "Is identity politics more important than qualifications of a job?" The daughter of the late Senator John McCain didn't seem to realize she wasn't a shining example of meritocracy herself.

What's dispiriting isn't just the white fragility on display; it's also the shallowness of the discourse from the professional personalities who've replaced public intellectuals in our culture. *The Talk* greets the most intense phase of a society-wide reckoning on anti-Black racism with Osbourne screaming, "How can I be racist about anybody or anything in my life?" We're finally talking about our nation's long history of mistreating Asian Americans, and *The View* marks the occasion with McCain concern-trolling over identity politics. Amid a global health crisis that has killed millions, there's still room in public life—on *Jeopardy!*, no less—for a doctor who has hyped hydroxychloroquine.

It's not that every thoughtful voice has been shut out of the conversation. Scholars like Isabel Wilkerson and literary novelists like Kazuo Ishiguro are still carving out space on best-seller lists. Crucial high-level concepts, from critical race theory to the Anthropocene, are still breaking out of the ivory tower. The problem is with the hacky, ill-informed interlocutors charged with shepherding these ideas into the mainstream. We may not deserve smarter, but we need it. Desperately. □



Krasner vs. the justice system

REVIEW

## A DA who fought the law

The resurgence of the Black Lives Matter movement in 2020 marked a turning point in politics if not in policy. As white liberals got on board, once radical ideas, from defunding police to abolishing prisons, finally entered the political mainstream. But many progressives who saw a need to fundamentally rethink the role of law enforcement still had practical concerns. What would the daily work of dismantling a racist justice system actually look like?

Ted Passon and Yoni Brook offer some compelling answers in *Philly D.A.*, a vérité-style docuseries about civil rights lawyer turned DA Larry Krasner. The directors spent three years following Krasner, who began his term by firing dozens of career prosecutors and installing deputies with activist orientations. In tense meetings, we see what he's up against: inertia, insubordination, police unions. But this isn't propaganda; there are empathetic profiles of his detractors, like the family of a cop who died saving civilians. The takeaway from this overly long but crucial doc? Radical change is very possible—but also extremely difficult. —J.B.

**PHILLY D.A.** premieres April 20  
on PBS

REVIEW

## Winslet cops an attitude

*MARE OF EASTTOWN* SOUNDS LIKE A YA equestrian novel, but in fact it's a poignant, richly observed if occasionally over-the-top HBO crime drama. Kate Winslet's Mare Sheehan is a (human) police detective in rural Pennsylvania. That the show is named for its protagonist and her hometown underscores how vital character and setting are to its storytelling.

Mare is a no-nonsense woman with many obligations and little faith in others. In one scene, we see her driving, choking down a sandwich and lacing into her ex-husband on the phone, all at once. Then, suddenly, she's parked and running after a perp she knows on sight because he's the brother of a woman Mare played basketball with in high school. This is Easttown: a working-class enclave where secrets travel fast.

It's a tough place to be a detective coming up empty in the year-old disappearance of a young woman. Tragedy multiplies as the body of a teen mom—one who had been caught between her baby, the child's resentful father and her own hostile dad—is found in a creek.

With public scrutiny at an all-time high, the chief calls in apparently clueless state detective Colin (Evan Peters)

to assist Mare. But this story is not primarily about mismatched cops forced to work together. Creator and showrunner Brad Ingelsby—a Pennsylvania native whose attention to detail is evident in everything from the local beer to the actors' subtle accents—offsets that familiar dynamic with story lines about the other Sheehans. (Standouts within an excellent cast include Jean Smart as Mare's critical mother and Angourie Rice as her punky, self-possessed teenage daughter.)

Realism might be the hardest aesthetic to do well; one inauthentic touch can take viewers right out of the story. This might explain why there's so much genre fare on TV. So it's no small achievement that Ingelsby, director Craig Zobel and the reliably superb Winslet (all executive producers) mostly succeed. A few silly twists and teases do eventually disrupt the naturalism. But Ingelsby nonetheless captures the texture of rural life in a particular place without the histrionics of a *Hillbilly Elegy*. Easttown isn't an ideal home. Mare isn't an ideal hero. Yet both have something more compelling going for them: they feel real. —J.B.

**MARE OF EASTTOWN** debuts April 18  
on HBO



*The talk of Easttown: unlikely partners Mare (Winslet), left, and Colin (Peters), center*

# 8 Questions

**Jon Batiste** The Late Show bandleader on composing for the movie *Soul*, his new genre-crossing album and learning from Stevie Wonder

**H**ow are you feeling today? I just got the vaccine shot. It's a trip, man. It's an emotional experience. I can't wait to get back on the road and perform again, because I think it'll have a brand-new meaning for me and the audience. I want to go to Japan, Benin, the Congo, Ghana, Russia.

**You and Terence Blanchard became the first Black composers to be nominated in the same year for best score at the Oscars, for *Soul* and *Da 5 Bloods*, respectively. What does that mean to you?** Terence and I went to the same high school in New Orleans. We had all the same teachers. We were going back and forth about how it's amazing to have made history, but to come from where we come from—it's a very small community. I'm honored to be a part of it.

**You're an incredible jazz pianist, but you also rap very well on your new album, *We Are*. Where did you pick up that skill?** It's so funny because back when I was growing up in New Orleans, there was this huge Southern rap boom: the Hot Boys, Master P, OutKast. All these folks from the neighborhoods I grew up in became these global superstars. Jay Electronica went to the same school as me and started these freestyle battles in the courtyard during lunch. I was doing these battles and making beats. Then I got known for piano, and it's almost like I forgot that I could do that.

**What is the connective tissue between jazz and hip-hop?** The connective tissue between them is overstated in that it gives the impression that one led to the other. I think it's more interesting to think about the connective tissue between rock 'n' roll and hip-hop. Rock 'n' roll started with Black dudes in the South: Little Richard, Chuck Berry, Fats Domino. Hip-hop is the new

I DON'T  
THINK THIS IS  
EGOTISTICAL ...  
BUT THERE'S  
NOBODY  
LIKE ME

rock 'n' roll. Rappers are the new rock stars. Hip-hop is basically the music of a community that was meant to be marginalized but couldn't be repressed.

**What advice have you received from Quincy Jones and Stevie Wonder?** Their advice is their presence. Talking to Stevie Wonder about the weather is a lesson in how to be a great musician, because his essence exists in a space of greatness.

**You were very involved in the protests last summer. Did you have conversations with Stephen Colbert about how *The Late Show* should address systemic racism?** The show is always about evolving. People who have watched the show and are fans of Stephen or me have seen our evolution. The goal is to incorporate as much of the evolution of the world around us as possible. And I had to have a lot of candid conversations after everything that happened—that's what all of us were doing. We talked about how we have to elevate our consciousness as a nation.

**You have so many disparate musical interests. Do you think you'll stick with being a pop star for a while?** People who know me have seen the hard drives: they know I have 10 records that are in process at any given time. So I function from the perspective of, Where is everything inevitably leading me toward? And it feels like the way it has led me is to definitely take the torch of Stevie Wonder, Marvin Gaye, and be the Black pop star making Black pop masterpieces.

**Have you thought about what you hope your legacy will be?** I don't think this is egotistical—although I know how stuff comes across in print—but there's nobody like me. I feel that I'm the only person in my generation who can do a lot of things. Within the next 10 years, you'll see a lot of stuff from me. —ANDREW R. CHOW



*I wish to train  
with astronauts*

Addison, 8  
Wilms tumor

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