DOUBLE ISSUE

JAN. 17 / JAN. 24, 2022

2022: THE YEAR AHEAD

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BY JUDY BERMAN

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TIME

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Trump supporters rally near the White House on Jan. 6, 2021, hours before mobs storm the Capitol

Photograph by Mark Peterson—The New York Times/Redux

ON THE COVER:
Photograph by Djeneba Aduayom for TIME

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Person of the Year

ON DEC. 13, *TIME* MARKED THE RELEASE of its 2021 Person of the Year issue by bringing together TIME100 honorees, CEOs, activists, storytellers and other global leaders in their fields.

Rousing performances bookended the vaccines-required event, which was held in New York City's Times Square: Alicia Keys opened with "Old Memories," from her latest album, *Keys*, and the Northwell Health Nurse Choir—formed in 2020, amid the COVID-19 pandemic—closed out the night with "You Will Be Found" from the Broadway musical *Dear Evan Hansen*.

TIME correspondent Alice Park spoke with Facebook whistle-blower Frances Haugen and Pardis Sabeti, one of the Ebola fighters whom TIME recognized as 2014's Person of the Year, about their work combatting misinformation. And editor-in-chief Edward Felsenthal interviewed 2021 Person of the Year Elon Musk. On the topic of how he made a career of what he calls "Mars and cars," Musk said, "When I was a kid, my favorite book was *The Lord of the Rings*. And I was like, 'What's the closest thing to being a wizard in the real world?'"

Read more at **time.com/poy-event**

Above, from left, the TIME staffers who wrote and edited the 2021 Person of the Year profile of Elon Musk: reporter Alejandro de la Garza, executive features editor Alex Altman, correspondent Molly Ball and editor at large Jeffrey Kluger

Right: Musk—holding his son X Æ A-Xii—in conversation with TIME editor-in-chief Edward Felsenthal

Above left: Grammy-winning singer and 2017 TIME100 honoree Alicia Keys

THEO WARGO—GETTY IMAGES FOR TIME (4); FAUSTO NUÑEZ (2)

Left: The Northwell Health Nurse Choir performs "You Will Be Found" from Dear Evan Hansen

Above, from left: Frances Haugen, TIME's Alice Park and Pardis Sabeti

Left: The crew of Inspiration4, the first all-civilian orbital flight, which was powered by Musk's SpaceX, from left, Jared Isaacman, Hayley Arceneaux, Sian Proctor and Christopher Sembroski

What you said about . . .

***TIME*'S PERSON OF THE YEAR** picks always spark spirited conversations, and the magazine's 2021 choice of Elon Musk was no exception. Perhaps the most notable back-and-forth occurred on social media, with U.S. Senator Elizabeth Warren, a Massachusetts Democrat, tweeting on Dec. 13: "Let's change the rigged tax code so The Person of the Year will actually pay taxes and stop freeloading off everyone else." Musk responded by claiming he will pay "more taxes than any American in history this year."

TIME's other selections also got people talking: interim National Institutes of Health director Lawrence A. Tabak tweeted "well deserved" to the vaccine scientists being named Heroes of the Year for "developing a technology that has transformed the way we will prevent other diseases." Civil rights lawyer Ben Crump applauded gymnast Simone Biles being named the 2021 Athlete of the Year, citing her "work ethic, resilience, and dedication to highlighting athletes' mental health." And the chorus of approval for singer-songwriter Olivia Rodrigo as Entertainer of the Year was literal. @Barbie, the doll, was among those tweeting, "Good for you, Olivia," quoting the title of a Rodrigo hit.

'AND HE CUT HIS OWN HAIR FOR THIS PIC TOO—ICON.'

@GRIMES,
musical artist and mother of Musk's son X Æ A-Xii, on his TIME cover portrait

'The scientists who developed the COVID-19 vaccine are heroes in every sense of the word. They've saved countless lives and deserve our deepest gratitude.'

SUZANNE BONAMICI,
U.S. Representative (D., Ore.), on Twitter

'I've gotten to do some crazy things this year but this one feels particularly surreal. thank u @TIME !!! entertainer of the year !!!!!!'

OLIVIA RODRIGO,
on Twitter

'Simone Biles showed us this summer what true strength looks like, and she's proof that you can be the greatest not in spite of but because of the fact that you prioritize your mental health.'

DR. VIVEK MURTHY,
U.S. surgeon general, on Twitter

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‘What was ahead of us is not just pouring rains or blowing winds, but hurricanes and tsunamis.’

CITIZEN NEWS, an independent news site in Hong Kong, announcing on Jan. 2 that they would stop publishing the next day, amid a rise in suppression of press freedoms in the territory

$250 million

Estimated sale price of **David Bowie’s music catalog,** in a deal announced Jan. 3

‘WHEN A MAYOR HAS SWAGGER, THE CITY HAS SWAGGER.’

ERIC ADAMS,
in a Jan. 3 press conference two days after being sworn in as New York City’s new mayor

$500,000

Amount paid to **Virginia Giuffre in 2009 to settle her lawsuit** accusing now deceased financier Jeffrey Epstein of sexually abusing her when she was a teenager, per records unsealed Jan. 3

‘What was cursed, we will cure. What was plagued, we will prove pure.’

AMANDA GORMAN, in her new poem “New Day’s Lyric,” released on Dec. 29

4

Number of **COVID-19 vaccine doses** authorized in Israel for medical workers, people over the age of 60 and some other high-risk individuals as of Jan. 2

‘Goldfish can learn to navigate a small robotic vehicle on land.’

RONEN SEGEV,
professor at Ben-Gurion University, previewing on Jan. 3 a scientific paper that asserts goldfish can be trained to drive

‘If the obviously aggressive line of our Western colleagues continues, we will take adequate, retaliatory military-technical measures.’

VLADIMIR PUTIN, in remarks to military officials on Dec. 21 about tensions between Russia and NATO

ILLUSTRATIONS BY BROWN BIRD DESIGN FOR TIME

SOURCES: VARIETY, CBS, THE NEW YORK TIMES, AP, WASHINGTON POST, THE JERUSALEM POST

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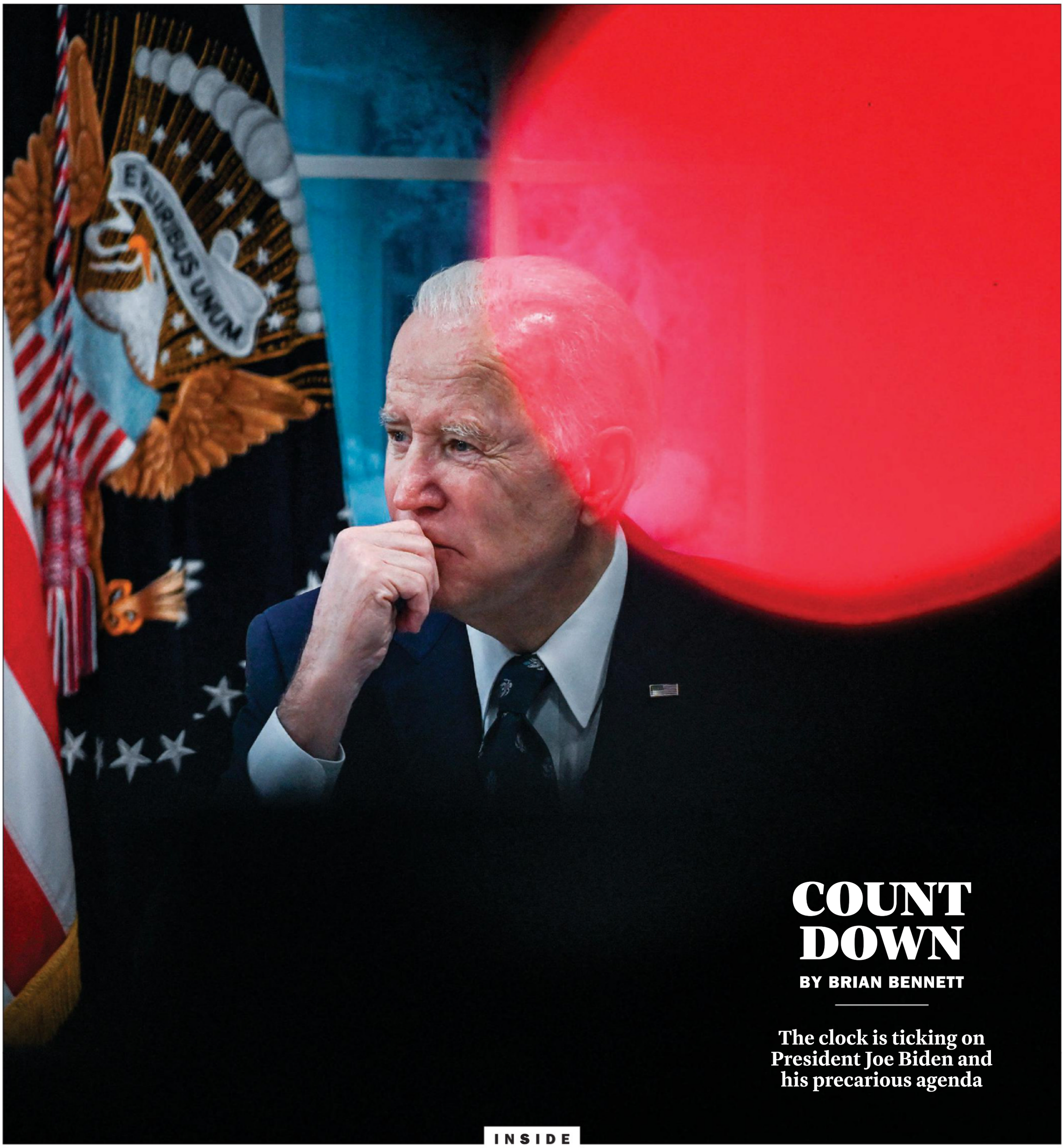
Partnership to End Addiction

The Brief



COUNT DOWN

BY BRIAN BENNETT

The clock is ticking on President Joe Biden and his precarious agenda

INSIDE

PHOTOGRAPH BY ROBERTO SCHMIDT

HE'S PRESIDED OVER THE ROLLOUT OF $2 trillion in health care funding and stimulus payments, seen the unemployment rate drop to 4.2%, made COVID-19 vaccines available for free to everyone in the country over 5 years old, and signed a trillion-dollar infrastructure law. But voters, fatigued by the uncertainties of the ongoing pandemic, have seemed reluctant to give the President credit; Joe Biden enters the New Year down in the polls, with nearly a quarter of Americans still hesitant to get vaccinated, and a recovering economy strained by inflation and an unpredictable supply chain.

That puts him in a precarious position at the start of 2022. With an evenly divided Senate and a narrow majority in the House, Democrats may lose control of Congress in the midterm elections on Nov. 8. The checklist of what Biden wants to accomplish in his second year in office has to be ticked off with a limited amount of political capital and a limited amount of time.

Infighting among Democrats has already delayed the next raft of Biden's priorities, including expanding paid family leave and access to health care and childcare, and funding more programs to reduce carbon emissions. But how the country fares in this phase of the COVID-19 pandemic is likely to be the single biggest factor impacting what Biden can accomplish and how he will be judged, experts say. "The virus is going to determine what the second year looks like" for President Biden, says Timothy Naftali, a historian at New York University.

Going into the New Year, just over 73% of Americans have gotten at least one shot of a COVID-19 vaccine; about 62% are fully vaccinated, according to data tracked by the Mayo Clinic. The Omicron variant has given more urgency to Biden's efforts to persuade the unvaccinated to get their shots, have parents vaccinate their children ages 5 and above, make rapid tests more widely available and urge those who are vaccinated to get boosters. Biden has promised that the federal government will distribute for free a half-billion home rapid tests in the coming months, and called up a surge of 1,000 troops to overstretched hospitals.

IF THE PANDEMIC improves and voters start to feel better about the economy, Biden may have more political leverage to pursue his agenda. High on Democrats' list of priorities: shoring up the election system before November.

Fueled by former President Donald Trump's false claims of voting fraud in the 2020 election, Republicans in multiple states are pushing forward plans to add new restrictions on voting access and to place political loyalists in positions where they could try to overturn legitimate election results. Trump has endorsed candidates for secretary of state and lieutenant governor in key states, raising concerns he's laying the groundwork to reverse future Republican electoral losses.

Biden and some allies in Congress, meanwhile, are struggling to shore up voter access to polls. On Nov. 3, Senate Republicans stood in the way of debate on one voting-rights bill named after John Lewis, the deceased civil rights leader and Congressman from Georgia, which seeks to strengthen parts of the 1965 Voting Rights Act and require the Justice Department to sign off on changes to voting laws in some states. Another bill, called the Freedom to Vote Act, would standardize some voting-access measures across all states. Advocates for voting rights are pressuring Democrats to suspend the filibuster for both bills, which would allow the legislation to move forward with 51 votes instead of the current 60-vote threshold.

78%

Percentage of Americans over age 5 who have received at least one shot of a COVID-19 vaccine

171

Number of Biden's senior Administration picks awaiting Senate consideration

51

Votes needed to pass voting-rights reform if the Senate suspends its filibuster

Democratic Senator Joe Manchin has put forward his own voting-rights bill—the For the People Act—that would impose national early-voting and vote-by-mail standards, require new transparency in political fundraising and establish Election Day as a national holiday. But Manchin has said he doesn't want to end the filibuster to pass voting legislation.

Manchin also promises to be a central player in determining whether Biden can pass any part of his roughly $2 trillion Build Back Better package, which the West Virginia Senator vowed to vote against at the end of December. Democrats may try to pass certain elements Manchin supports separately in 2022, including paid family leave and universal pre-K, but even that path forward is unclear.

Senate negotiations have also stalled over efforts to bring more transparency to how police departments operate, improve training and limit some police practices that have been repeatedly abused. Efforts to pass the George Floyd Justice in Policing Act, a bill that passed the House in March, collapsed in September. Advocates for police reform want Biden to make the legislation a higher priority in 2022.

And Biden still hasn't been able to fully staff his Administration. As of early January, 171 of his picks for senior positions were still waiting to be considered by the Senate (266 have been confirmed, according to data kept by Partnership for Public Service). These appointees would run departments and agencies across the federal government. Leaving the jobs unfilled hampers implementation of—and Biden's ability to take credit for—the policies he's scrambling to bring home. ◻

NEWS TICKER

France plans to 'piss off' unvaccinated

As his government seeks to pass **legislation tightening rules surrounding vaccine passes,** French President Emmanuel Macron drew criticism on Jan. 5 after the publication of an interview with the newspaper *Le Parisien,* in which he said that he "really [wants] to piss off" people who remain unvaccinated.

Theranos' Elizabeth Holmes guilty

Holmes, founder and CEO of failed biotech company Theranos, which raised billions for devices that promised to test for hundreds of diseases from a drop of blood, **was found guilty on four of 11 federal fraud charges** on Jan. 3 after a months-long trial. She faces up to 20 years in prison for each charge.

Outrage in India over 'auction' site

Mumbai police on Jan. 4 arrested two people accused of organizing a fraudulent and defamatory online "auction" **of more than 100 prominent Indian Muslim women,** amid rising anti-Muslim sentiment. The website, which included images of women critical of India's Hindu nationalist government, was taken down within 24 hours.

Frozen in place

Vehicles stranded on U.S. Interstate 95 in Caroline County, Virginia, wait for traffic to be cleared on Jan. 4, after ice and snow from a fast-moving winter storm closed a 48-mile stretch of the highway a day earlier. Hundreds of accidents were reported amid the dangerous conditions, furthering the gridlock. Some drivers chose to abandon their cars while others, including U.S. Senator Tim Kaine (D., Va.), slept in their vehicles overnight. —*Madeleine Carlisle*

THE BULLETIN

Diplomatic boycott of Beijing Games divides the world

THE LAST TIME THE U.S. BOYCOTTED THE Olympics, China joined in—withdrawing from the 1980 Moscow Games along with at least 44 other nations. (The Soviet Union and its allies withheld athletes in turn from the 1984 Games in Los Angeles.) Four decades later, China is now the subject of a boycott. In December, the U.S., U.K., Canada and Australia announced a "diplomatic boycott"; no government officials will attend the 2022 Beijing Winter Olympics, though their athletes will still compete.

OLYMPIC OUTCRY Calls to boycott the Beijing Games over China's human-rights record came to a head in November after Chinese tennis star Peng Shuai leveled a sexual-assault allegation against a former top official of the Communist Party and then disappeared from public view, sparking international concern for her safety. Peng later re-emerged in state-run media and disavowed her accusations. But questions remain about the repercussions of her speaking out.

FAIR PLAY The International Olympic Committee (IOC) has worked to keep politics and sports as separate as possible—but that effort has come under fire. Human Rights Watch accused the IOC of "sportswashing" for Beijing after its members spoke with Peng via video chat and reported "she would like to have her privacy respected."

NEXT STEPS A largely symbolic move, the diplomatic boycott doesn't have the scale of the Cold War–era movement, which barred athletes from competing. Some U.S. allies, like South Korea and France, have also said they will not participate in the boycott. But it marks the end of a global détente over the Games that lasted for nearly 40 years, and may be only the beginning of Olympic hostilities. China has responded furiously, saying boycotters would "pay a price." "We refer to the great-power conflict as the great game," says Stuart Murray, a sports-diplomacy expert at Australia's Bond University. "And that's what you're seeing through the Olympics." —CHAD DE GUZMAN

OPENING PAGE: AFP/GETTY IMAGES; THIS PAGE: STEVE HELBER—AP

GOOD QUESTION

What can the James Webb Space Telescope tell us about our universe?

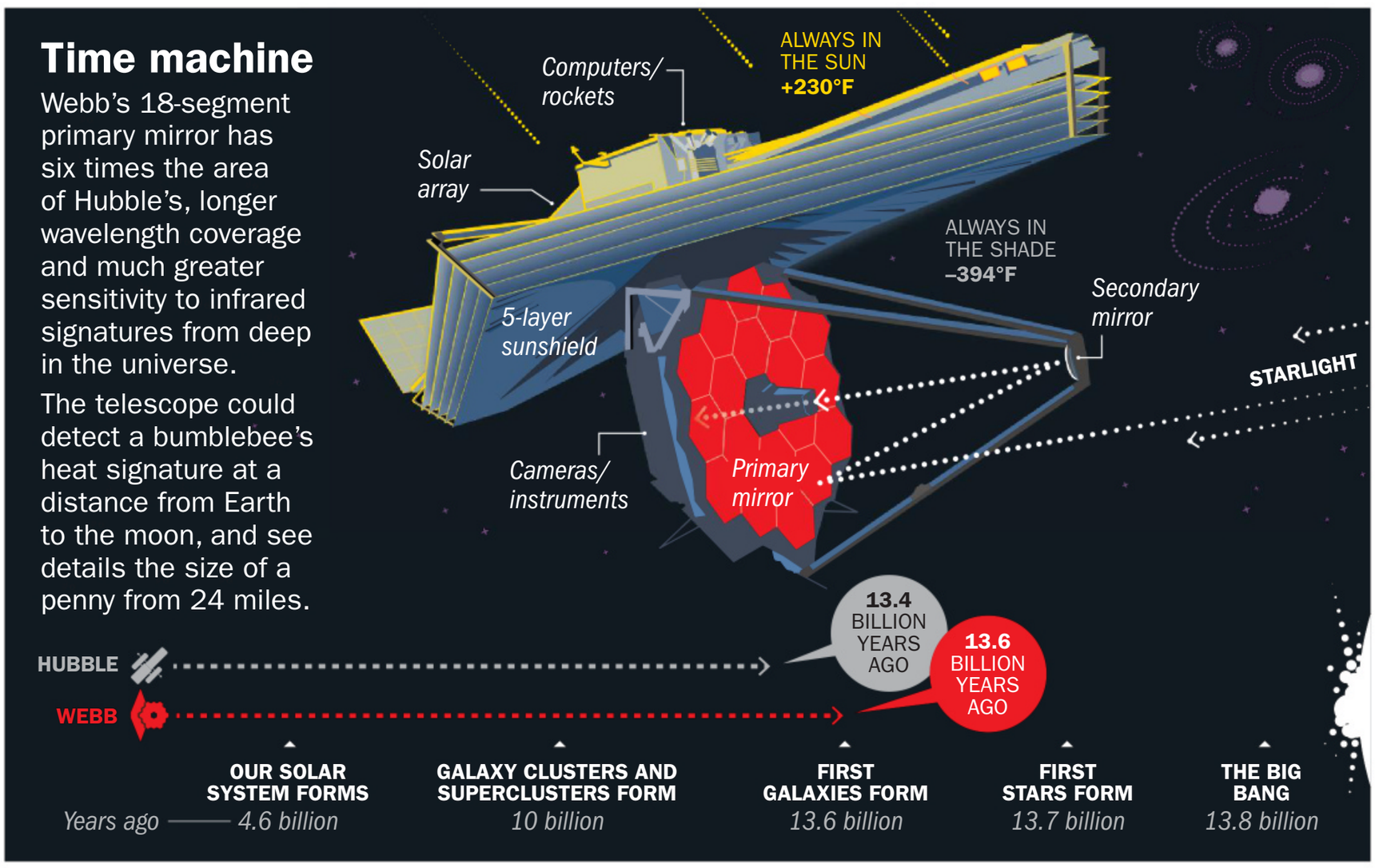
ON CHRISTMAS DAY, FRENCH GUIANA briefly became the center of the universe—or at least humanity's understanding of it—when a European Ariane 5 rocket lifted off with a payload that represents $10 billion worth of hardware and 25 years of work, and on which the next generation of research into the origin of the cosmos depends. The spacecraft sent aloft that morning was the James Webb Space Telescope, NASA's follow-on to the aging Hubble Space Telescope, widely considered the greatest space observatory ever built. Until now, at least.

The Hubble's work is best captured in the album of dazzling photos it has sent back over the years. But those pictures also reveal a shortcoming: Hubble sees in the ultraviolet and visible spectrums, allowing it to peer approximately 13.4 billion years back, or just 400 million years after the Big Bang. (Because light from the cosmos can take a long time to reach us, looking up at the night sky is effectively looking into the past.) A lot happened in those missing early years—galaxies began to form, stars began to flicker on—but the great distance that light from that epoch is traveling to reach us causes its wavelength to stretch from the visible spectrum and into the infrared, to which Hubble and human eyes are blind.

The infrared, however, is the band in which the Webb was designed to see, pushing its sensitivity 200 million years further back to 13.6 billion years ago. That comparatively small improvement is enormously significant, opening the door to the universe's babyhood.

Before the telescope can begin its work, it will face hurdles. Unlike the Hubble, which was small enough to fit comfortably inside a space shuttle's cargo bay, the Webb telescope is far too big to fit fully extended inside even the biggest rocket now flying. It had to be folded multiple times before being loaded aboard the Ariane—and now that it's in space, it's being unfolded.

Very much like the Hubble, however, Webb promises to make astronomical history, kicking open the door to portions of the cosmos that until now have remained unseen, and revealing secrets about the birth of the universe that were once not just unknown, but unknowable. "There are all of these things that lurk out there that we haven't even imagined," says Klaus Pontoppidan, a Webb project scientist. The telescope, he says, will be nothing less than "a discovery machine." —JEFFREY KLUGER



NEWS TICKER

CDC urges Americans to avoid cruises

As reports of COVID-19 outbreaks on cruise ships rise, the U.S. Centers for Disease Control and Prevention on Dec. 30 **warned travelers to avoid cruises—even if vaccinated.** The industry has pushed back; the Cruise Lines International Association argued on Dec. 31 that cases on ships are "far fewer" than those on land.

E.U. debates 'greenwashed' climate plans

A European Commission decision on Dec. 31 to label nuclear and gas power sources as green energy **ignited a debate between European countries and NGOs about whether the plan was "greenwashing"**—or an effective way to help the E.U. reach its climate goals.

Subpoenas for Trump family in N.Y. State

New York attorney general Letitia James' office said Jan. 3 it had ordered **Ivanka and Donald Trump Jr. to testify for a civil investigation on the Trump Organization's business practices.** Although the Trumps have disputed the subpoena's validity, James' office said it is "confident that our questions will be answered."

ILLUSTRATION BY LON TWEETEN FOR TIME

TRAVEL

A film lover built an oasis in Dubai's desert metropolis

BY NICOLA CHILTON

DUBAI'S FIRST ART-HOUSE CINEMA WAS VERY NEARLY among the casualties of COVID-19. Sudan Film Week was about to begin at Cinema Akil when the virus hit in early 2020. Lockdown orders forced what founder Butheina Kazim calls a "very precarious situation." But offering subscription-based online film screenings helped the fledgling enterprise survive, and in June 2020, Cinema Akil reopened as a place for people to gather to share films.

Kazim is part of a new wave of socially minded entrepreneurs broadening the cultural offerings of a Middle Eastern city known globally as a hub of commerce, transport and tourism, but among the 90% of residents who hail from outside the UAE, for a certain amount of dislocation. "We want to be a place that grows with the city and is part of its decisionmaking and story," she says.

Kazim decided to work in cinema 15 years ago, when she first saw Iranian-Kurdish director Bahman Ghobadi's *A Time for Drunken Horses,* about a family of Kurdish orphans on the Iran-Iraq border. She has since come to view the art form as a way to challenge viewers' biases and center underrepresented groups and cultures. "A big part of my personal interest is showing films that champion notions of social justice," says Kazim, who showcases films that fight racism and discrimination and promote women's rights, like Soudade Kaadan's *The Day I Lost My Shadow,* about a woman's experience in the early days of the Syrian civil war.

The seeds that led to Cinema Akil were planted in 2009, when Kazim, who was then working for entertainment conglomerate Arab Media Group, pitched an idea for a pan-Arab cinema channel. But the project was shelved amid that year's financial crisis. Instead, Kazim started showcasing independent films at events around Dubai. "I flipped the model from free-to-air, with a potential audience of 360 million, to targeting a very small community in Dubai," she says.

KAZIM'S FIRST SHOWS were free, but she soon believed she had enough interest to sustain a permanent space. In 2018, she found a home for Cinema Akil in a warehouse in Dubai's Alserkal Avenue creative district, a former industrial zone that hosts art galleries, studios, record shops and more. Cinema Akil is in many ways the centerpiece of the area, which is becoming a must-visit destination showcasing Dubai's emerging creative scenes.

Cinema Akil now offers a variety of film festivals and pop-up events, and showcases many movies that would otherwise not be screened in Dubai, ranging from independent Palestinian short films to lesser-known Latin American titles. Kazim has also been working to cultivate a sense of community among those who share her passion for film. She designed the space with that goal top of mind: mismatched furniture and lamps evoke the feeling of being in an eccentric but beloved relative's home; the wallpaper references the decor of formal Arabic gathering spaces called *majlis;* and 40 red seats rescued from the Golden Cinema—Dubai's longest-running single-screen theater, demolished in 2017—tie the space to the city's cinematic history. Kazim wants the theater to be a sanctuary, especially for Dubai's newcomers. "The sense of displacement … is so unnerving that it really becomes important to find places of stability that keep your feet on the ground," she says.

'We want to be a place that grows with the city and is part of its story.'

—BUTHEINA KAZIM, CINEMA AKIL

The pandemic has been a turbulent time for Kazim's business, which has had to operate at 30% capacity for social distancing. But her spirits are renewed every time someone tells her how much Cinema Akil means to them. "I get an email every few months from somebody who left Dubai and still remembers it, and wants to express whatever it meant for them at the time," she says. "This is what this space is supposed to be; I hope there is always going to be a need for that."

NATALIE NACCACHE FOR TIME

Italy's most famous chef **Massimo Bottura** wants us to cook our way to no food waste

BY ARYN BAKER

CHEF MASSIMO BOTTURA DIDN'T BRING HIS chef's jacket to the photo shoot. Which is just as well, considering that simple chef's whites could never convey what this exuberant bon vivant has become since opening the doors of his three-Michelin-starred, two-time winner of the best restaurant in the world, Osteria Francescana in Modena, Italy, in 1995. His culinary empire now extends from Dubai to Beverly Hills, with a new hotel in Modena that serves as an extension of his own home, with walls hung with works by Ai Weiwei, Damien Hirst and Tracey Emin. He is the author of two books and one of the stars of Netflix's cult foodie docuseries *Chef's Table*.

But out of all those successes, Italy's most celebrated chef says the pinnacle of his achievements is Milan's Refettorio Ambrosiano and the 12 global spin-offs that have followed in its wake.

At Refettorio Ambrosiano, dinner guests are greeted by name. They dine on fine china at tables created by the country's most sought-after furniture designers, under works of art that would not be out of place in a contemporary art museum. The waiters are courteous, and the chefs have trained under the finest restaurateurs in the world. The set menu changes daily, depending on what comes in with the morning's delivery.

This morning's delivery contains wilting arugula, chicken close to its sell-by date, too-ugly-to-be-sold oranges and only enough shrimp for half the anticipated guests. But by dinner, the supermarket castoffs have been transformed into a three-course feast, the shrimp sautéed with arugula for a pasta starter and the roast chickens slathered in a fragrant orange glaze. Dessert is a rich mousse made from donated chocolate and almost-past-its-prime cream. The 100 or so diners—runaways, refugees, the homeless and the unemployed—tuck in with obvious pleasure, laughing with the volunteer waiters, praising the volunteer chefs and forgetting, at least for an hour, the challenges of a life lived on the streets of Milan.

The brightest gems in Bottura's culinary empire are not restaurants at all. They are soup kitchens. Not that Bottura would call them that. He thinks of them as catalysts, venues that not only reaffirm the dignity of the guests, but also draw light and art into neglected neighborhoods, all while focusing attention on the growing global food-waste crisis by turning foods destined for landfill into Michelin Guide–worthy meals. "A Refettorio is not a soup kitchen," says Bottura. "It is a cultural project that shares beauty. We treat our guests like we do at our restaurants. That's the warm hug we are giving. We are saying 'Welcome, this is a beautiful place, and it's your place. This is the food that we cook for you. We are here for you.'"

Bottura, 59, first conceived of Refettorio Ambrosiano as a pop-up concept for the 2015 World Expo in Milan. The organizers had invited Bottura to cook for the grand opening. He demurred, proposing instead to invite the world's best chefs to cook alongside him for the city's homeless, using surplus food. Pope Francis, having caught wind of the idea, suggested something more permanent, and offered the use of a derelict theater belonging to a church in Greco, one of Milan's most blighted quarters. Bottura renovated the theater in an homage to Italian art and design.

"After six years, Food for Soul is no more a project; it is a movement. It is a model for fighting food waste and social isolation on the front lines," says Bottura from behind the wheel of his custom Maserati Levante. A gift from the Modena-based carmaker, the SUV has wheel wells and a nose splattered with the psychedelic swirls of Damien Hirst's spin paintings, at Bottura's request. Ever accommodating, Bottura has offered to run back home to swap his green velvet blazer for a chef's jacket.

Driving with one hand on the steering wheel in order to leave the other free to punctuate his stream-of-consciousness musings, Bottura expounds on his theory of culture with the depth of an obsessive and the breadth of an omnivore. On his avant-garde dishes: "I have to break tradition to build new ones." Music: "Not a crazy fan of the Beatles, but they changed the history of contemporary music." But when asked about food waste, both hands fly off the wheel in

BOTTURA QUICK FACTS

Music fan
His hotel in Modena has a music library stocked with a personal collection of more than 8,000 jazz records.

Instagram sensation
For the first 70 nights of Italy's pandemic lockdown, Bottura livestreamed his family's nightly dinner prep in all its chaotic, messy intimacy to his 1.5 million followers.

Global foodie
Refettorios are found from Harlem to Rio de Janeiro and San Francisco. Two more will open in 2022: one in Geneva, the other in Sydney.

Unofficial motto
The first Refettorio has an installation by Italian artist Maurizio Nannucci that spans the building's roofline with the phrase NO MORE EXCUSES in meter-high blue neon letters. Bottura has the same phrase tattooed above his right bicep.

LUCIA BURICELLI FOR TIME

angry exclamation points. "We are 8 billion people on earth. We produce enough food for 12 billion people. Yet 820 million people don't have anything to eat. It's criminal."

Nearly a billion tons of food goes to landfill every year, and food waste is responsible for some 10% of global greenhouse-gas emissions. Project Drawdown, the climate-change nonprofit, ranks reducing food waste ahead of switching to electric cars in terms of impact.

FOR BOTTURA, fighting the crime of food waste has become second nature. At the Refettorios, chefs must make whole meals out of surplus. At his restaurants the cooks are challenged to squeeze maximum use out of every single ingredient, from meat and fish trimmings to vegetable peelings and stale bread. One of the first tasks for new chefs is to introduce themselves with a staff meal made from food that would otherwise be thrown out. Some of the items even make it to the restaurant menu, like the crackers one intern made from the rinds of Parmigiano Reggiano cheese. Even Bottura's signature pesto is born from waste. Presented with old bread and a bunch of herbs one night, Bottura riffed on the basil-based staple by blending the mint and thyme with garlic, bread crumbs and olive oil to create a decadently creamy pasta sauce. "In Italy, if I call it pesto, they will crucify me," he chuckles.

Turning base ingredients into gastronomic gold is Bottura's magic. He credits his grandmother, who, like many of her wartime generation, was an adept practitioner of the Italian tradition of *cucina povera,* poverty cuisine. "It was the original no-waste kitchen," he says. "What you think is food waste is just an opportunity to create something amazing."

Most three-star chefs live in perpetual fear of losing a star. The general attitude among the 60-odd staff at Osteria Francescana and its offshoots is that the third Michelin star—earned in 2012—is not so much an accolade as a responsibility. "A third star gives you a voice," says Lara Gilmore, Bottura's U.S.-born wife and business partner of 25 years. "So, the question becomes, What are you going to do with it?"

Osteria Francescana is not just a restaurant anymore, but also an incubator of culinary talent with a no-waste ethos. Under Bottura's tutelage, new chefs learn not only his particular approach to building a dish—he calls his style "emotion in a bite"—but also his commitment to making a difference in people's lives. "In the beginning, I thought I was going to change the world," he says. Now he realizes it's all about getting everyone to change the world together. "Everybody has the ability to contribute to positive change. It starts with all of us, in our own kitchens." It starts by looking at an old carrot or a stale crust of bread and catching a glimpse of gold. ◻

'In Italy, if I call it pesto, they will crucify me.'

MASSIMO BOTTURA, ON HIS UNORTHODOX BREAD-CRUMB PESTO

DIED

Joan Didion

Unflinching gaze

BY LYNN STEGER STRONG

COOL IS THE WORD USED MOST OFTEN TO describe her: the Coca-Colas and the cigarettes each morning, the leotard and the typewriter, the scotch and the shawl. California. Writing for movies to make a living, "making notes for the director," her short, tight dispatches from the South and West. But the word *cool* also means the absence of strong feeling, and she was the opposite of that.

There's an idea around writing that we do it to make sense, to give shape, but staying free of the assumption that there's sense to be made was one of Joan Didion's most astounding accomplishments. Is the 5-year-old in white lipstick, high on LSD, in Haight-Ashbury in "Slouching Towards Bethlehem" O.K.? Should Didion have taken her home or called somebody in? What to make of Didion's psychological deterioration as described by her psychiatrist's assessments in "The White Album"? How sick was she really? How much was it just the world, seeping in? Of course what that essay shows us is that those questions aren't answerable; they're not even particularly interesting.

Why is this woman so sad? some critics lamented, but if you spend any time at all in the world Didion, who died Dec. 23 at 87, was observing, the question also arises: Why weren't they? And that sad woman just kept writing, through the deaths of her husband—"Life changes in the instant"—and then her daughter, 20 months later, at 39.

"We tell ourselves stories in order to live." Whenever I hear that quote, I get prickly, defensive. That whole essay is about how at various moments in most writers' lives, language feels slippery and useless; stories too sensical and coherent to have anything to do with the life we're trying to hold. Even words begin to feel too blunt-force, so much less than what we might have hoped.

But then Didion knew all of this. She taught it to us, shaped and reshaped observations and experience until we saw. She collided all the contradictions built with other people's stories, bastardized and broken with too much coarse and hazy language, and she helped us see it all more sharply, with the lacerating power that comes from never trying to make sense.

Strong is the author of the novel Want

DIDION: GILLIAN LAUB—CONTOUR BY GETTY IMAGES; TUTU: GALLO IMAGES/SUNDAY TIMES/GETTY IMAGES

There's little to be written about Didion, pictured in her New York apartment in 2011, that she wouldn't have written better herself

DIED

- Former *Vogue* editor **Grace Mirabella,** on Dec. 23, at 92.
- **Sarah Weddington,** the lawyer who successfully argued *Roe v. Wade,* on Dec. 26, at 76.
- Model and transgender activist **April Ashley,** on Dec. 27, at 86.

RESIGNED

Sudan's Prime Minister Abdalla Hamdok on Jan. 2 following **mass pro-democracy protests** criticizing a deal he made to share power with the military.

RETURNED

A man believed to be a North Korean gymnast **to North Korea by way of the DMZ** on Jan. 1, after previously defecting to the South in 2020, according to the South Korean military.

PARDONED

Homer Plessy—whose 1892 **arrest for sitting in a whites-only train car** in New Orleans led to the infamous "separate but equal" Supreme Court ruling—by Louisiana Governor John Bel Edwards on Jan. 5.

OPENED

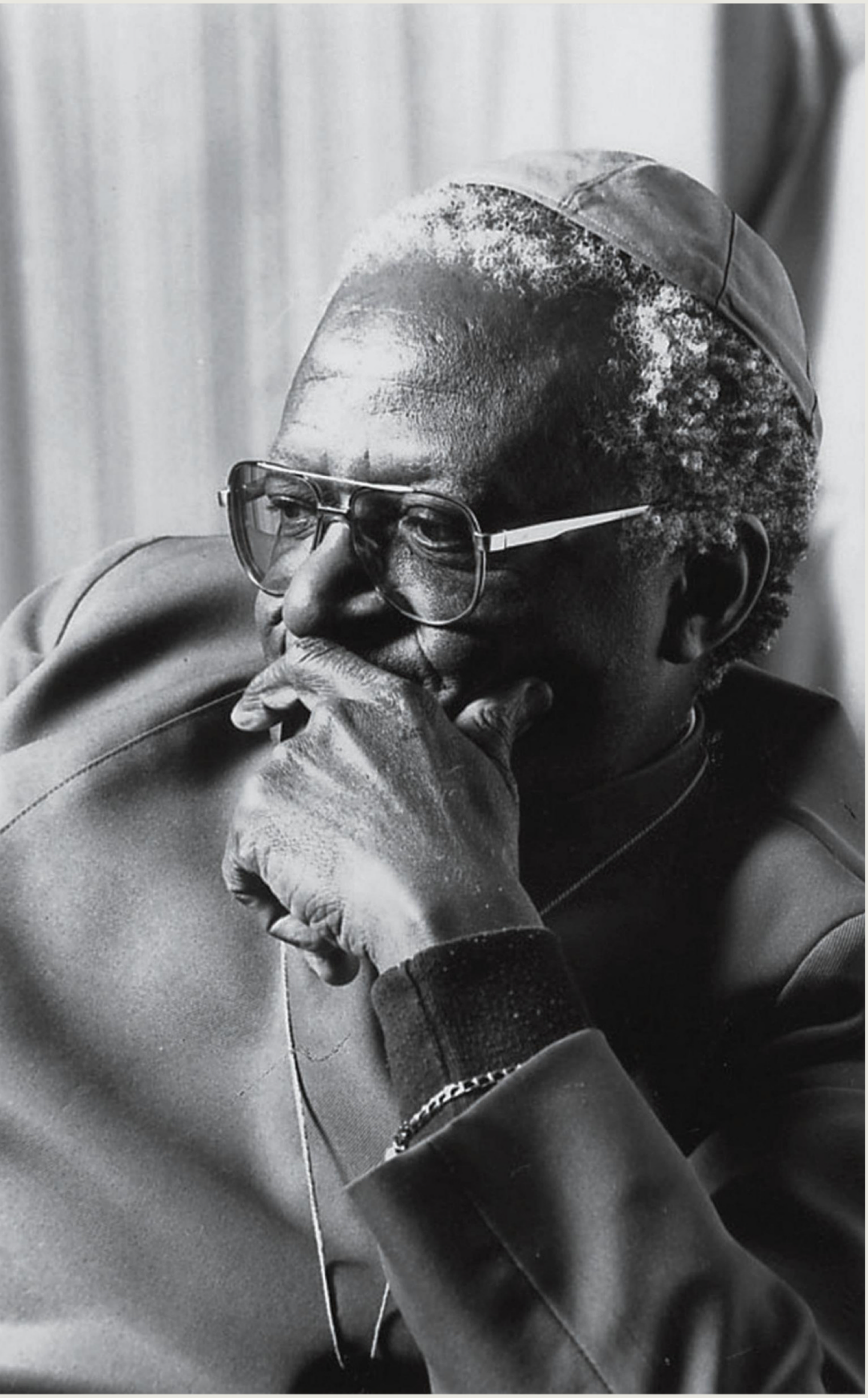
A Tesla showroom in Xinjiang, China, on Dec. 31, amid **outcry from activists over human-rights abuses** against mostly Muslim ethnic minorities in the region.

ENDED

The **BlackBerry smartphone's legacy operating system** and software, on Jan. 4.

DECLARED

A **two-week state of emergency** in Kazakhstan on Jan. 5 amid widespread protests and unrest over rising fuel prices.



DIED

Desmond Tutu

Tireless moral witness

BY BONO

I KNOW "THE REVEREND AND the rock star" sounds like the start of a joke, not the description of a friendship. Improbable as it was, Archbishop Desmond Tutu, who died on Dec. 26, and I did have a friendship, and it's been one of the blessings of my life. Not just to know him, but to have the chance to learn from him and to try to get a grip of the radical Christianity he preached even, at times, against the orthodoxy of his own church.

He taught me that prayer is not an escape from real life, but a passage to it. And his understanding of scripture demanded he afflict the comfortable as surely as he comforted the afflicted. "Do it!" he once chided me, "or I will personally stand in the way of you entering the gates of heaven. I'm an archbishop . . . I have influence."

U2 played our first anti-apartheid gig in 1979 and finally met Tutu in 1998. He talked about the philosophy behind truth and reconciliation—about his deep belief that they have to happen in that order. Only after the truth has its way can a clenched fist become an open hand.

His life's work made clear it was never enough for activists to call out injustice. Tutu had the gall to demand we also sup with our enemies. We will miss his example at a time when truth is under siege and reconciliation a distant dream, a time when racial injustice remains deep and unresolved. In this era as in his, we need an outing of how we became ourselves, both as countries and as individuals. Tutu's work, which was never his alone, must go on. We are wounded, scarred and divided, but we need to see ourselves, in all our brokenness, before we can mend.

Bono is a musician and an activist

DIED

Betty White

First lady of television

THOUGH BETTY WHITE HAD BEEN A household name since the 1950s, it was her work on NBC's *The Golden Girls* that cemented her status as an icon long before she died on Dec. 31 at 99.

When the show premiered in 1985, White was a natural as the kind-hearted Rose Nylund. She cleverly imbued Rose, an ever effervescent native of the fanciful St. Olaf, Minn., with a gullible naiveté, the perfect foil for her co-stars' barbs and eye rolls. *The Golden Girls* aired for seven seasons, and White was nominated for an Emmy for Outstanding Actress every year of its run. She won her third Primetime Emmy in its very first. Whether telling yet another St. Olaf story or doing one of her many selfless deeds, Rose just "wasn't one to blow [her] own vertubenflugen." And it was precisely that mix of innocence and loyalty that endeared her to viewers.

But White was as savvy in real life as Rose was seemingly dim-witted, and she enjoyed a decades-long career in Hollywood that continued to flourish as so many of her peers found their opportunities disappear when they reached a certain age. In fact, she entered the *Guinness World Records* book in 2014 for "longest TV career for an entertainer (female)."

White, in a July 1986 promotional photo for the second season of The Golden Girls

AS A YOUNG ACTOR filled with ambition, she first landed a spot in a margarine commercial after reportedly hanging around a producer's office until he caved and offered her a job. She spent six days a week on the variety show *Hollywood on Television;* that led to her producing and starring in her own sitcom, called *Life With Elizabeth,* beginning in 1953. She had two versions—a sitcom and talk show—of *The Betty White Show,* starred as the man-crazy Sue Ann Nivens in *The Mary Tyler Moore Show,* and was a staple on game shows like *Password* and *Match Game*. She also worked with her future *Golden Girls* roommates in guest spots on Bea Arthur's *Maude,* and a lead role alongside Rue McClanahan in *Mama's Family*.

When *The Golden Girls* went into syndication, and then became available for streaming, White's comedic brilliance was introduced to new generations. And with a knowing wink, White used Rose's wholesome persona in later years to shock audiences with unexpectedly bawdy humor, like in her memorable turn as "Gammy" in the 2009 rom-com *The Proposal,* or during her 2010 turn hosting *Saturday Night Live*—the result of a social media campaign led by ardent fans. She landed roles on *That '70s Show, Boston Legal* and *Bones,* and later turned a guest spot on TV Land sitcom *Hot in Cleveland* into a full-time gig when she was 88.

White was honored for her extraordinary career during the 70th Emmy Awards in 2018, where she joked about how long she had been working in Hollywood. "Somebody said something the other day [about how I'm] the first lady of television, and I took it as a big compliment," White said. "Then I heard her say to her daughter, 'Yeah, first lady–she's that old!'"

But she displayed gratitude and awe at her career when accepting her Guinness World Record. "I have no regrets at all," she said in 2013. "I consider myself to be the luckiest broad on two feet." —MELISSA LOCKER

DIED

Harry Reid

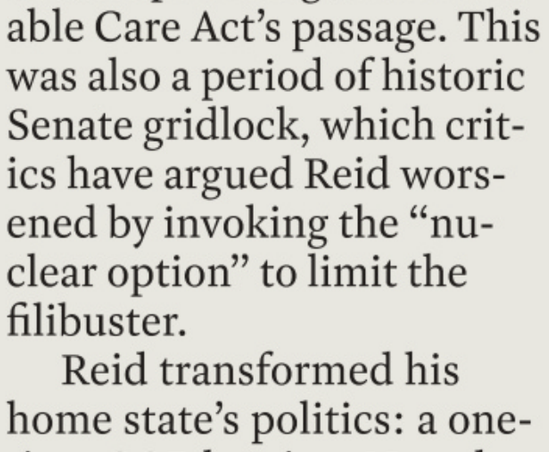
Master dealmaker

IN THE ONE-ROOM SHACK where Harry Reid was raised, the closest thing to religion was an FDR quotation on the wall: WE CAN. WE WILL. WE MUST.

Those six words sum up as well as anything the creed that took Reid, who later converted to Mormonism, from the gold-rush ghost town of Searchlight, Nev., to the U.S. Senate: fearlessness, grit and an obligation to his fellow underdogs. Reid, the Democratic majority leader from 2007 to 2015, died Dec. 28 at 82.

As a politician, Reid's strength was not soaring rhetoric but the inside game. He steered his party through the Bush and Obama eras, turning against the Iraq War and shepherding the Affordable Care Act's passage. This was also a period of historic Senate gridlock, which critics have argued Reid worsened by invoking the "nuclear option" to limit the filibuster.

Reid transformed his home state's politics: a one-time GOP bastion, Nevada now has two Democratic Senators and has gone blue in the last four presidential elections. "I wasn't the leader of the Senate because I was tall, dark and handsome," Reid said in 2018. "I did things no one else would do." —MOLLY BALL



DIED

bell hooks

Trailblazing author and activist

BY DREAM HAMPTON

BELL HOOKS WAS A RADICAL FEMINIST, SCHOLAR AND author who spent the '90s publishing about a book a year. Like a lot of young Black women, I thought of myself as part of her army. Daughters of her thought, ready to integrate her text into our public and personal lives. I fought to have my name published in lowercase letters like hers.

Her seminal *Ain't I a Woman* was a field guide toward a liberation that not only considered gender but centered it. Like the Black feminist scholars who'd informed her, giants like Audre Lorde, hooks—who died Dec. 15 at 69—produced work that provided tools. She devoted entire books to Black interior life and love, the kind of work feminist scholars avoid, lest they risk not being taken seriously. And she refused to take on white supremacy without interrogating patriarchy; she knew we'd have to set cis normative, patriarchal norms on fire to begin the work of healing Black trauma. She was unafraid to burn it all down. To begin again.

hooks, on a reimagined TIME cover as part of TIME's "100 Women of the Year" project

hampton is an award-winning filmmaker and writer from Detroit

DIED

John Madden

Voice of a game, and its soul

In a sport that, more than any other in the U.S., doubles as religion, no other figure has shaped American football more completely than John Madden, who died on Dec. 28, at 85.

"He *was* football," said NFL commissioner Roger Goodell, in a statement that contained no empty platitudes or hyperbole, but only truth.

As a coach, Madden—who led the Oakland Raiders from 1969 to 1978—won a Super Bowl and holds the highest winning percentage (at 75.9%) for an NFL coach with a minimum of 10 years on the sideline. As a video-game impresario, he connected new generations to football: his *Madden NFL* series, which debuted in 1988, has exceeded $4 billion in sales. And as a commentator, he explained the game to millions of viewers, while his own personal sound effects—*"Boom! Bam!"*—captured its sheer physicality. These were the unmistakable sounds of John Madden, ingrained in football minds forever.

—Sean Gregory

WHITE: GARY NULL—NBCUNIVERSAL/GETTY IMAGES; REID: MAUREEN KEATING—CQ ROLL CALL/GETTY IMAGES; HOOKS: JAMES KEYSER; MADDEN: FRED KAPLAN—SPORTS ILLUSTRATED/GETTY IMAGES

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Time is running out to protect our forests. **Act now.** wwf.org/love

The View

TAKING ON CLIMATE CHANGE IN 2022

The environmental crisis we're facing can seem insurmountable. It's true we're falling behind in adapting to reality, and the window of opportunity is closing—but it's also not too late.

We just need to take concrete and immediate steps forward. To that end, we've asked industry and government leaders from around the world to share their thoughts on the 2022 goals that will help us avoid climate catastrophe.

INSIDE

Every investor must vote

BY CHRISTOPHER JAMES

IN 2022, INVESTORS WHO WANT TO address climate change should focus on one simple but essential goal: active stock ownership. They should engage with companies on both sides of the energy transition—those heading in the right direction and those falling woefully short—and move away from blame and toward responsibility.

Engine No. 1 spent the first six months of 2021 in a fiercely contested proxy battle with ExxonMobil, trying to place four new members with industry expertise and experience in transitioning away from fossil fuels on a board lacking in both. We were successful in winning three of those seats, and the company's behavior has begun to change.

Before we launched our campaign, Exxon was aiming to increase oil production from 3.7 million barrels per day to 5 million by 2025. Once our campaign was under way, Exxon announced it would instead keep production flat at 3.7 million barrels per day. That 1.3 million reduction means that there will be roughly 220 million metric tons fewer carbon emissions annually. Exxon barely mentioned the word *carbon* before we started our campaign, but it has since launched a low-carbon-solutions business and is investing more in decarbonization. Recently, it announced a more ambitious target for reducing company-wide greenhouse-gas emissions intensity by 20% to 30% by 2030.

The company still has a long way to go. To succeed over the long term, every energy company needs a strategy for transitioning away from fossil fuels, and Exxon has yet to articulate one. But the company's behavior has started to reverse, and we're confident that had we not engaged with Exxon a year ago, the changes we've witnessed so far wouldn't have happened.

So the goal for 2022 should be active ownership, and it should not be limited to large or professional investors. Now more than ever, retail investors are interested in engaging on issues they care about. But many of those investors don't realize they have a vote on issues that can be related to companies' environmental and social impacts or the way those companies are managed. Anyone who owns even a single share of stock in some ways owns that company. Every spring, they can vote on proposals that can range from a company's environmental policies to important management policies such as executive pay and board composition. Just as voters in political elections change the direction of countries, shareholders have the ability to push the direction of the companies they own. But they must vote.

Historically, the way investors tried to change a company's bad climate-impact behavior was to divest their holdings as a show of discontent. Divestment was an important early step in bringing awareness to the negative effects that companies can have. But the idea that simply walking away will help solve the problem is misguided.

Anyone who owns a share of stock in some ways owns that company

If every investor who cared about moving away from fossil fuels and addressing climate change divested from Exxon to show their disdain for the company and its approach, it would simply leave the company with shareholders who don't particularly care—and that would be a problem. It certainly would have doomed our effort to place new members on the board.

In 2022, investors big and small should make it their goal to vote this proxy season on all environmental, social and governance issues raised at the annual meetings of companies they own. As investors, they have a seat at the table. They should sharpen their elbows and raise their voices.

James is founder and executive chairman of investment firm Engine No. 1

MARIO TAMA—GETTY IMAGES

HOLD POLLUTING COUNTRIES ACCOUNTABLE

BY SURANGEL S. WHIPPS JR.

Typically, much of the climate-change discussion refers to it as a "threat." But the reality is, for many on earth, the crisis is already here. Many small-island developing states have already suffered climate-related losses of livelihood, security and welfare. My country, Palau, has been ravaged by the climate crisis, suffering two major typhoons that resulted in a loss of more than half of our national GDP.

Our lives have been engulfed by sea-level rise for two decades. King tides habitually flow into our homes. Mudslides are common along the only road to our hospital and main business center during increasingly frequent and intense storms. It is only a matter of time before a typhoon floods the corridors of our only hospital, wreaking havoc on our already strained public-health system. These once seasonal occurrences now exacerbate our existing health, environment and economic crises.

On the world's stage, we and those suffering similar realities have demanded bold action and robust delivery of community-centric adaptation and mitigation. Yet the voices

The View is reported by Alejandro de la Garza, Leslie Dickstein, Mariah Espada, Simmone Shah and Julia Zorthian

A 2019 flood in Tuvalu, a small island state facing climate disaster

of these Indigenous people are drowned out as though by the winds and rain that pummel their shores. That's despite the fact that Pacific small-island nation-states combined are responsible for a mere 0.03% of global emissions.

Meanwhile, powerful economies continue to discharge poisonous emissions along with unfulfilled pledges to fund losses and damages. Sadly, international platforms like COP26 have been feeble sounding boards resulting in promises leading to disappointment and false solutions that dilute the problems. The injustice is that the largest emitters are not held accountable for our plight.

Given this dilemma, Palau has joined the Commission of Small Island States (COSIS) on Climate Change and International Law to seek justice that advances the basic principle that the polluter must pay. COSIS aims to be the first to bring a case of this kind to the U.N. International Tribunal for the Law of the Sea. We hope that our case will help determine the obligations of countries under international law and hold polluters accountable.

Palau was the first member of COSIS from the Alliance of Small Island States. Following our work at the U.N. General Assembly and COP26, in 2022 we hope to bring in all small-island countries in pursuing judicial action through international courts. This will be a priority at the Our Ocean Conference, which Palau will host in April.

Like schools of surgeonfish that unite in the face of an imminent threat, the global community must come together in vision, voice and action to combat the alarming realities of the climate crisis. Allies must hasten their stride into a persuasive march toward real progress on the reduction of emissions and prompt delivery of climate financing.

Palau's people are resilient. Until the world corrects its course, we will continue to adapt one day at a time. We will mobilize our scarce resources to move our hospital to higher ground; clear the debris and repair our homes and businesses after each coming storm; and continue to collaborate with partners and allies to collectively address future adversities.

I and other Pacific leaders look to our culture and environment for wisdom to withstand these uncertain times. Yet we know wisdom without capacity cannot save us. Palau joins other small-island states and Indigenous peoples across the globe in calling on the international community to make 2022 a year of accountability, reciprocity and significant investments in adequate safeguards that ensure basic human rights for the world, enabling us to fulfill our responsibility as custodians of the earth to transfer our lands, our ocean and our cultures to future generations.

Whipps is President of the Republic of Palau

Connect hard-to-reach places to solar power

BY NICOLE POINDEXTER

YOU BRING YOUR FEVERISH BABY TO THE hospital in the middle of the night. The nurse asks you to go home to get a flashlight. When the flashlight batteries give out, she resorts to a flickering candle to guide the insertion of an IV needle, delivering malaria medicine, into your baby's hand.

Maybe you don't have a baby. Maybe you travel 14 miles a day by public bus to buy fresh fish to sell in your village. Every day, you must sell the fish before your ice melts and your inventory becomes worthless.

In much of Africa, this is the norm. Almost half of the continent's 1.3 billion population live without electricity, which destroys opportunities for education, jobs and adequate medical care. That's why the U.N. has set the global goal of providing electricity by 2030 to 600 million people who are currently without it. Achieving that target will require the participation of a range of players: large organizations like the Rockefeller Foundation; development institutions like the World Bank; the governments of African countries; and entrepreneurial minigrid utility companies like Energicity. Together, building on successes of recent years, we should aim to provide 6 million additional people with sustainable electricity in 2022, to put us on a pathway to reaching 600 million by 2030. To do so, all participants need to embrace new strategies over the next 12 months.

The results of fossil-fuel-based, centralized, power-plant strategies of the past 50 years speak for themselves: high levels of pollution and slow rollouts due to high construction and fuel costs. Instead, we need to focus on minigrid-based electricity powered by solar power and batteries, which can provide 24-hour clean energy. And because they are decentralized—with the electricity that each community needs provided by solar farms in the area (optimized through artificial intelligence and Internet of Things technologies) and without long, expensive transmission lines—minigrids are often low-cost and deployable in weeks. Already, Energicity has brought solar-powered electricity to 40,000 people, and our goal for 2022 is to reach 250,000 more, across

With over $10 billion pledged, bringing green power to 6 million should be achievable

four countries in West Africa.

With over $10 billion committed—including pledges from organizations like the Rockefeller Foundation and from a multitude of governments—bringing green power to 6 million people in 2022 should be achievable. We have some successful models already, like a private-public partnership in Sierra Leone; minigrid companies Energicity, Winch Energy and PowerGen; the U.K. Foreign, Commonwealth and Development office; and private investors providing equity funding. Together, we expect to bring minigrid-based power to 10% of Sierra Leone's population in the next 12 months.

One of Energicity's customers in Sierra Leone is Memenatu, a businesswoman living in the fishing town of Kychom. Without electricity to power a freezer, she bought fish to dry in the sun, so that it would keep as she traveled the 25 miles to sell in Kambia, the district capital. Knowing she did not have enough time to dry many fish in the sun before they spoiled, she bought only 20 at a time, and because dried fish did not sell for very much she made only about $20 on market days. After she got connected to Energicity's solar minigrid, though, Memenatu could afford to buy and power a freezer—and as a result, her family's income has increased by some 700%. The frozen fish are much more valuable in the market than dried fish, and she can buy many more each day because freezing is faster than drying.

There are millions like her, for whom there's a clear solution forward, one that brings needed access to electricity to those who lack it, while building up infrastructure that will help reduce human contributions to global climate change. We just need everyone involved, from foundations to climate consultants to national governments to private investors, to not only commit to the distributed solar-energy approach, but also, in 2022, to act on it.

Poindexter is the founder and CEO of Energicity Corp

Electric vehicles at charging stations in Oslo in 2016

INCENTIVIZE ELECTRIC-CAR PURCHASES

BY CHRISTINA BU

Norway is not the most likely place to start a transportation revolution, but electric vehicles (EV) are suddenly the new normal here. Almost 65% of new passenger cars sold in Norway in 2021 were electric; in addition, 22% were plug-in hybrids. It took us only 10 years to go from 1% to 65%, and this year I believe we will pass 80%. The U.S. and other governments should use 2022 to enact policies that incentivize a similar shift.

How did Norway become the world's top-selling EV market per capita? Strong demand-side policies kept in place for a long time. Most cars are purchased secondhand, and people in the secondhand market rely on the choices of new-car buyers. The government therefore taxes the sales of new polluting cars heavily but does not tax EVs at all, making EVs, which are more expensive to produce, a competitive option. The Parliament has also decided that all sales of new cars and vans shall be zero emission by 2025.

Norway's progress has been helped by emission restrictions directed at car manufacturers internationally, and we have seen the start of a global rollout of charging infrastructure. Did you see the final Super Bowl ad from GM? Will Ferrell said that he hated Norway because of the high uptake of EVs and that GM and the U.S. would catch up. And the U.S. has started! President Biden's infrastructure law includes $7.5 billion for a nationwide charging network.

But the U.S. can go further, as can other countries, and implement policies directed at the demand side. The key is to start taxing new sales of at least the most-polluting cars and use this money to subsidize EVs. This is a fair way to implement climate policies, as it is aimed at people buying new cars, rather than an indiscriminate tax at the pump. (To be clear, Norway's other incentives—like lower road tolls and cheaper public parking for those who drive EVs—also help, but tax policies on purchases are the most important step countries can take.)

Yes, the switch to EVs might be more politically difficult in some countries than others, but several, like Sweden and New Zealand, have already seen good results after implementing EV tax policies. And while Norway took 2.5 years to move from 2% to 10% EV market share, the U.K. took 1.5 and Germany only one.

This year, all governments should join the 38 countries that signed the COP26 declaration to work toward 100% sales of new cars and vans being zero emission globally by 2040, and by no later than 2035 in leading markets.

Frankly, I don't think any manufacturer will produce cars with internal-combustion engines after 2035. But we're in a hurry when it comes to cutting emissions. So, when there are alternatives that are more than good enough, why not speed things up?

Bu is the secretary general of the Norwegian EV Association

To read more on climate targets for 2022, visit ***time.com/climate-goals-2022***

NORWAY: FREDRIK BJERKNES—BLOOMBERG/GETTY IMAGES; UKRAINE: ANATOLII STEPANOV—AFP/GETTY IMAGES

THE RISK REPORT BY IAN BREMMER

The top global crisis points for 2022

A DOMESTIC FOCUS for both the U.S. and Chinese governments lowers the odds of a big international conflict in 2022, but it leaves less potential leadership and coordination to respond to emerging crises. That's bad news in a year that will be dominated by the COVID-19 pandemic, climate change and a number of regional geopolitical crises.

1. NO "ZERO COVID"

We're done with the pandemic, but it's not yet done with us, and the finish line depends on where you live. Critically, China's "zero COVID" policy will fail. In the developed world, the end is near. The highly transmissible Omicron variant is colliding with highly vaccinated populations that are bolstered by highly effective mRNA vaccines and COVID-19 treatments. That's why the pandemic will likely become endemic for advanced industrial economies in the first half of this year.

But China, the primary engine for global growth, will face highly transmissible COVID-19 variants without the most effective vaccines and with far fewer people protected by previous infection. China's policy will fail to contain infections, lead to larger outbreaks and require more severe lockdowns. That means greater economic disruptions, lower consumption and a more dissatisfied population at odds with the triumphalist "China defeated COVID" of the state-run media.

2. TECHNOPOLAR WORLD

Today, the world's biggest tech firms decide much of what we see and hear. They determine our economic opportunities and shape our opinions on important subjects. E.U., U.S. and Chinese policymakers will all tighten tech regulation this year, but that won't limit tech giants' ability to invest in the digital sphere where they, not governments, remain the primary architects, actors and enforcers.

Tech giants can't yet (and don't want to) effectively govern the digital space or the tools they're creating. Disinformation will further undermine public faith in democracy, particularly in the U.S.

3. U.S. MIDTERMS

In November, Republicans will almost certainly win back majority control of the House of Representatives—and maybe the Senate. If so, Democrats will view GOP control as the illegitimate result of a voter-suppression campaign, and Republicans will see a 2022 win as proof 2020 was fraudulent. Impeaching President Joe Biden will lead the GOP agenda, and public trust in American political institutions will take an even larger hit.

Disinformation will further undermine public faith in democracy, particularly in the U.S.

4. CHINA AT HOME

An increasingly burdensome "zero COVID" policy and President Xi Jinping's reform plans will unsettle markets and companies in 2022. Xi's vision of technological self-sufficiency, economic security and social harmony will collide with intensifying pushback from the West, an exhausted growth model, an overleveraged and unbalanced economy, and a rapidly aging population.

5. RUSSIA

A buildup of Russian troops near Ukraine has opened a broader confrontation over Europe's security architecture. President Vladimir Putin could send in troops and annex the occupied Donbas, though his current demand is for major NATO security concessions and a promise of no further eastward expansion. But a grand bargain is unlikely.

6. IRAN

Iran's nuclear program is rapidly advancing. With diplomacy stalled, the Biden Administration has few options. Israel will increasingly take matters into its own hands—which once again raises the specter of Israeli strikes on Iranian nuclear facilities. These pressures will collide this year, leaving oil prices and regional states jittery and increasing the risk of conflict.

For more top risks of the year, please visit ***time.com/2022-risks***

Ukrainian troops on the front line with Russia-backed separatists in Donetsk on Dec. 18

The D.C. Brief

By Philip Elliott

WASHINGTON CORRESPONDENT

No one really disputes the concept of political coattails: the biggest name on a ballot has some dragging fabric that can pull down-ballot contenders across the finish line. Well, it may turn out the favor goes both ways, and **hyperlocal candidates can have a positive spillover on their colleagues up-ticket.**

In an analysis of seven must-win states from Democratic data nerds, it turns out that fielding down-ballot races has a statistically significant effect on boosting the headliners. In other words, having someone on the ballot for parochial races like school board can actually help the contenders for governor, Senator and even President. How much help they offer varies, from 0.4 percentage points to 2.3 percentage points, according to the BlueLabs analysis funded by Run for Something and For Our Future, two groups that emerged from the ashes of 2016's Democratic losses.

A fraction of a percentage point might seem small, and it is. But Joe Biden won Pennsylvania and Georgia by 0.2 points, Arizona by 0.3 points and Wisconsin by 0.7 points. Four years earlier, Hillary Clinton lost Michigan by 0.3 percentage points, Pennsylvania and Wisconsin by 0.7 points, and Florida by 1.2 points. The power of the presidency is regularly decided on the margins and may well hinge on that state assembly race that no one is paying attention to.

Strategic hacks are now starting to look at filling the gaps on existing ballots this election year, not necessarily to win the races but to build capacity, goodwill and potential. It might be the smartest investment a party can make.

For more insights from Washington, sign up for TIME's politics newsletter at **time.com/theDCbrief**

New Yorkers wait to get tested on Dec. 22 amid a surge of Omicron cases

The Coronavirus Brief

By Jamie Ducharme

HEALTH CORRESPONDENT

IN THE EARLY MONTHS OF THE COVID-19 vaccine rollout, breakthrough infections among the inoculated were so rare that individual cases sometimes made the news. Now, as Omicron tears through the U.S., that era is clearly over.

Avoiding COVID-19 forever is an increasingly untenable strategy, several experts told me for a recent story. As highly contagious variants like Omicron move through our reopened world, breakthrough infections are becoming much more common.

On an individual level—at least for most vaccinated people—that's not a reason to panic. Fully vaccinated people still have strong protection against severe disease and death, and boosted people are in an even better position. If you've had your shots, a breakthrough infection might make you feel lousy for a few days, but it's unlikely to threaten your life or land you in the hospital. For that reason, we may someday be as blasé about a breakthrough infection as we would be about a case of the flu or a bad cold.

But someday is not today. Individual risks for vaccinated people might be low. But our societal situation is bad. Hospitals are understaffed and overwhelmed, and as Omicron pushes case counts to new heights, that situation will only get worse—to the detriment of anyone who needs emergency medical care for any reason.

A huge chunk of our population is still vulnerable to the virus, too. Almost 40% of people in the U.S. are not fully vaccinated—including all children under 5, for whom there is not yet an authorized shot. And the elderly, those who are immunocompromised and people with other underlying medical issues are still at a higher-than-average risk. To open the floodgates and let the virus run wild is to put all these lives in danger.

Several experts told me we're at a transitional stage. **We're close to treating breakthrough infections as routine, but not there yet.** Our systems are too weak, and too much of our population is at high risk. For now, our priority has to be flattening the Omicron curve as much as possible. Only once the emergency passes, and our nation's treatment and testing capabilities hopefully increase, can we begin to accept that COVID-19 is here to stay.

For everything you need to know about COVID-19, subscribe at **time.com/coronavirus**

TESTING: SPENCER PLATT—GETTY IMAGES; FREEDOM: ADAM GLANZMAN—GETTY IMAGES; SHOES: KEVIN C. COX—GETTY IMAGES

Embrace America by defending the rights of others

BY ENES KANTER FREEDOM

IN MY FIRST WEEKS AS A U.S. CITIZEN, I'VE EXPERIenced the full richness and contradictions of what it means to be an American. I changed my last name to Freedom, and then made the most of that newfound freedom by continuing to advocate for the oppressed and speaking truth to power at every opportunity. Along the way, I made a point of expressing gratitude for the freedoms U.S. citizens are entitled to. We are free to speak our minds and pursue our dreams, and have the opportunity to forge our destiny.

The freedom to engage in protest is precisely what makes this country so great. But I also understand that this country was built on slavery and racial injustice—a legacy that lives on today. In the aftermath of George Floyd's murder, I was among the first in the NBA to march and speak in solidarity with our brothers and sisters fighting for overdue systemic change.

In the U.S., we have the ability to engage in such protest to move our country forward. I come from a country, Turkey, where authorities tried to kidnap me, forced my family to publicly disown me, tortured my father in detention, and ultimately revoked my passport, stripping me of my home and my identity—all for speaking up for human rights. The very expression of dissent and participation in protest are met with violent suppression in authoritarian regimes around the world. In China, the regime is trying to erase Uighurs and other ethnic minority groups in Xinjiang, has systematically abused the basic human rights of Tibetans, and suppressed the civil rights of Hong Kongers.

That's why I use my platform to speak out and to offer my unique perspective on the immeasurable value and responsibility that come with our many freedoms here.

But I don't speak from either the right or the left. As a human-rights activist, I know we need to work across divides with all allies in the struggle for justice, regardless of political background. Like so many, I worry that my deeper message tends to get lost in the culture wars and polarization of today. I want us to lift one another up, make one another better. I have immense respect for LeBron James and his leadership in giving back and supporting progressive causes. But I called him out to raise awareness about his silence and that of too many others in the face of the Chinese Communist Party (CCP) and its economic clout. Instead, we must stand up against the CCP's domestic mass atrocities, including the forced-labor industry behind the very shoes and clothes we wear and promote.

THERE'S A LONG LIST of celebrities, government officials and corporations that prefer to stay silent on China to preserve their business deals. The CCP's economic influence comes at the expense of its victims.

I wanted to sound the alarm on Nike's complicity in the CCP's attempted genocide against the Uighurs because NBA players have the power to make a difference here. As of 2020, one of Nike's largest shoe factories, Taekwang, has been documented as forcing hundreds of Uighurs, mostly women, to produce millions of Nike shoes annually. A new report further underscores the high risk of forced Uighur labor within Nike's supply chain.

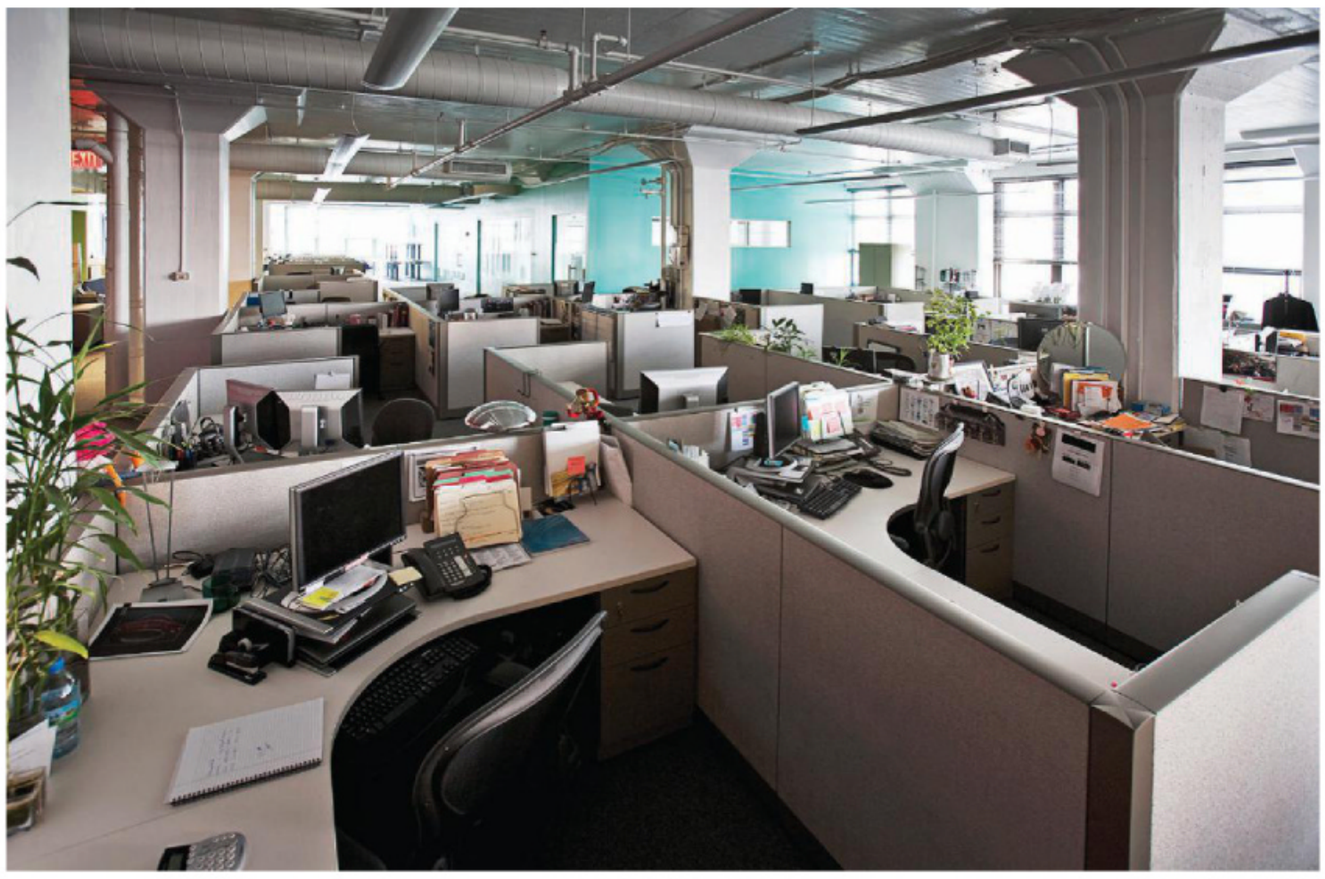
The Freedom in my last name is our greatest strength—something that is not guaranteed in many countries around the world. Let's tap into it and work together to make this country and world a better place. The U.S. has said it will not send its officials to the 2022 Beijing Olympics. We should continue putting pressure on corporate sponsors—including Visa, Alibaba, Allianz, Coca-Cola, Dow, General Electric, Intel, Panasonic, Procter & Gamble, Toyota and Airbnb—to follow suit and withdraw.

We, as athletes, should further push our governments, the IOC and sporting associations to move the Games and suspend all other sporting activities hosted by a regime committing ongoing, widespread human-rights abuses. Do we really want to risk sending our players to a country that disappears its own citizens and arbitrarily imprisons foreigners as bargaining chips? We should speak up for injustice around the world. We should embrace the promise of America.

The Boston Celtics center, seen below at a Dec. 1 home game, often uses his shoes as placards. The message in Atlanta on Nov. 17 was SAVE UYGHUR

The Freedom in my last name is our greatest strength

Freedom plays for the Boston Celtics



WORK

How to make a return to the office a little less stressful

BY ANNE HELEN PETERSEN

EVER SINCE VACCINES BECAME WIDELY AVAILABLE TO adults in the U.S., the conversation in HR departments and C-suites has centered on the same topic: How and when are we going to go back to the office? I've spent the past 21 months talking to companies, experts and employees about the pitfalls and promising changes that can accompany the shift from fully remote or optional office time to at least some mandatory in-person time, and the best advice I can give is that it's going to feel messy, fraught and unsatisfying for a while. But that doesn't mean there aren't ways to address those feelings.

FOR EMPLOYERS:

1. RECOGNIZE THAT THE FUTURE IS FLEXIBILITY

Companies determined to go back in time to pre-COVID-19 norms are in for a harsh reality. Flexibility might involve any number of combinations of remote and in-person work. But many people have no desire to return to the way things were. Either you're going to fight that tide and watch people leave or start grappling with the future now.

2. SOLICIT FEEDBACK—AND LISTEN TO IT

Asking for feedback and then ignoring it is a recipe for demoralization. If you're actually interested in cultivating a flexible work environment that serves the best interest of the company, keep actively listening to (and acting on!) employee opinions. How are caretakers feeling? Parents of kids under 5? New employees? Have job descriptions changed? The more you think about "back to the office" as "figuring out the future of flexible work for all of us," the more collaborative and satisfying the process will be.

3. FLEXIBLE MANAGEMENT IS A SKILL

Managing people is hard. Even before the pandemic, most managers had little training in how to do it well. And managing people within sight every day is a different skill from managing people remotely. Figure out how to provide the training and support that will make good, flexible management possible. Much of the pandemic was spent cultivating patience as we tried to wing it under compounding forms of duress. It's time to start figuring out sustainable systems for how we'll work moving forward—and that includes management.

We aren't rubber bands that can just bounce back to our previous way of working

FOR WORKERS:

1. ACKNOWLEDGE THE DISCOMFORT

We aren't rubber bands that can just bounce back to our previous way of working, especially when going to an office comes with the stresses of a commute, childcare gaps or the fear of COVID-19 exposure amid a rapidly spreading Omicron variant. Work with your manager to figure out how to not only acknowledge whatever distress arises, but also give yourself space to process it. That might include weekly check-ins and scheduled paid time off to let yourself absorb the changes.

2. IDENTIFY YOUR RHYTHMS

When are your deep work concentration hours? What is your best time (and location) for administrative work? Flexible work means the chance to craft your workday (at least in some form) around what works for you. You might have already been doing this to some extent during the pandemic, but the reopening of offices offers a chance to revisit your schedule in a meaningful way. On the days you work from home, how can you create on- and off-ramps to ease in and out of the workday? How can you block spaces in your calendar for a lunch not spent in front of your computer?

3. RESERVE THE RIGHT TO LOOK ELSEWHERE

How your company handles the transition back to the office is indicative of how it handles, well, everything. If people in charge ignore worker concerns, if guidelines feel arbitrary, there are many other organizations that are looking. No job is perfect, but some jobs, particularly at companies committed to figuring out a way forward in this new flexible reality, are far better than others.

Petersen is co-author of Out of Office: The Big Problem and Bigger Promise of Working From Home

GETTY IMAGES

SOCIETY

A New Year's resolution for when everything feels out of your control

BY AUBREY HIRSCH

Hirsch is the author of the short-story collection Why We Never Talk About Sugar

POLITICS

THE

The FBI's massive investigation of Jan. 6 rioters is delivering convictions, and resistance By Vera Bergengruen

FALLOUT

Trump supporters protest in front of the Capitol before a crowd stormed the building on Jan. 6, 2021

PHOTOGRAPH BY BRENT STIRTON

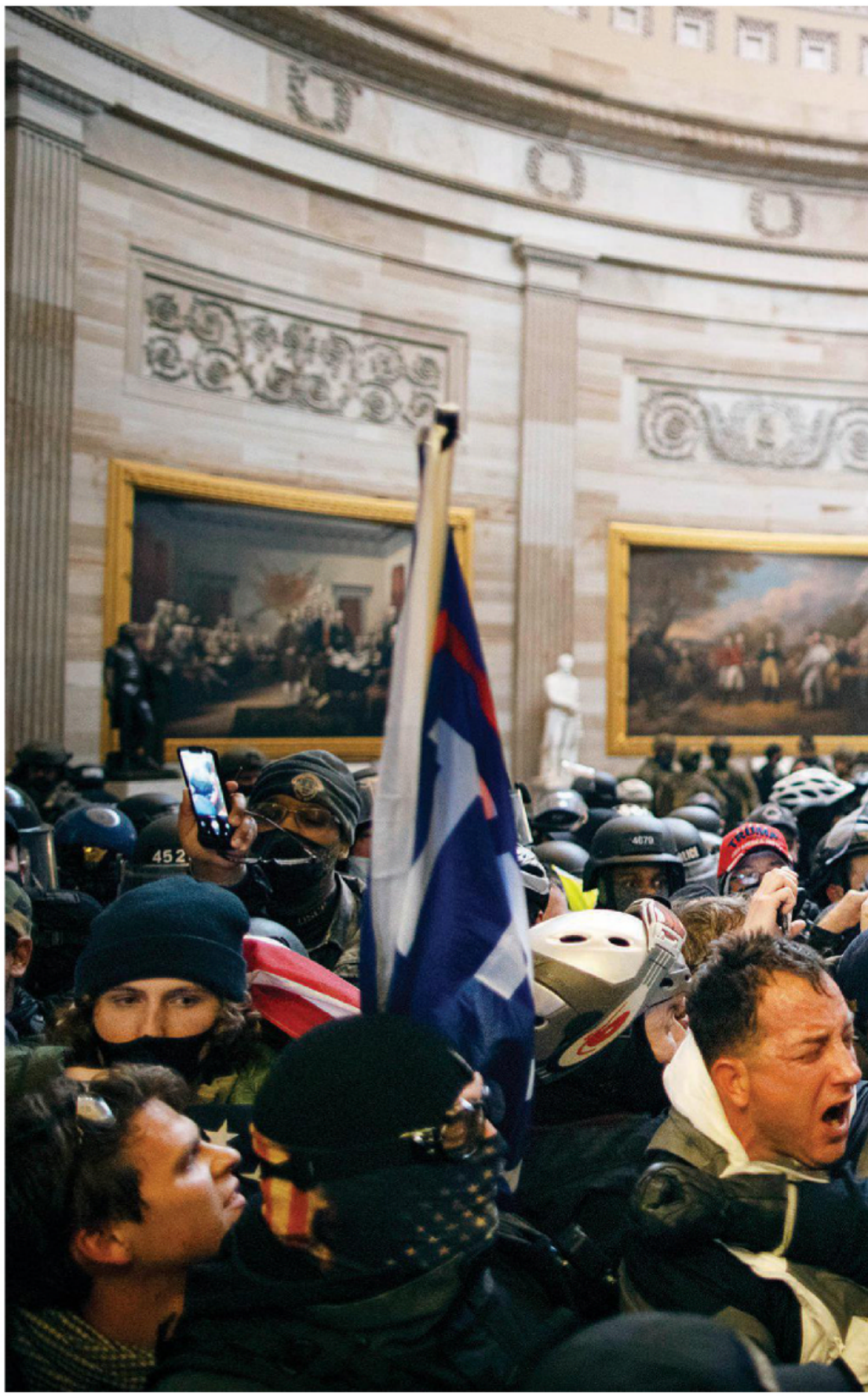
In the predawn hours of Dec. 14, residents of a quiet street in Tamarac, Fla., were woken up by the flashing lights of police vans.

As officers deployed around a modest house, one man videoed a SWAT team arresting his neighbor, Mason Courson, bringing him out of his home with his hands behind his back.

It's a scene that has played out in hundreds of neighborhoods across the country over the past year. Courson, 26, was allegedly part of the mob of supporters of former President Donald Trump that stormed the U.S. Capitol on Jan. 6, 2021, intent on stopping the certification of his loss in the 2020 election. Shouting "Heave, ho!" Courson and a group of rioters had crushed a bleeding D.C. police officer between two doors as they forced their way into the Capitol, according to prosecutors. They said the group went on to beat another officer with a baton, which Courson allegedly kept as a possible "trophy" or "memento."

It took 342 days for FBI agents to come to Courson's door and charge him with eight federal offenses, including assaulting officers, civil disorder, and entering a restricted building with a deadly or dangerous weapon. "Crazy they still finding them," one resident observed in the Facebook comments of a local news story. "Dudes probably thought they got away with it."

The tear gas had barely dissipated from the Capitol riot last year when the FBI launched the largest federal investigation in U.S. history. Aided by a steady flow of tips from Internet sleuths and the public, the agency has identified and charged more than 720 men and women involved in the attack that left five people dead and lawmakers frantically calling for help as a violent crowd shattered



windows and ransacked offices. More than 140 police officers suffered injuries—including concussions, cracked ribs, smashed spinal disks and stab wounds—and four officers who responded have since taken their own lives.

But as investigators closed in, the country drew apart. Today roughly half the number of Republicans support prosecuting the Jan. 6 mob as did a year ago, polls show. As prosecutors, judges and juries hold those who broke the law to account, the entire investigation has come under attack.

For many, the arrests of rioters who beat police officers and erected a fake gallows and chanted, "Hang Mike Pence!" have brought a sense of justice, even relief. But many others see the probe as part of a politically motivated crackdown on a largely peaceful group exercising their First Amendment rights. What the American justice system has found to be a riot, GOP lawmakers, conservative media and right-wing activists cast as a legitimate protest that just got out of hand. By and large, they recall the day as an exuberant, even lighthearted, exercise in self-expression: the smiling grandmothers in red Trump hats posing for photos in the chaos; the Texas man drinking a

PREVIOUS SPREAD: GETTY IMAGES; THESE PAGES: MOSTAFA BASSIM—ANADOLU AGENCY/GETTY IMAGES

Police clash with Trump supporters in the Capitol rotunda after they breached the building

beer who bragged, "I don't always storm the Capitol of the United States of America, but when I do, I prefer Coors Light."

Now, as the investigation enters its second year, federal officials face the uncomfortable possibility that the more successful they are, the more Americans may take up the cause of people seen as persecuted patriots. "Within a week of Jan. 6, there was a recognition that how we address what happened had to be done very carefully because it can have unintended consequences of causing additional radicalization," says Elizabeth Neumann, who until 2020 led the Department of Homeland Security office that oversees responses to violent extremism.

But even she was surprised at how quickly some have cast the rioters as beleaguered champions of free speech. "More people may be vulnerable to suggestions that breaking the law or committing an act of violence is appropriate to preserve their agency," she says. "That is a powerful narrative: that their government is out to get them."

THE FBI HAS been swamped by evidence. Agents have sifted through 15,000 hours of footage from surveillance and law-enforcement body cameras, electronic communications from some 1,600 devices and more than 270,000 tips from the public. Then there is all the digital media generated by the rioters themselves, many of whom documented their exploits on social media in real time. As of Jan. 5, at least 220 people had been charged with assaulting, resisting or impeding officers, 75 of them charged with using a deadly or dangerous weapon or seriously injuring an officer. So far at least 150 of the over 720 people charged with federal crimes related to the riot have pleaded guilty.

The resource-intensive investigation has taken place amid scrutiny of how the FBI handled warnings of potential unrest before Jan. 6. It and other agencies dismissed online threats to violently attack Congress, bring firearms to Washington, and even arrest and kill lawmakers as "aspirational," not serious plans to break the law. Defendants have echoed that assessment. "It was a protest that became a riot," argued the defense lawyer for Paul Allard Hodgkins, 38, before a federal judge in July. Hodgkins was sentenced to eight months in prison. Said his lawyer: "If we're going to label this protest as domestic terrorism, then please consider this: Where do we draw that line?"

The effort to do so has challenged the Justice Department. Although some in the mob belonged to extremist groups like the Oath Keepers, more than 20 of whose members are facing federal charges including conspiracy, the majority did not have ties to such groups or the organized plots investigators say they have uncovered. Absent evidence of hidden criminal plans, the feds have relied on the rioters' own words to establish motive, in some cases citing social media posts in which participants said they were prepared to commit violence.

Authorities also have weighed rioters' behavior when they returned home. Did they brag about their exploits, or show remorse and acknowledge the gravity of what they had done? At a hearing in early December, a federal judge read out a Pennsylvania man's Facebook post bragging, "Overall I had fun lol," before sentencing him to 30 days. These kinds of posts made it "extraordinarily difficult" to show him leniency, U.S. District Judge Amy Jackson said. "The 'lol' particularly stuck in my craw because, as I hope you've come to understand, nothing about Jan. 6 was funny," Jackson said. "No one locked in a room, cowering under a table for hours, was laughing."

The FBI is still asking the public to help identify at least 350 people "believed to have committed violent

One year later, the FBI has charged more than 720 people with federal crimes

acts" at the Capitol. But many Americans appear to have moved on. The number of Republicans who said they thought it was "very important" to prosecute those who broke into the Capitol dropped from 50% in March 2021 to 27% in September, according to a Pew Research poll. "There is no public outcry demanding that the government continue to comb through every snippet of video from Jan. 6, 2021, seeking people to indict," the lawyer for Patrick McCaughey, a Connecticut man charged with assault, said in March. She called the investigation "the largest political witch hunt in DOJ history."

A SEPTEMBER "JUSTICE FOR J6" rally in support of those arrested attracted only a few hundred supporters in Washington, D.C., yet the view of charged insurrectionists as "political prisoners" has become a popular rallying cry on social media. In November, a three-part documentary series released by Fox News host Tucker Carlson reframed the events of Jan. 6 as a "false flag" operation set up to trap and "purge" Trump supporters in a "new war on terror."

> 'No one locked in a room, cowering under a table for hours, was laughing.'
>
> —AMY JACKSON, U.S. DISTRICT JUDGE

In September, Trump himself released a statement in support of the Jan. 6 protest, saying, "Our hearts and minds are with the people being persecuted so unfairly relating to the January 6th protest concerning the Rigged Presidential Election."

It's a narrative that resonates for those Americans struggling to reconcile the actions of their friends, family and neighbors with the larger forces that brought the mob to the Capitol. On Dec. 22, in a courthouse in Miami, Courson's lawyer argued he had wanted only to attend Trump's widely publicized rally, not participate in a violent event. "This became a chaotic situation," he said. "Emotions took over for most of these folks, and they found themselves in a situation that they never intended."

The judge admitted it was hard to assess Courson's actions as an individual compared with those of the larger group, yet ultimately ordered him detained prior to trial, citing his direct participation: "'There's no way to interpret this offense other than that the Defendant engaged in an armed insurrection against the United States and against the very heart of our democracy." But for many Americans, the case is still open. —*With reporting by* MARIAH ESPADA

DUSTIN CHAMBERS—REUTERS

TRUMP'S LUCRATIVE LIE

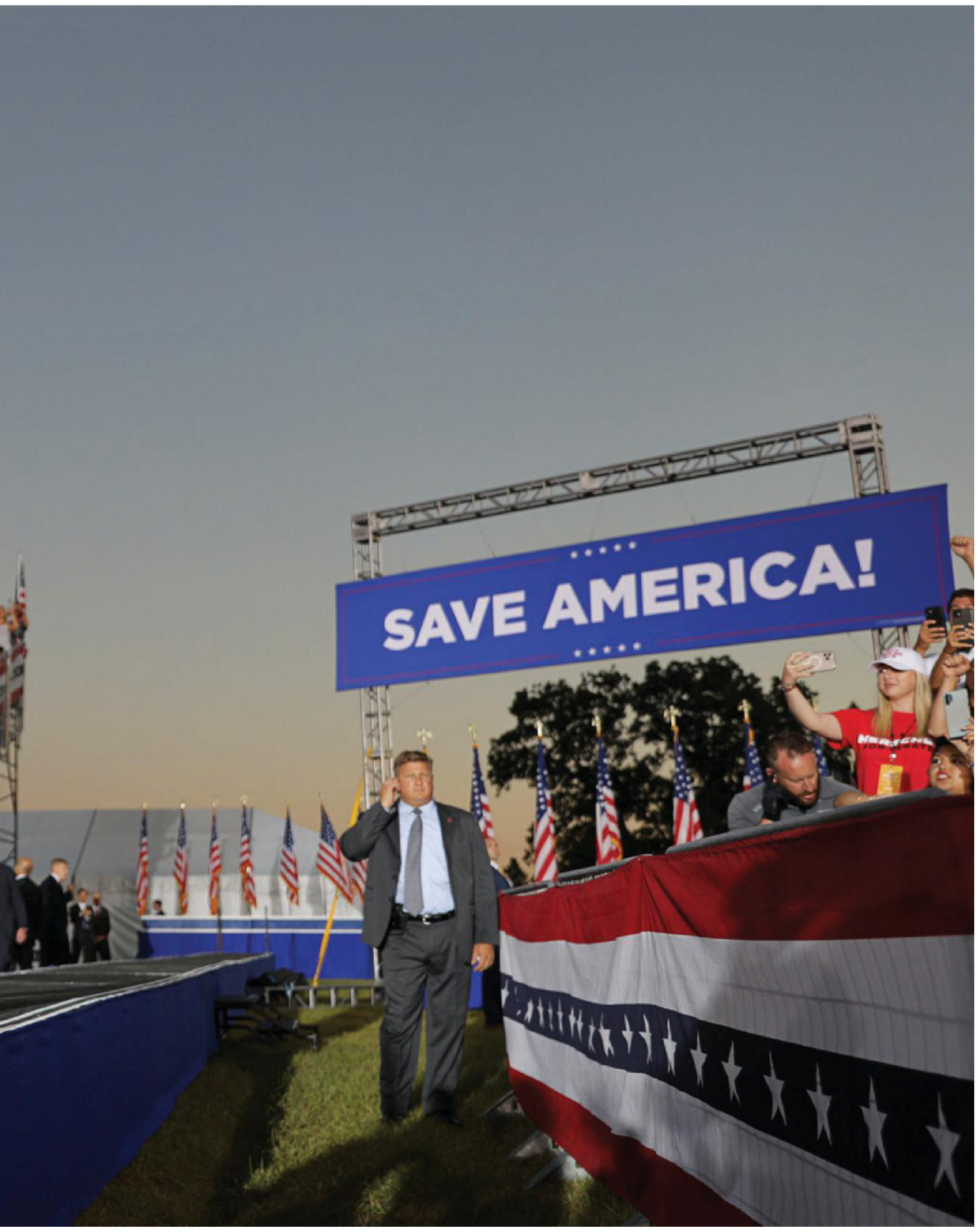
The former President has weaponized the Jan. 6 attack By Brian Bennett and Chris Wilson

FOR MILLIONS OF AMERICANS, JAN. 6 WAS A JARring day that ended their nation's 150-year streak of peaceful transitions of power.

For Donald Trump, it was a windfall.

Ever since his supporters stormed the Capitol as Joe Biden's victory was being certified, Trump has continued to falsely insist he won in 2020 and paint the unrest as the result of a stolen election. In December, Trump said that the real insurrection "took place on Nov. 3," recasting the violence that left five dead as an "unarmed protest of the rigged election."

It has proved to be a potent—and lucrative—lie. Nearly half of Republicans in the country believe Trump won in 2020, according to recent polling. For months, fundraising emails from Trump that claim that the 2020 election was "rigged and stolen" have pointed readers to a bright red button that



Trump at a rally in Perry, Ga., on Sept. 25

reads DONATE TO SAVE AMERICA. Trump's political machine raked in at least $50 million in the six months that followed the Jan. 6 Capitol riot, according to filings with the Federal Election Commission, an unusually high figure for a defeated former President during his first year out of office and nearly eight times what Trump raised in outside funding while seeking the GOP nomination in 2015.

The fallout from Jan. 6 has also allowed the former President to strengthen his grip on the Republican Party. Lawmakers' reactions to the attack have become a personal loyalty test: at least six Republicans who have criticized the rioters have been targeted for primary challenges by candidates loyal to Trump. Members of Congress who supported the House investigation into the attempted insurrection have been featured in critical ads by pro-Trump groups. "Sometimes there are consequences to being ineffective and weak," Trump said in May of the "wayward Republicans" who voted for the congressional probe to move forward. Trump's office did not respond to requests for comment.

Trump and his allies are trying to do more than paper over the events of the day. They are using it as a rallying cry to raise the specter of more violence if future voting doesn't go Trump's way in the 2022 midterms or, should Trump run again for President, in the 2024 elections. Asked by ABC News' Jonathan Karl in a March interview about the individuals who breached the Capitol and threatened Vice President Mike Pence's life over his decision to uphold the legitimate election results, Trump backed his supporters: "Well, the people were very angry."

THERE APPEARED REASON to hope, in the raw immediate aftermath of Jan. 6, that the spectacle of political violence in the halls of Congress might spur a national course correction.

That didn't happen. Instead, disinformation about alleged election fraud has become mainstreamed as a plank of both the Republican Party's political strategy and Trump's potential 2024 run. While most major GOP advertisers have stayed away from highlighting the Jan. 6 insurrection in their ads, Republicans routinely use myths around election fraud as a central message in their funding drives and efforts to collect contact information from supporters, according to analysis of Republican political-ad spending by Bully Pulpit Interactive, a left-leaning digital-advertising firm.

Since July, the pro-Trump Save America Joint Fundraising Committee, which brought in more than $20 million in the first half of 2021, spent over $1 million in Facebook advertising, using false claims of fraud in the 2020 vote to fundraise and build lists of supporters, according to the Facebook Ad Library. One ad posed the question, IS TRUMP THE TRUE PRESIDENT? Those who clicked "Answer Now" were sent to a fundraising page and asked for their emails.

The strategy is not only raking in money. According to an NPR/Ispos poll released on Jan. 3, 45% of Republicans believe there was major fraudulent voting that changed the result of the presidential election. Nearly one-third of Republicans polled believed the storming of the Capitol on Jan. 6 was carried out by groups from the far-left "antifa" movement or government agents, a conspiracy theory propagated early on by right-wing media outlets, and 38% of Republicans described Jan. 6 as a "riot that got out of control," rather than an attempt to overturn an election.

Among all Americans polled, 64% agreed that American democracy is in crisis and at risk of failing. That sense of alarm boosts Trump's power, says Larry Sabato, a political analyst and director of the Center for Politics at the University of Virginia. "Jan. 6 has increased his rank and file's anger and resentment," he says. "It's confirmation for them that everybody else is out to get them."

AS TRUMP AND HIS ALLIES have used Jan. 6 to raise money and woo voters, they have also leveraged it to weed out GOP members critical of Trump's actions that day. After U.S. Representative Peter Meijer of

Attendees of a Trump rally in Des Moines, Iowa, pose with cardboard cutouts, on Oct. 9

Michigan voted to impeach Trump for trying to overturn the election result and staying silent for hours while his supporters violently laid siege to the Capitol, Trump called him a "RINO" ("Republican in name only") and endorsed a primary challenger. Trump also endorsed a challenger against Representative Jaime Herrera Beutler of Washington State, who voted in favor of his second impeachment and said Trump encouraged "would-be assassins" with his remarks at a rally before the attack. (Trump was acquitted by the Senate in the impeachment trial.)

Groups supporting the former President joined the fight. When 35 House Republicans voted in May to form a commission investigating the riot, a pro-Trump super PAC stepped in. Drain the DC Swamp, registered in Marlton, N.J., spent more than $210,000 for 13 ads on Facebook and Instagram in a two-week blitz, labeling the GOP lawmakers "communist traitors" and "turncoats." The campaign, which continued through mid-July, appeared in Americans' Facebook and Instagram feeds more than 6.7 million times.

After Representative Nancy Mace, a Republican from South Carolina, voted on Oct. 21 in favor of holding former Trump adviser Stephen Bannon in contempt of Congress for failing to cooperate with the House investigation into Jan. 6, Drain the DC Swamp again went on a spending spree. On Dec. 13, the group dropped at least $14,000 for five different ads on Facebook and Instagram calling Mace "anti-Trump" and "a disgrace." The ads appeared more than 450,000 times, reaching an audience largely over the age of 55, per the Facebook Ad Library.

The events of Jan. 6 are "being used as a resource for Trump," says Amy Fried, a political-science professor at the University of Maine, "to raise funds, to keep himself front and center, to bind himself with loyalty to his supporters." Fried, who co-authored the book *At War With Government: How Conservatives Weaponized Distrust From Goldwater to Trump,* sees this as an escalation of a decades-long tendency by Republican politicians to undermine the public's faith in government. Republican voters, she says, have "gotten used to that diet of distrust."

That erosion is very hard to reverse. "We can never take the American system for granted," says Sabato. "We're just as vulnerable as most other societies—most other democracies—to deterioration in our standards and values." One year later, there's every reason to fear that the violence of Jan. 6 may not have marked the end of the nation's political degradation, but its acceleration. —*With reporting by* JULIA ZORTHIAN

'Republican voters have gotten used to that diet of distrust.'

—AMY FRIED, UNIVERSITY OF MAINE

TRUMP: SCOTT OLSON—GETTY IMAGES; CHENEY: JIM LO SCALZO—EPA-EFE/SHUTTERSTOCK

COMMITTEE COUNTDOWN

The House panel on Jan. 6 races to conclude its work before the midterms By Nik Popli

When a bipartisan House committee began investigating the Jan. 6 insurrection, its goal was simple: compile a detailed account of what happened, and make recommendations to ensure it never happens again. But piecing together the facts of how that day unfolded has proved to be a daunting task. So far, the select committee has obtained more than 30,000 records, interviewed over 300 witnesses and issued subpoenas to dozens of former President Donald Trump's allies—yet its work remains far from complete.

Members of Trump's inner circle are refusing to cooperate with the investigation, and the committee is waiting to see whether the Supreme Court will deny the former President's request to block access to White House records related to the riot. Lacking crucial evidence, the nine-member House panel hopes to finish its work before the Nov. 8 midterm elections, when Republicans could win back control of the House and dissolve the committee.

WHAT NEW EVIDENCE HAVE THEY FOUND? The biggest source of evidence uncovered by the panel is some 9,000 pages of documents that White House chief of staff Mark Meadows turned over before he decided to stop cooperating. Among them are text messages to Meadows that have brought new focus on Trump's failure to act quickly to stop the insurrection, despite pleas from lawmakers, journalists and even his eldest son. "Someone is going to get killed," one anonymous message warned Meadows. "He's got to condemn this sh-t ASAP," Donald Trump Jr. wrote.

Investigators are also reviewing a PowerPoint presentation circulated by Phil Waldron, a retired colonel who worked with Trump's outside legal team, that recommended Trump declare a national emergency to keep himself President and proposed Vice President Mike Pence reject electors from "states where fraud occurred," despite there being no evidence of such fraud.

WHAT HAVE THEY DONE? So far, the committee has subpoenaed around 50 Trump allies and rally organizers for documents, phone records and bank statements. Most witnesses have cooperated, but three former Trump aides have refused to comply with the records request: chief strategist Stephen Bannon, Justice Department official Jeffrey Clark and Meadows. The House voted to hold Bannon and Meadows in contempt of Congress, a misdemeanor criminal offense that can result in up to one year in prison. In December, the panel requested interviews with Republican Representatives Scott Perry of Florida and Jim Jordan of Ohio, who reportedly communicated with Trump on Jan. 6.

Investigators have also suggested subpoenaing Trump to answer questions before the committee. Experts warn he's unlikely to speak as long as the courts are considering his claims of Executive privilege, a legal defense Trump is trying to use to shield his presidential communications, despite no longer serving in office.

SELECT COMMITTEE VICE CHAIR LIZ CHENEY AND CHAIRMAN BENNIE THOMPSON AT A DEC. 14 HEARING

WHAT NOW? One of the most critical questions the panel will try to answer is whether Trump's conduct while a mob of his supporters overtook the Capitol could qualify as an effort to obstruct the certification of Joe Biden's victory and amount to criminal obstruction of Congress. "We know hours passed with no action by the President to defend the Congress of the United States from an assault while we were trying to count electoral votes," GOP Representative Liz Cheney of Wyoming said to House colleagues on Dec. 14.

While courts have held in the past that Congress cannot conduct a law-enforcement investigation, lawmakers can share the results of their probe with the Justice Department if they believe they have uncovered evidence of a crime. Such a criminal referral could affect the midterms, and increase pressure on Attorney General Merrick Garland to prosecute Trump and his allies for their role in the insurrection.

But time is short. Committee chairman Representative Bennie Thompson, a Democrat from Mississippi, said he hopes to finish by early spring. "We will tell this story to the American people. But we won't do it piecemeal," he said on Dec. 13. "We'll do it when we can tell the story all at once, from start to finish."

HEALTH

CDC director Rochelle Walensky faces a surging virus—and a crisis of trust

By Alice Park

PHOTOGRAPHS BY SHARIF HAMZA FOR TIME

Walensky brings a rare combination of scientific credentials and people skills to the position of CDC director

IF VIRUSES KNOW NO BORDERS, THEY have an equal disdain for human holidays. On Thanksgiving 2021, Dr. Rochelle Walensky shut off her phone for about 45 minutes and placed the turkey on the dining table to enjoy the holiday meal with her husband and three sons. When she turned the phone back on, she found, among the messages that had piled up, warnings that SARS-CoV-2 had morphed into a potentially dangerous new variant, identified in South Africa. Health officials there predicted that what would become known as the Omicron variant was much better at spreading than previous variants, and Walensky knew it was only a matter of time before Omicron cases would appear in the U.S.

As director of the U.S. Centers for Disease Control and Prevention (CDC), Walensky's job is to protect the nation, and by extension the world, from threats like this one. To buy time as she and the country's public-health experts learned as much as they could about the new variant, she joined them in advising that flights from South Africa and nearby nations reporting cases be temporarily halted. She also beefed up genetic-sequencing efforts to monitor for the new variant so health officials would know as soon as the first cases hit the country.

By Christmas, Omicron had overtaken Delta as the dominant variant, accounting for almost 60% of new infections in the nation, and over that holiday weekend, Walensky and the country's top COVID-19 experts wrestled with a difficult decision. With thousands of flights canceled as airline staff tested positive for COVID-19 and were unable to work, and with hospitals, schools and food industries similarly tottering under the pressure of maintaining an adequate labor force as Omicron pulled employee after employee into the COVID-19-positive ranks, Walensky and the CDC made the critical, and controversial, decision to cut the isolation times for people who were infected by half, from 10 days to five. Business groups supported the change, which provided a release valve on their increasing labor problems, but health care workers and certain labor unions pushed back, arguing that employees would be compelled to work while potentially still contagious, which could lead to an increase in COVID-19 cases.

Walensky defended the move, telling TIME, "There are a lot of studies [from other variants] that show the maximum transmissibility is in those first five days. And [with Omicron] we are about to face hundreds of thousands more cases a day, and it was becoming very, very clear from the health care system that we would have people who were [positive but] asymptomatic and not able to work, and that was a harbinger of what was going to come in all other essential functions of society." The decision reflects the balancing act that Walensky has been performing since becoming director of the CDC last January: integrating the scientific reality that an infectious and quickly adapting virus ideally requires intensive lockdown with the economic and social realities that make it impossible to do so for lengthy periods of time. In addition, Walensky confronts another equally monumental task: restoring the public's trust in science, and educating people about the iterative nature of science so they don't see changing recommendations as so confusing and conflicting that they stop listening.

Before taking the CDC job, Walensky had never held a government position, and had only visited the CDC as a guest speaker. As with other specialists in her field, for her the agency represented the best and final word on public health; every time she typed in *C*, her Google search tab auto-filled *CDC*. On the one hand, coming to the agency from outside of the government gives her a clearer sense of how the CDC can and should convey its advice to the health community and to the public. On the other hand, she lacks an extensive network and experience navigating conflicting political and bureaucratic demands—which may have led to some mixed messages from the CDC that, in some people's eyes, only deepened the confusion and mistrust the public feels toward the agency and its recommendations.

'I needed to let [CDC personnel] know that even in the moment when morale was down, the country was relying on them.'

Especially after 2020, when the Trump White House consistently failed to support and bolster scientific advice from the CDC and other science agencies, the public response to changing CDC guidance—even when it comes with well-researched and corroborated evidence—has often been skeptical at best. "It's hard being under the microscope of the media, especially social media," says Captain Amanda Cohn, who was serving as the COVID-19 vaccine lead at the CDC. "It's hard when every time you change a word on the website, everyone responds immediately."

Walensky knows better than anyone else that the CDC has an image problem. Because of changing, often conflicting advice about everything from masks to booster shots, and slow release of guidance on how to safely reopen schools and businesses, the CDC has become a scapegoat for missteps throughout the pandemic response. Walensky is keenly aware that such credibility issues can be as contagious as the virus the agency is confronting, eroding the already weakened trust and integrity that are crucial to everything the agency does. Those public perceptions have created a deeply rooted morale problem within the agency itself, at its headquarters in Atlanta, and among its 13,000 scientists, epidemiologists and public-health experts deployed in more than 60 countries around the world.

So, at a digital all-hands meeting that Walensky called in November, more than 8,300 staff members logged in for another chance to hear from their new director, whom the vast majority had yet to meet in person. During the Q&A session, Walensky fielded a question

Walensky during a Nov. 17 White House briefing

about the hometown Atlanta Braves, who had just won the World Series. Would Walensky, despite being a longtime Boston resident and Red Sox fan, don a Braves cap or T-shirt at the next all-hands meeting to show support for her adopted city?

Walensky did the questioner one better. "I'll be honest, I've spent too much time in Boston to change allegiance from the Red Sox to the Braves entirely," she said. "But … at the risk of having my family and my boys disown me, here I go. I'm happy to wear a Braves hat for the rest of the meeting." And she did.

Yes, it was a calculated and staged effort to show solidarity with a staff that's been beleaguered, belittled and bewildered since the pandemic began as they saw the work to which they'd dedicated their lives dismissed and sidelined at a time when the world needed it most. And yes, it was a relatively small gesture in the grand scheme. But President Joe Biden chose Walensky as much for her scientific credentials—she's a well-respected physician in infectious disease—as for her people skills, which he hoped could halt and maybe even reverse the public's crisis in confidence about public-health science. Directing the CDC is as much a social and political job as it is scientific, and Walensky, with her easy smile and warm demeanor, has the capacity to be a cheerleader for science and scientists, in addition to the voice of the latest data-based evidence.

"I RAN the emergency-preparedness response at CDC for four years before becoming acting director, and we used to run exercises for responding during a crisis," says Dr. Richard Besser, now president and CEO of the Robert Wood Johnson Foundation, of the political noise that drowned out scientific voices in 2020. "We never exercised a scenario in which the political leadership rejected public-health science as an underlying principle of the response."

When Walensky took command of the CDC in January 2021, she responded to that credibility issue with the strongest weapon in her arsenal: data-based evidence. "I am committed to the science, and I will deliver recommendations that are based on science," she tells me during my recent visit in Atlanta, and "Follow the science" is a mantra that she repeats again and again in her briefings and interviews. Soon after joining the CDC, Walensky launched the COVID-19 Data Tracker, a comprehensive dashboard for all things related to pandemic, that she pressured her team to keep updated in near-real time with cases, hospitalizations, deaths and genetic-sequencing information. Trust in science, she believes, starts with good data. "Modeling infectious disease is what I did for 20 years, so I dive in," she says.

It's a battle-tested strategy. Walensky's former mentor Dr. Kenneth Freedberg, professor in health policy and management at Massachusetts General Hospital (MGH), recalls that in 2018 she helped reverse the World

Health Organization's decision to halt the rollout of a three-drug anti-HIV combination for pregnant women over concerns that the medications could cause birth defects. Within hours after the decision was announced, Walensky assembled a team of researchers and crunched the numbers to show that the benefits of the medications far outweighed the risks; the analysis ultimately persuaded the WHO to reverse its position.

But even the best models can't entirely forecast what an unpredictable virus will do. Assessing the risks and benefits of specific advice about COVID-19 will never be a one-and-done endeavor but rather a constantly evolving effort that must take into account ongoing changes in scientific understanding.

For every modification and revision of its guidelines, the CDC, and Walensky, have taken heat. In May 2021, when vaccination rates were increasing, Walensky recommended that immunized people could stop wearing masks indoors. The decision balanced the science at the time—cases were falling but still far from zero—against the growing backlash from the public about the lack of benefits of vaccination; if getting the shots changed nothing about what they could do safely, then why get vaccinated? Two and a half months later, the CDC went back to urging even vaccinated people to wear masks indoors as a new variant pushed case numbers up again.

The media, politicians and the public demolished the CDC for flip-flopping. "I have spent a lot of time thinking about" the shifting advice, says Walensky. "All of the science in that moment said it was safe to take off your masks if you were vaccinated. We perhaps should have said 'for now.' I think that if we had said, 'Despite the science, you have to keep your masks on,' we would have lost the trust of people with regard to actually following the science."

Finding that balance is a task unique to the CDC: keeping up with constantly changing science and turning that data into practical public-health advice. "We have to provide what the science says not in a vacuum but with the understanding of the uncertainty and the moment,"

Health workers administer COVID-19 tests in Stamford, Conn., on Dec. 28 after the 2021 Christmas weekend

JOHN MOORE—GETTY IMAGES

says Walensky. And that means adapting recommendations to the influx of new data. "Translating science into practicable guidance is what has really distinguished the value of CDC over the arc of time," says Dr. Julie Gerberding, chief patient officer at Merck, who ran the CDC from 2002 to 2009. "We have all had scenarios where we weren't able to provide perfect communication [and] perfect guidance. That's part of the challenge."

WALENSKY GREW UP in the suburbs of Washington, D.C., and was inspired by her pediatrician—the only female physician she knew as a child—to pursue medicine. After college, she enrolled at Johns Hopkins School of Medicine, where she trained in internal medicine, in a residency program so notoriously rigorous that its members are called Osler Marines, after one of the co-founders of the hospital. After graduating, she and her husband moved to Boston, and in 2017, Walensky became the first female chief of infectious diseases at MGH.

It was in that role that Walensky became indispensable in advising the Harvard University health system about COVID-19 protocols, setting up testing and mitigation measures to ensure safe ways for people who absolutely had to come to the hospital to continue working—and, eventually, serving as COVID-19 consultant for both the mayor of Boston and the governor of Massachusetts. That caught the attention of the Biden transition team, who saw her impeccable scientific credentials and natural ability to translate complicated science as a prescription for solving the CDC's credibility problem at the time. Walensky was among the Biden Administration's first political appointees, and started Jan. 20.

It wasn't until Walensky came to the CDC that the good intentions that had guided her throughout her medical career were scrutinized for the first time. "When you're a physician or a scientist, no one is questioning your motive, that you want to save someone's life," says her husband Loren, a pediatric-cancer specialist at Dana-Farber Cancer Institute. "What's new in a job like this, which in the end is a political appointment, is that now all of a sudden … that person's motives are now questioned."

Former CDC directors say coming into the agency as an outsider can be daunting. "I had more than a decade of

experience running public-health programs in both the U.S. and globally, and worked for five years running the largest tuberculosis program in the country [in New York City]," says Dr. Tom Frieden, who ran the CDC from 2009 to 2017 and is currently president of the nonprofit Resolve to Save Lives. "And it was overwhelming. No matter how hard I worked, how many hours I worked and how efficiently I worked, I just couldn't keep up with the combination of demands from the White House and the Department of Health and Human Services and the media, and the constantly changing information and the diversity of health care systems in the U.S. And that was in a much less, enormously less challenging situation."

Besser, who was an acting director of the CDC in 2009, adds, "I can't think of a more formidable challenge than stepping into the helm of the CDC in the midst of a pandemic in a setting where you are working totally remotely. That is absolutely an unbelievable challenge."

Walensky works mostly from home but seems to have overcome the challenges of connecting with a staff and country mostly through Zoom, and flies into CDC's Atlanta headquarters for several days a month. "Rochelle has a very high emotional intelligence and is able to convey to staff how much she values them and listens to them," says Frieden. Walensky is impressively on time for her back-to-back meetings, efficiently getting her points across and making sure to end with action plans for next steps.

Every evening, her bedtime reading consists of a carefully compiled report of the latest scientific studies on COVID-19—not exactly light fare, considering the urgency of the pandemic means that studies are now published not only in peer-reviewed journals but also on preprint servers that churn out the latest data as quickly as possible and avoid the lengthy review and editing process.

Aware of the long hours and often thankless sacrifices CDC staffers have made, Walensky has been making what she refers to as "heroes calls" to thank them personally. "People are shocked," she says. "People have asked me, 'Am I fired?' But I love doing it." The calls are a natural extension of her inclusive leadership style, which includes a human touch that isn't lost on people she works with. "Sometimes people in high places may not be willing to show vulnerability or talk about times they failed," says Dr. Ingrid Bassett, co-director of the Medical Practice Evaluation Center at MGH, whom Walensky mentored. She recalls her mentor sharing her own experiences of having her grant applications rejected, which Bassett says was reassuring and motivating.

In March 2021, as cases in the U.S. began surging upward, and public-health officials were urging people to get vaccinated to spare the health care system that was, once again, drained of hope and motivation, Walensky veered from the script at the regular White House COVID-19 briefing and spoke from the heart. She empathized with the health care workers who were often the last ones to hold a dying patient's hand because their family was not allowed to visit because of COVID-19 protocols, and said, her voice wavering, "I'm speaking today not necessarily as your CDC director—not only as your CDC director—but as a wife, as a mother, as a daughter. And I ask you to just please hold on a little while longer. I so badly want to be done. I know you all so badly want to be done. Get vaccinated when you can so that all of those people that we all love will still be here when this pandemic ends."

In that same briefing, Walensky admitted to feeling a sense of "impending doom," and some in the media and public-health community criticized her for being overly dramatic. But that sort of empathy may be exactly what the CDC needs the most right now. "Morale was a challenge," she says of the state of the staff when she arrived in January. "The voices of the people who were delivering the science were not being heard and were not being heeded. And there was exhaustion; people had been working a lot and for a long time." When she spoke publicly, Walensky wasn't just talking to the American population at large; she was talking to the CDC personnel tasked with protecting them. "I needed to let people know that even in the moment when morale was down, and people were tired, the country was relying on them to make decisions," she says. "And the only way for that to happen is for them to know you have their back."

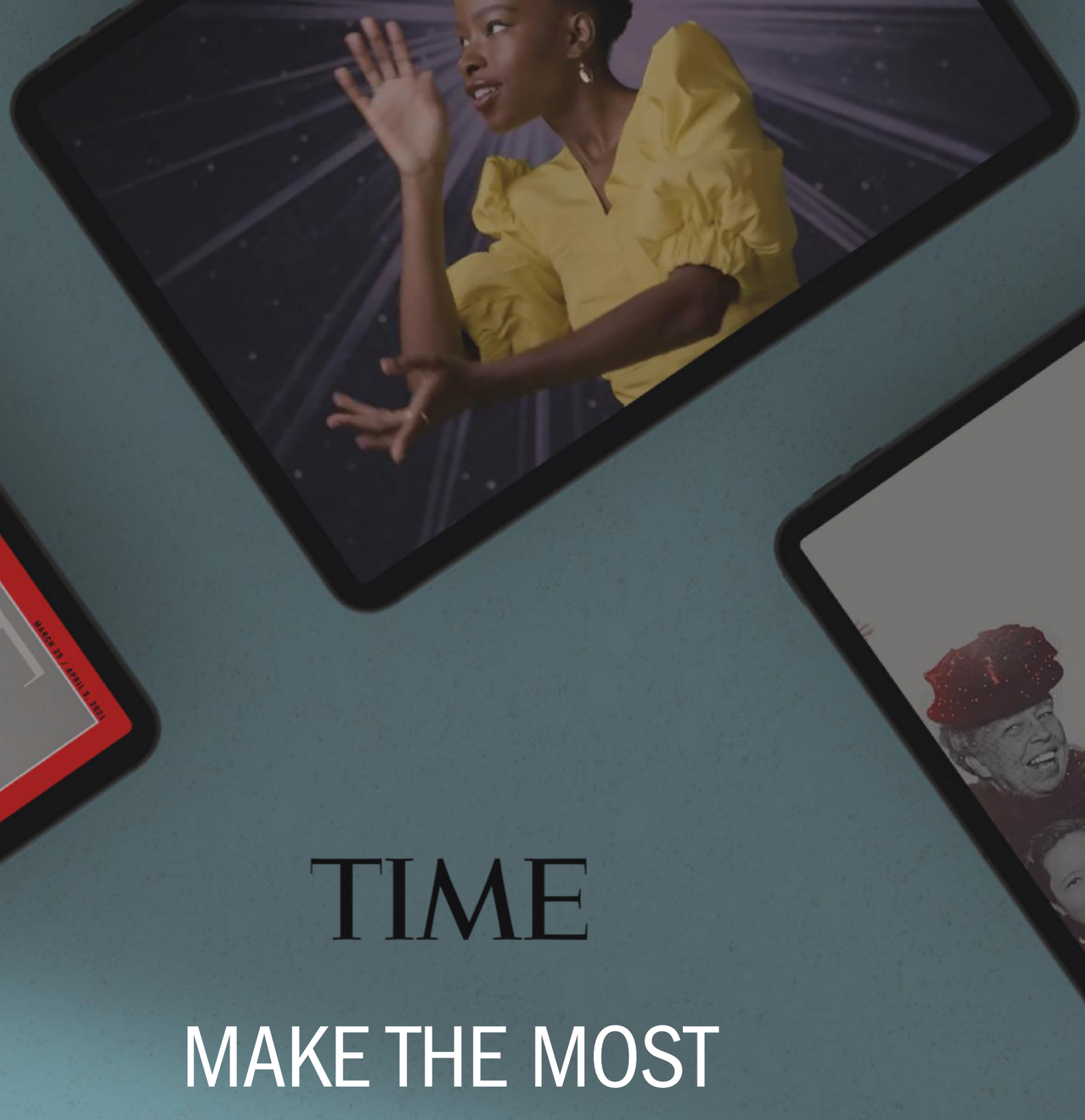
'I can't think of a more formidable challenge than stepping into the helm of the CDC in the midst of a pandemic.'

—DR. RICHARD BESSER, FORMER CDC ACTING DIRECTOR

WALENSKY RECOGNIZES that was never going to happen overnight, and that it's moving more slowly than is ideal—the fact that the majority of the staff are still working remotely doesn't help. Cohn, who last year served as the COVID-19 vaccine lead at the CDC, admits, "I do not share where I work with people I do not know. I don't want to have to get into a conversation with people not believing in vaccines; I don't have the energy to talk about it one more time. Even though Dr. Walensky is out there trying to right the ship, I don't know if we would say we all feel like it's been righted yet. I still think there's a morale problem at the CDC, and it's starting to shift, but it's going to take some time."

Walensky and her team also still need to persuade the public not to give up. As the Omicron variant has exploded across the U.S., Walensky remains convinced that a multilayered approach—getting vaccinated, getting boosted, wearing masks in indoor public settings and self-testing before small gatherings—will better position us to fight the virus this year than last year.

"We're certainly not where we want to be, and we have more work to do—this virus is a formidable foe—but we know what we need to do to keep Americans safe," she says. "The hard work now is just coming together as a country and recognizing what we need to do in order to keep one another safe . . . I would love to see us as a country be in a place where we're focused a little more on the health and protection of each other, as well as our own health. I think that would be an incredible gift in 2022." —*With reporting by* LESLIE DICKSTEIN



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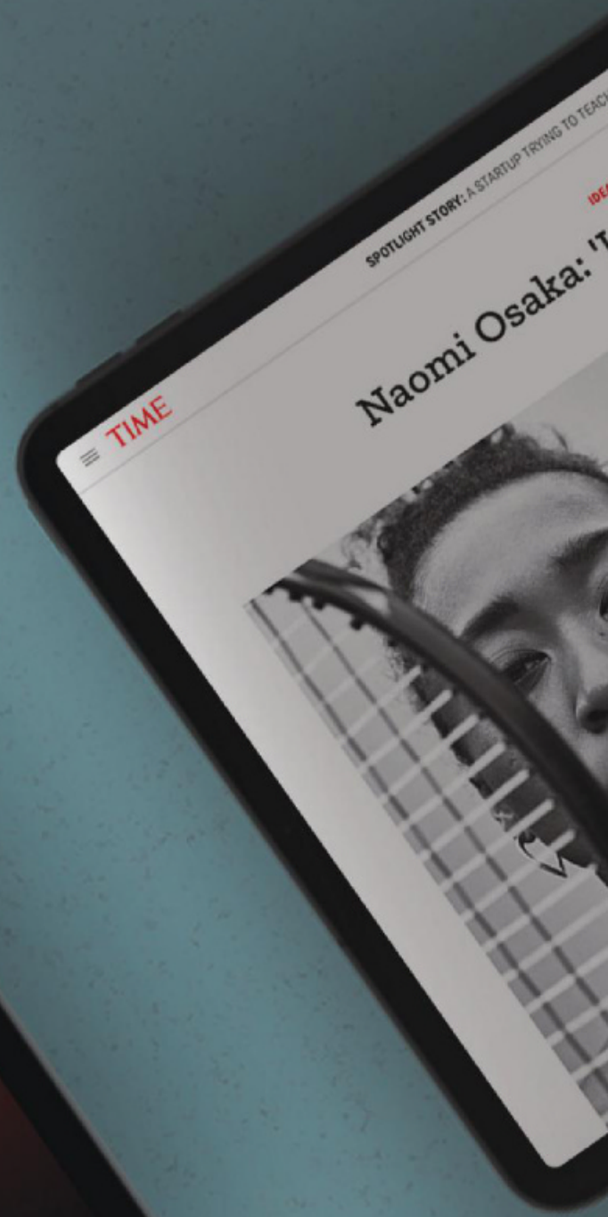

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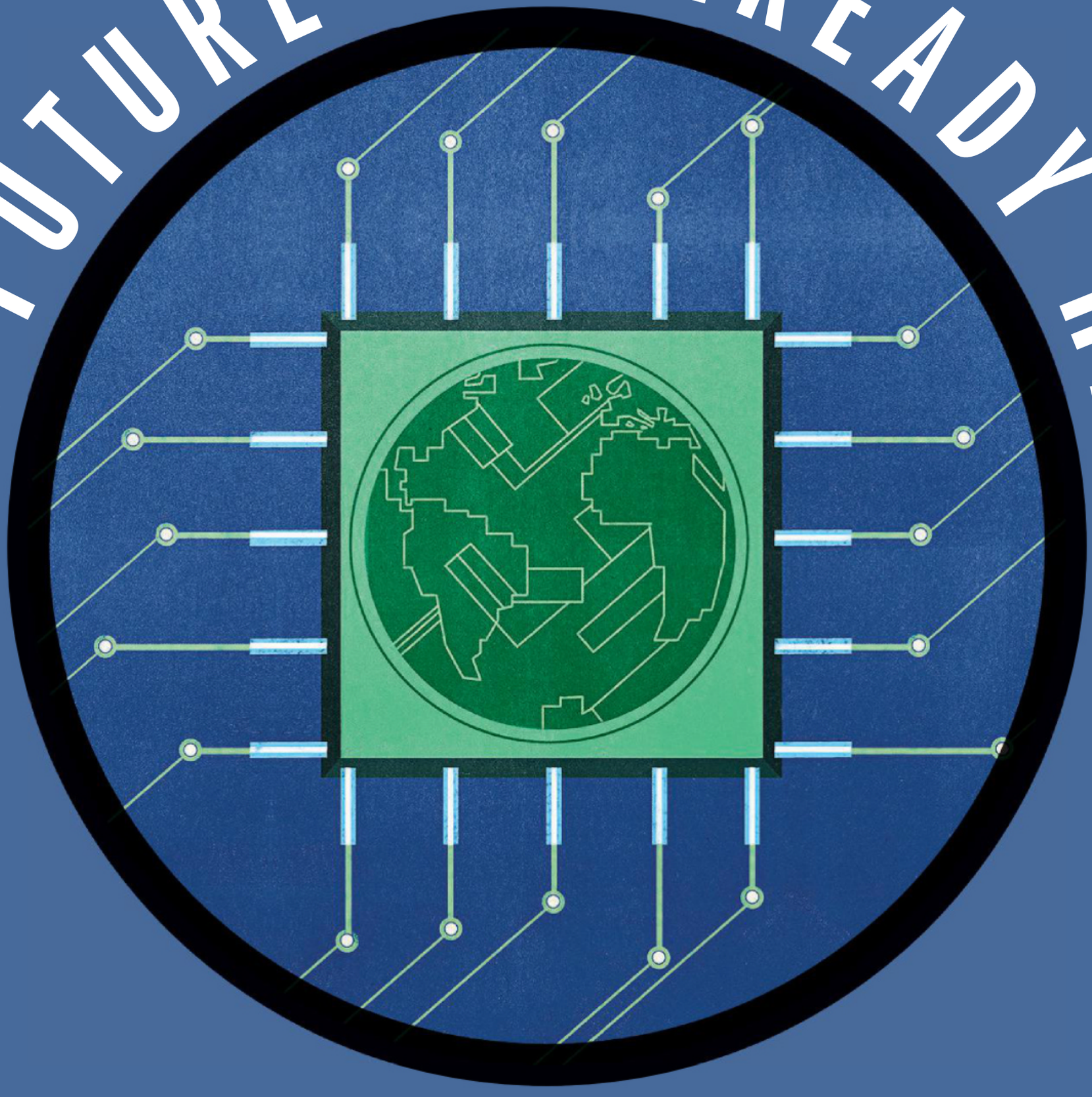

FEATURING:

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the future is already here

THE PROMISE OF NUCLEAR

Can a stable and safe source of energy rise to the occasion, or will it be cast aside as too expensive, too risky and too late?

BY ANDREW BLUM

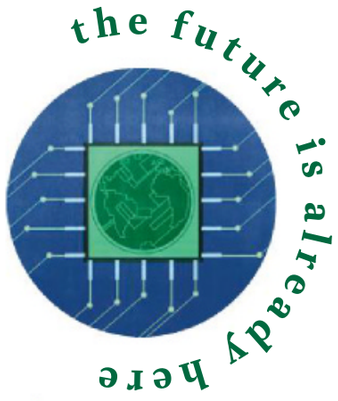
ON A CONFERENCE-ROOM WHITEBOARD IN the heart of Silicon Valley, Jacob DeWitte sketches his startup's first product. In red marker, it looks like a beer can in a Koozie, stuck with a crazy straw. In real life, it will be about the size of a hot tub and made from an array of exotic materials like zirconium and uranium. Under carefully controlled conditions, they will interact to produce heat, which in turn will make electricity—1.5 megawatts' worth, enough to power a neighborhood or a factory. DeWitte's little power plant will run for a decade without refueling

A rendering of the future Oklo Aurora plant, housed in a building many times smaller than standard nuclear plants

COURTESY OKLO/GENSLER

and, amazingly, will emit no carbon. “It’s a metallic thermal battery,” he says, coyly. But more often DeWitte calls it by another name: a nuclear reactor.

Fission isn’t for the faint of heart. Building a working reactor—even a very small one—requires precise and painstaking efforts of both engineering and paper pushing. Regulations are understandably exhaustive. Fuel is hard to come by—they don’t sell uranium at the Gas-N-Sip. But DeWitte plans to flip the switch on his first reactor around 2023, a mere decade after co-founding his company, Oklo. After that, they want to do for neighborhood nukes what Tesla has done for electric cars: use a niche and expensive first version as a stepping-stone toward cheaper, bigger, higher-volume products. In Oklo’s case, that means starting with a “microreactor” designed for remote communities, like Alaskan villages, currently dependent on diesel fuel trucked, barged or even flown in at an exorbitant expense, then building more and incrementally larger reactors until their zero-carbon energy source might meaningfully contribute to the global effort to reduce fossil-fuel emissions.



At global climate summits, in the corridors of Congress and at statehouses around the U.S., nuclear power has become the contentious keystone of carbon-reduction plans. Everyone knows they need it. But no one is really sure they want it, given its history of accidents. Or if they can even get it in time to reach urgent climate goals, given how long it takes to build. Oklo is one of a growing handful of companies working to solve those problems by putting reactors inside safer, easier-to-build and smaller packages. None of them is quite ready to scale to market-level production, but given the investments being made in the technology right now, along with an increasing realization that we won't be able to shift away from fossil fuels without nuclear power, it's a good bet that at least one of them becomes a game changer.

If existing plants with giant 1,000-metawatt-plus reactors are the energy equivalent of a 2-liter soda bottle, Oklo's strategy is to make reactors by the can. The per-megawatt construction costs might be higher, at least at first. But producing units in a factory would give the company a chance to improve its processes and to lower costs. Oklo would pioneer a new model. Nuclear plants need no longer be bet-the-company big, even for giant utilities. Venture capitalists can get behind the potential to scale to a global market. And climate hawks should fawn over a zero-carbon energy option that complements burgeoning supplies of wind and solar power. Unlike today's plants, which run most efficiently at full blast, making it challenging for them to adapt to a grid increasingly powered by variable sources (not every day is sunny, or windy), the next generation of nuclear technology wants to be more flexible, able to respond quickly to ups and downs in supply and demand.

Engineering these innovations is hard. Oklo's 30 employees are busy untangling the knots of safety and complexity that first sent the cost of building nuclear plants to the stratosphere and all but halted their construction in the U.S. "If this technology was brand-'new'—like, if fission was a recent breakthrough out of a lab, 10 or 15 years ago—we'd be talking about building our 30th reactor," DeWitte says.

But fission is an old, and fraught, technology, and utility companies are scrambling now to keep their existing, gargantuan nuclear plants open. Economically, they struggle to compete with cheap natural gas, along with wind and solar, often subsidized by governments. Yet climate-focused nations like France and the U.K. that had planned to phase out nuclear are instead doubling down. (In October, French President Emmanuel Macron backed off plans to close 14 reactors, and in November, he announced the country would instead start building new ones.) At the U.N. climate summit in Glasgow, the U.S. announced its support for Poland, Kenya, Ukraine, Brazil, Romania and Indonesia to develop their own new nuclear plants—while European negotiators assured that nuclear energy counts as "green." All the while, Democrats and Republicans are (to everyone's surprise) often aligned on nuclear's benefits—and, in many cases, putting their powers of the purse behind it, both to keep old plants open in the U.S. and to speed up new technologies domestically and overseas.

It makes for a decidedly odd moment in the life of a technology that already altered the course of one century, and now wants to make a difference in another. There are 93 operating nuclear reactors in the U.S.; combined, they supply 20% of the nation's electricity and 50% of its carbon-free electricity. Nuclear should be a climate solution, satisfying both technical and economic needs. But while the existing plants finally operate with enviable efficiency (after 40 years of working out the kinks), the next generation of designs is still a decade away from being more than a niche player in our energy supply. Everyone wants a steady supply of electricity, without relying on coal. Nuclear is paradoxically right at hand and out of reach.

For that to change, "new nuclear" has to emerge before the old nuclear plants recede. It has to keep pace with technological improvements in other realms, like long-term energy storage, where each incremental improvement increases the potential for renewables to supply more of our electricity. It has to be cheaper than carbon-capture technologies, which would allow flexible gas plants to operate without climate impacts (but which are still too expensive to build at scale). And finally it has to arrive before we give up—before the specter of climate catastrophe creates a collective "doomerism" and we stop trying to change.

Not everyone thinks nuclear can reinvent itself in time. "When it comes to averting the imminent effects of climate change, even the cutting edge of nuclear technology will prove to be too little, too late," predicts Allison Macfarlane, former chair of the U.S. Nuclear Regulatory Commission (NRC)—the government agency singularly responsible for permitting new plants. Can a stable, safe, known source of energy rise to the occasion, or will nuclear be cast aside as too expensive, too risky and too late?

NUCLEAR BEGAN IN A RUSH. In 1942, in the lowest mire of World War II, the U.S. began the Manhattan Project, the vast effort to develop atomic weapons. It employed 130,000 people at secret sites across the country, the most famous of which was Los Alamos Laboratory, near Albuquerque, N.M., where Robert Oppenheimer led the

At work on fusion in 1958 for Project Sherwood at Los Alamos National Laboratory in New Mexico

J.R. EYERMAN—THE LIFE PICTURE COLLECTION/SHUTTERSTOCK

design and construction of the first atomic bombs. DeWitte, 36, grew up nearby. Even as a child of the '90s, he was steeped in the state's nuclear history and preoccupied with the terrifying success of its engineering and the power of its materials. "It's so incredibly energy-dense," says DeWitte. "A golf ball of uranium would power your entire life!"

DeWitte has taken that bromide almost literally. He co-founded Oklo in 2013 with Caroline Cochran, a fellow graduate student in nuclear engineering at the Massachusetts Institute of Technology. When they arrived in Cambridge, Mass., in 2007 and 2008, the nuclear industry was on a precipice. Then presidential candidate Barack Obama espoused a new eagerness to address climate change by reducing carbon emissions—which at the time meant less coal and more nuclear. (Wind and solar energy were still a blip.)

It was an easy sell. In competitive power markets, nuclear plants were profitable. The 104 operating reactors in the U.S. at the time were running smoothly. There hadn't been a major accident since Chernobyl, in 1986. The industry excitedly prepared for a "nuclear renaissance." At the peak of interest, the NRC had applications for 30 new reactors in the U.S.

Only two would be built. The cheap natural gas of the fracking boom began to drive down electricity prices, razing nuclear's profits. Newly subsidized renewables, like wind and solar, added even more electricity generation, further saturating the markets. When on March 11, 2011, an earthquake and subsequent tsunami rolled over Japan's Fukushima Daiichi nuclear power plant, leading to the meltdown of all three of its reactors and the evacuation of 154,000 people, the industry's coffin was fully nailed. Not only would there be no renaissance in the U.S., but the existing plants had to justify their safety. Japan shut down 46 of its 50 operating reactors. Germany closed 11 of its 17. The U.S. fleet held on politically, but struggled to compete economically. Since Fukushima, 12 U.S. reactors have begun decommissioning, with three more planned.

At MIT, Cochran and DeWitte—who were teaching assistants together for a nuclear-reactor class in 2009, and married in 2011—were frustrated by the setback. "It was like, There're all these cool technologies out there. Let's do something with it," says Cochran. But the nuclear industry has never been an easy place for innovators. Governments had always kept a tight grip on nuclear; for decades, the technology was under shrouds. The personal-computing revolution, and then the wild rise of the Internet, further drained engineering talent. From DeWitte and Cochran's perspective, the nuclear-energy industry had already ossified by the time Fukushima and fracking totally brought things to a halt. "You eventually got to the point where it's like, We have to try something different," DeWitte says.

He and Cochran began to discreetly convene their MIT classmates for brainstorming sessions. Nuclear folks tend to be dogmatic about

their favorite method of splitting atoms, but they stayed agnostic. "I didn't start thinking we had to do everything differently," says DeWitte. Rather, they had a hunch that marginal improvements might yield major results, if they could be spread across all of the industry's usual snags—whether regulatory approaches, business models, the engineering of the systems themselves or the challenge of actually constructing them.

In 2013, Cochran and DeWitte began to rent out the spare room in their Cambridge home on Airbnb. Their first guests were a pair of teachers from Alaska. The remote communities they taught in were dependent on diesel fuel for electricity, brought in at enormous cost. That energy scarcity created an opportunity: in such an environment, even a very expensive nuclear reactor might still be cheaper than the current system. The duo targeted a price of $100 per megawatt hour, more than double typical energy costs. They imagined using this high-cost early market as a pathway to scale their manufacturing. They realized that to make it work economically, they wouldn't have to reinvent the reactor technology, only the production and sales processes. They decided to own their reactors and supply electricity, rather than sell the reactors themselves—operating more like today's solar or wind developers. "It's less about the technology being different," says DeWitte, "than it is about approaching the entire process differently."

That maverick streak raised eyebrows among nuclear veterans—and cash from Silicon Valley venture capitalists, including a boost from Y Combinator, where companies like Airbnb and Instacart got their start. In the eight years since, Oklo has distinguished itself from the competition by thinking smaller and moving faster. There are others competing in this space: NuScale, based in Oregon, is working to commercialize a reactor similar in design to existing nuclear plants, but constructed in 77-megawatt modules; in December, it announced plans to go public, at a combined valuation of $1.9 billion. TerraPower, founded by Bill Gates in 2006, has plans for a novel technology that uses its heat for energy storage rather than to spin a turbine, which makes it an even more flexible option for electric grids that increasingly need pliability. And X-energy, a Maryland-based firm that has received substantial funding from the U.S. Department of Energy, is developing 80-megawatt reactors that can also be grouped into "four-packs," bringing them closer in size to today's plants. Yet all are still years—and a billion dollars—away from their first installations. The NRC accepted Oklo's application for review in March 2020, and regulations guarantee that process will be complete within three years. Oklo plans to power on around 2023, at a site at the Idaho National Laboratory,

one of the U.S.'s oldest nuclear-research sites, and so already approved for such efforts. Then comes the hard part: doing it again and again, booking enough orders to justify building a factory to make many more reactors, driving costs down, and hoping politicians and activists worry more about the menace of greenhouse gases than the hazards of splitting atoms.

Nuclear-industry veterans remain wary. They have seen this all before. Westinghouse's AP1000 reactor, first approved by the NRC in 2005, was touted as the flagship technology of Obama's nuclear renaissance. It promised to be safer and simpler, using gravity rather than electricity-driven pumps to cool the reactor in case of an emergency; in theory, this would mitigate the danger of power outages, like the one that led to the Fukushima disaster. Its components could be constructed at a centralized location and then shipped in giant pieces for assembly.

But all that was easier said than done. Westinghouse and its contractors struggled to manufacture the components according to nuclear's mega-exacting requirements, and in the end only one AP1000 project in the U.S. actually happened: the Vogtle Electric Generating Plant in Georgia. Approved in 2012, its two reactors were expected at the time to cost $14 billion and be completed in 2016 and 2017, but costs have ballooned to $25 billion. The first will open, finally, in 2022.

New Jersey's Hope Creek nuclear plant and Salem nuclear plant (bottom, with two domes) in 2011

STAN HONDA—AFP/GETTY IMAGES

Oklo and its competitors insist things are different this time, but they have yet to prove it. "Because we haven't built one of them yet, we can promise that they're not going to be a problem to build," quips Gregory Jaczko, a former NRC chair who has since become the technology's most biting critic. "So there's no evidence of our failure."

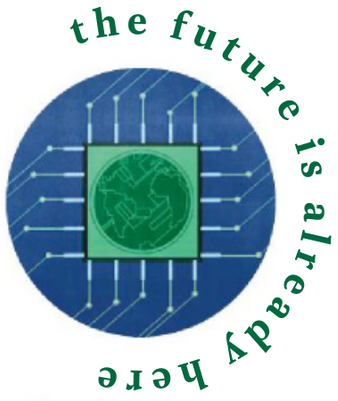
THE COOLING TOWER of the Hope Creek nuclear plant rises 50 stories above Artificial Island, New Jersey, built up on the marshy edge of the Delaware River. The three reactors here—one belonging to Hope Creek and two run by the Salem Generating Station, which shares the site—generate an astonishing 3,465 megawatts of electricity, or roughly 40% of New Jersey's total supply. Construction began in 1968 and was completed in 1986. Their closest human neighbors are across the river in Delaware. Otherwise the plant is surrounded by protected marshlands, pocked with radiation sensors and the occasional guard booth. Of the 1,500 people working here, around 100 are licensed reactor operators—a designation held by fewer than 4,000 people in the country.

Among the newest in their ranks is Judy Rodriguez, an Elizabeth, N.J., native and another MIT grad. "Do I have your permission to enter?" she asks the operator on duty in the control room for the Salem Two reactor, which came online in 1981 and is capable of generating 1,200 megawatts of power. The operator opens a retractable belt barrier, like at an airport, and we step across a thick red line in the carpet. A horseshoe-shaped gray cabinet holds hundreds of buttons, glowing indicators and blinking lights, but a red LED counter at the center of the wall shows the most important number in the room: 944 megawatts, the amount of power the Salem Two reactor is generating this afternoon in September.

As the epitome of critical infrastructure, this station has been buffeted by the crises the U.S. has suffered in the past few decades. After 9/11, the three reactors here absorbed nearly $100 million in security upgrades. Workers and visitors pass through metal and explosives detectors on the way in and radiation detectors on the way out. Walking between the buildings entails crossing a concrete expanse beneath high, bullet-resistant enclosures.

The scale and complexity of the operation is staggering—and expensive. "The place you're sitting at right now costs us about $1.5 million to $2 million a day to run," says Ralph Izzo, president and CEO of PSEG, New Jersey's public utility company, which owns and operates the plants. "If those plants aren't getting that in market, that's a rough pill to swallow." In 2019, the New Jersey board of public utilities agreed to $300 million in annual subsidies to keep the three reactors running. The justification is simple: if the state wants to meet its carbon-reduction goals, keeping the plants online is essential, given that they supply 90% of the state's zero-carbon energy. In September, the Illinois legislature came to the same conclusion as New Jersey, approving almost $700 million over five years to keep two existing nuclear plants open. The bipartisan federal infrastructure bill includes $6 billion in additional support (along with nearly $10 billion for development of future reactors).

These subsidies—framed in both states as "carbon mitigation credits"—acknowledge the reality that nuclear plants cannot, on their own terms, compete economically with natural gas or coal. "There has always been a perception of this technology that never was matched by reality," says Jaczko. The subsidies also show how climate change has altered the equation, but not decisively enough to guarantee nuclear's future. Lawmakers and energy companies are coming to terms with nuclear's new identity as clean power, deserving of the same economic incentives as solar and wind. Operators of existing plants want to be compensated for producing enormous amounts of carbon-free energy, according to Josh Freed, of Third Way, a Washington, D.C., think tank that champions nuclear power as a climate solution. "There's an inherent benefit to providing that, and it should be paid for." For the moment, that has brought some assurance to U.S. nuclear operators of their future



prospects. "A megawatt of zero-carbon electricity that's leaving the grid is no different from a new megawatt of zero-carbon electricity coming onto the grid," says Kathleen Barrón, senior vice president of government and regulatory affairs and public policy at Exelon, the nation's largest operator of nuclear reactors.

Globally, nations are struggling with the same equation. Germany and Japan both shuttered many of their plants after the Fukushima disaster and saw their progress at reducing carbon emissions suffer. Germany has not built new renewables fast enough to meet its electricity needs, and has made up the gap with dirty coal and natural gas imported from Russia. Japan, under international pressure to move more aggressively to meet its carbon targets, announced in October that it would work to restart its reactors. "Nuclear power is indispensable when we think about how we can ensure a stable and affordable electricity supply while addressing climate change," said Koichi Hagiuda, Japan's Minister of Economy, Trade and Industry, at an October news conference. China is building more new nuclear reactors than any other country, with plans for as many as 150 by the 2030s, at an estimated cost of nearly half a trillion dollars. Long before that, in this decade, China will overtake the U.S. as the operator of the world's largest nuclear-energy system.

Energy companies are coming to terms with nuclear's identity as clean power, deserving of the same incentives as solar and wind

THE FUTURE won't be decided by choosing between nuclear and solar power. Rather, it's a technically and economically complicated balance of adding as much renewable energy as possible while ensuring a steady supply of electricity. New Jersey, for its part, is aiming to add 7,500 megawatts of offshore wind by 2035—or about the equivalent of six new Salem-size reactors. The technology to do that is readily at hand; Kansas alone has about that much wind power installed already.

The challenge comes when renewables make up a greater proportion of the electricity supply—or when the wind stops blowing. The need for "firm" generation becomes more crucial. "You cannot run our grid solely on the basis of renewable supply," says PSEG's Izzo. "One needs an interseasonal storage solution, and no one has come up with an economic interseasonal storage solution."

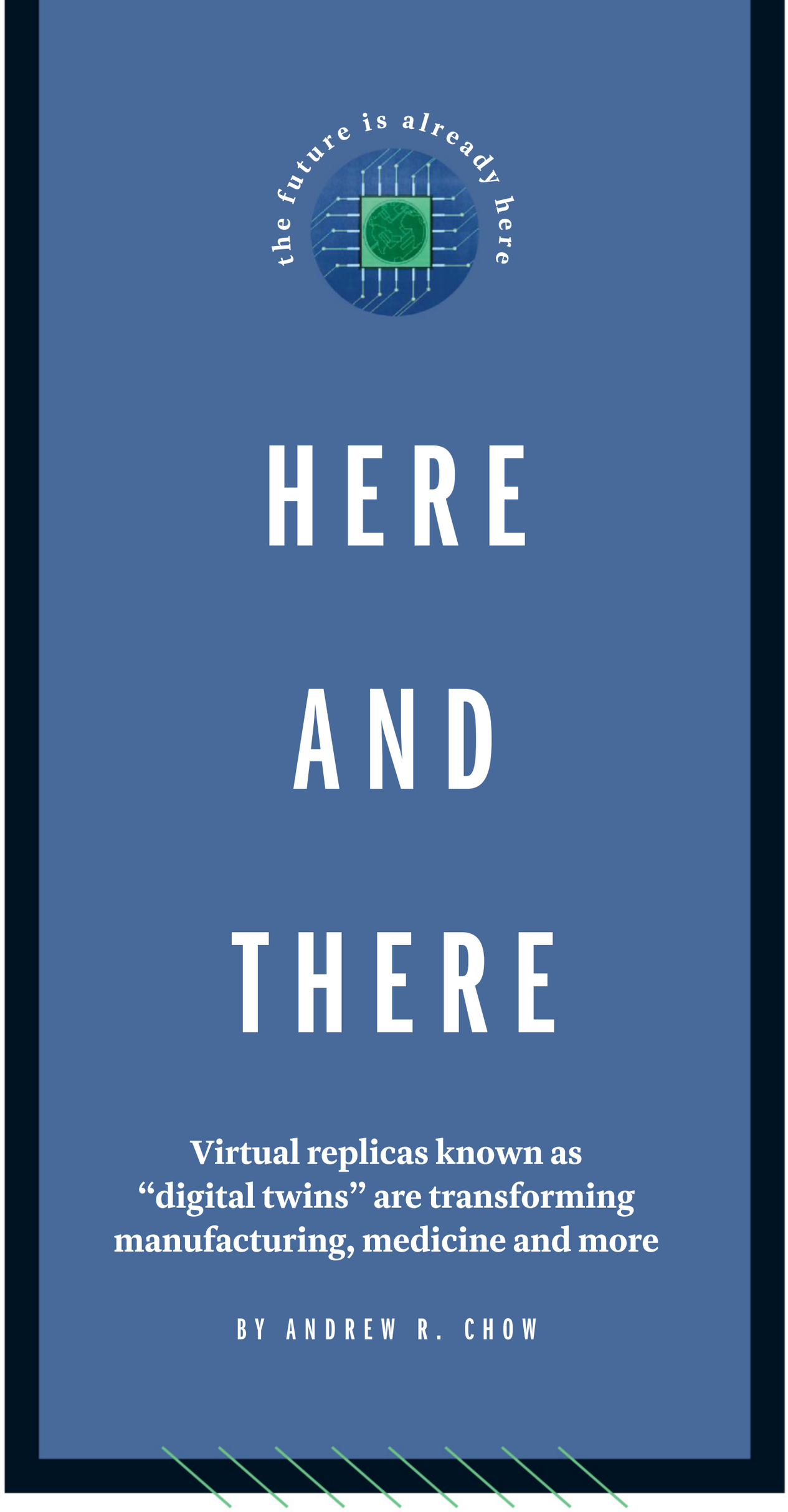
Existing nuclear's best pitch—aside from the very fact it exists already—is its "capacity factor," the industry term for how often a plant meets its full energy-making potential. For decades, nuclear plants struggled with outages and long maintenance periods. Today, improvements in management and technology make them more likely to run continuously—or "breaker to breaker"—between planned refuelings, which usually occur every 18 months and take about a month. At Salem and Hope Creek, PSEG hangs banners in the hallways to celebrate each new record run without a maintenance breakdown. That improvement stretches across the industry. "If you took our performance back in the mid-'70s, and then look at our performance today, it's equivalent to having built 30 new reactors," says Maria Korsnick, president and CEO of the Nuclear Energy Institute, the industry's main lobbying organization. That improved reliability has become its major calling card today.

Over the next 20 years, nuclear plants will need to develop new tricks. "One of the new words in our vocabulary is *flexibility,*" says Marilyn Kray, vice president of nuclear strategy and development at Exelon, which operates 21 reactors. "Flexibility not only in the existing plants, but in the designs of the emerging ones, to make them even more flexible and adaptable to complement renewables." Smaller plants can adapt more easily to the grid, but they can also serve new customers—for instance, providing energy directly to factories, steel mills or desalination plants.

Bringing those small plants into operation could be worth it, but it won't be easy. "You can't just excuse away the thing that's at the center of all of it, which is it's just a hard technology to build," says Jaczko, the former NRC chair. "It's difficult to make these plants, it's difficult to design them, it's difficult to engineer them, it's difficult to construct them. At some point, that's got to be the obvious conclusion to this technology."

But the equally obvious conclusion is we can no longer live without it. "The reality is, you have to really squint to see how you get to net zero without nuclear," says Third Way's Freed. "There's a lot of wishful thinking, a lot of fingers crossed."

Blum is the author of The Weather Machine: A Journey Inside the Forecast



THERE ARE TWO VERSIONS OF A BMW factory in the medieval town of Regensburg, Germany. One is a physical plant that cranks out hundreds of thousands of cars a year. The other is a virtual 3-D replica, accessed by screen or VR headset, in which every surface and every bit of machinery looks exactly the same as in real life. Soon, whatever is happening in the physical factory will be reflected inside the virtual one in real time: frames being dipped in paint; doors being sealed onto hinges; avatars of workers carrying machinery to its next destination.

The latter factory is an example of a “digital twin”: an exact digital re-creation of an object or environment. The concept might at first seem like sci-fi babble, or even a frivolous experiment: Why would you spend time and resources to create a digital version of something that already exists in the real world? But digital twins are now proving invaluable across multiple industries, especially those that involve costly or scarce physical objects. Created by feeding video, images, blueprints or other data into advanced 3-D-mapping software, digital twins are being used in medicine to replicate and study internal organs. They’ve propelled engineers to devise car and plane prototypes—including Air Force fighter jets—more quickly. They allow architects and urban planners to envision and then build skyscrapers and city blocks with clarity and precision.

And in 2021, digital twins began to break into the mainstream of manufacturing and research. In April, chipmaker Nvidia launched a version of its Omniverse 3-D simulation engine that allows businesses to build 3-D renderings of their own—including digital twins. Amazon Web Services announced a competing service, the IoT TwinMaker, in November. The digital-twin market already generated sales of more than $3 billion in 2020, according to the research firm Research and Markets, and tech executives leading digital-twin efforts say we’re still at the dawn of this technology. Digital twins could have huge implications for training workers, for formulating complicated technical plans without having to waste physical resources—even for improving infrastructure and combatting climate change. “Health care, music, education, taking city kids on safari: it’s hard to imagine where digital twins won’t have an impact,” says Richard Kerris, Nvidia’s vice president of Omniverse development.

THE NEED was always there. In the 1960s, NASA created physical replicas of spaceships and connected them to simulators so that if a crisis ensued on the actual vehicle hundreds of thousands of miles away, a team could workshop solutions on the ground. Dave Rhodes, the senior vice president of digital twins at Unity Technologies, a video-game and 3-D-platform company, says that digital-twin technology is only now being widely released because of several confluent factors, including the increased computing power of cloud-based systems, the spread of 5G networks, improvements in 3-D rendering and the remote work demands of COVID-19.

Digital twins can replicate real-world objects ranging in size from millimeters to miles. In Poland, a team of doctors and technologists is starting with one of the smallest objects imaginable: the human fetal heart. About 1 in 100 newborns has a congenital heart disease, which can be fatal if not treated. But studies have shown that more than half of those diseases go undetected.

Sonography simulators are expensive and bulky, and most medical schools don't include hands-on training. "Most likely you will encounter a congenital heart defect for the first time when you are already in your clinic," says Marcin Wiechec, an ob-gyn and associate professor at Jagiellonian University in Krakow.

So Wiechec and his team created Fetal Heart VR, which allows doctors to guide a probe across a belly-like dome in order to study normal and abnormal beating fetal hearts—re-created identically from real-life scans—through a VR headset. Wiechec has been using the app to train students in Krakow. Jill Beithon, a retired sonographer and educator based in Fergus Falls, Minn., says the app could have enormous benefits for medical workers in areas with less access to resources or cutting-edge education centers. "The fetal heart is very intimidating—and the size of a quarter at 20 weeks, beating at 100 beats per minute. It takes additional training, and it's not training you can easily find," she says. "With the VR, you don't have to go to expensive courses or try to find a mentor. This is going to replace hands-on experience."

Digital-twin technology is being trialed across the medical landscape, for planning surgical procedures and exploring the heart risks of various drugs. In November, seven medical researchers from around the U.S., writing in the journal *Nature Medicine,* called for an increase in clinical studies of "cancer patient digital twins" to precisely track a patient's physical state and adjust treatment accordingly. Digital twins "are poised to revolutionize how cancer and a host of other complex diseases are treated and managed," the researchers wrote.

The automotive industry is also being transformed. Back in Regensburg, BMW can now test or tweak parts of the assembly line without having to move around heavy machinery; the company estimates the technology will cut the time it takes to plan out factory operations by at least 25%. In Pittsburgh, Ding Zhao, an assistant professor of mechanical engineering at Carnegie Mellon, has been working with carmakers to use digital twins to improve the safety of self-driving vehicles. In his lab, he leverages vast quantities of data collected from real tests of self-driving cars to build complex digital-twin simulators. The simulations, he says, help predict how a car's AI will react in dicey situations that could be dangerous and difficult to re-create IRL: when merging onto a dark snowy highway, for instance, or when jammed in between two trucks.

Crucially, digital twins also allow researchers to run crash-test simulations countless times without having to destroy cars or endanger real people. That means digital-twin technology is becoming

essential to the development of self-driving cars. "Real-world testing is too expensive and sometimes not even effective," Zhao says. Digital twins are also being used in other complex and potentially dangerous machines, from nuclear reactors in Idaho to wind turbines in Paris.

Others are deploying the technology at an even larger scale, to create digital twins of entire cities or even countries. In 2021, the Orlando Economic Partnership, a nonprofit community-development organization, announced it was partnering with Unity to build a digital twin of 40 sq. mi. of the Florida city. CEO Tim Giuliani hopes that the twin will eventually be used as a public resource and "backbone infrastructure," allowing transportation experts to see how a rail system might impact the region, for utility companies to map out 5G networks and for ecologists to study the potential impacts of climate change. He estimates the project will cost $1 million to $2 million.

OF COURSE, creating digital replicas at increasingly large scale raises questions about privacy and cybersecurity. Many of these digital twins are made possible by a multitude of sensors that track real-world data and movement. Workers at factories with digital twins may find their every movement followed; the hacker of a digital twin could gain frighteningly precise knowledge about a complex proprietary system. Zhao, at Carnegie Mellon, stresses the need for regulations. "Legislators and companies need to work together on this. You cannot just say, 'I am a good company, I will never do evil things, just give me your data,'" he says.

Before the regulations arrive, technology companies are rolling full steam ahead. Many of them believe digital twins will gain importance with the rise of the metaverse, a collection of connected virtual worlds that increasingly impact—or even replace—what happens in the real world. Digital-twin humans are coming too: the NFL and Amazon Web Services have created a "digital athlete" that will run infinite scenarios to better understand and treat football injuries.

BMW plans to take its digital-twin factory model to the world. The company is in the process of building a new plant in Hungary that is modeled completely in Nvidia's Omniverse. But BMW could soon implement digital twins at all facilities. Frank Bachmann, the plant director in Regensburg, says that the advantages of digital twins will only be fully realized when every factory is digitized in a standard way. "We need these processes of digital twins everywhere," he says.

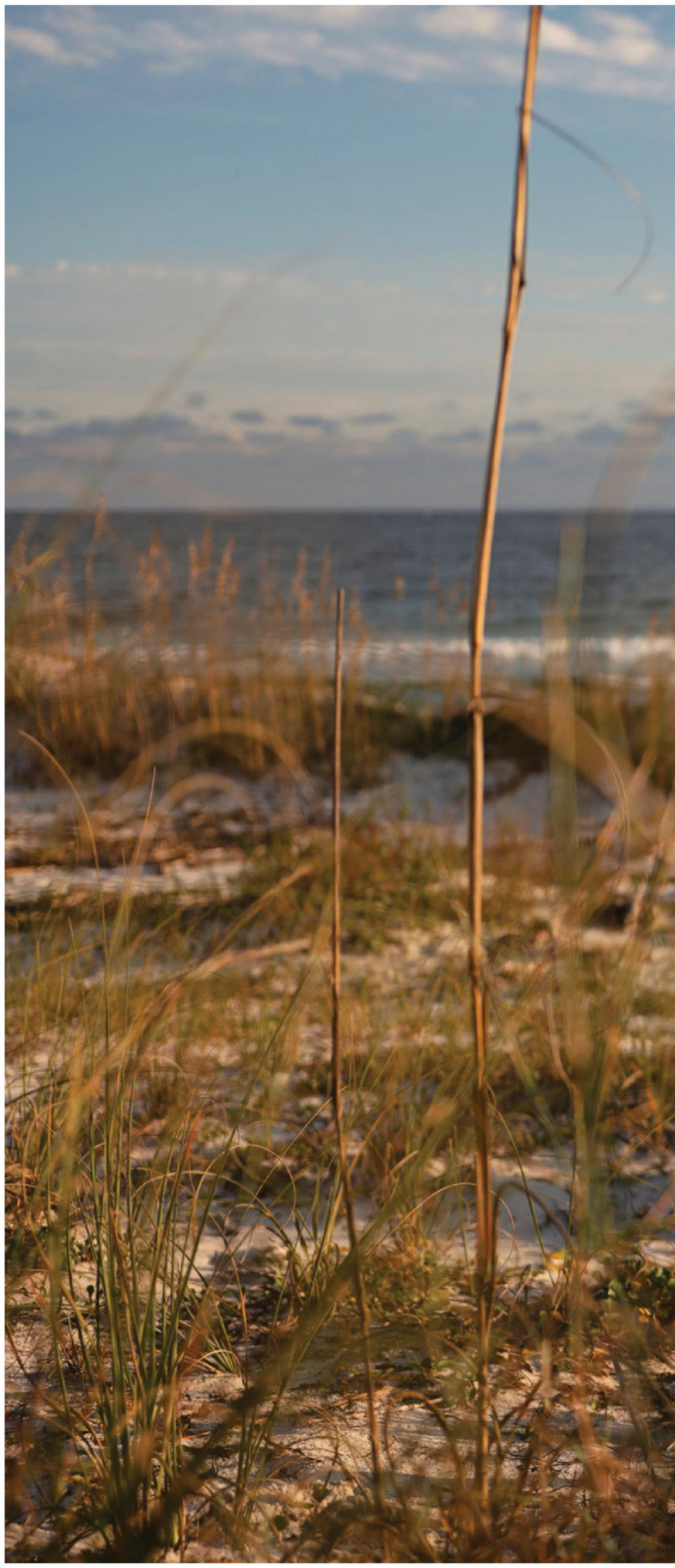
the future is already here

THE ‘SUBSCRIBE TO ME’ ECONOMY

Online creators are now selling their talents directly to fans. But that doesn’t mean they’re in charge

BY RAISA BRUNER

PHOTOGRAPHS BY ANNIE FLANAGAN FOR TIME



IN AUGUST, SAVANNAH’S ENTIRE MONTHLY income was at stake. OnlyFans, the social media platform where she built her career, making an average of $50,000 a month from subscribers, had just announced it would be removing content like hers from the site. But there was little she could do about it. She remembers thinking, “O.K., well, this is another Thursday, I might as well finish my Chick-fil-A, and I’m just gonna chill here and wait for us to get some sort of response.” Savannah, 24, is part of a vibrant community of online sex workers

who underwrite OnlyFans' considerable financial success; it's now valued at more than $1 billion. But that community was shaken when OnlyFans announced it would be banning explicit content. "The sky falls on OnlyFans, like, every three or four months," Savannah says wryly.

She could've gotten a more standard job when she graduated from college in 2020 with a business degree—maybe at a bank, as a mortgage-loan officer. But while career hunting, she was working three part-time jobs and her boyfriend at the time suggested trying out OnlyFans. She opened an account in January 2020, posting sassy videos and photos that showed off her passion for *Star Wars* cosplay and her cheeky sense of humor to attract subscribers. "It was nerve-racking," Savannah admits. At first, the subscribers just trickled in; she made $80 that month.

Savannah's OnlyFans account, where she posts photos and videos in costume like this Star Wars *cosplay, allowed her to buy a house at 23*

Then the pandemic lockdowns started, and Savannah's online star began to rise. "It was an extreme case of 'right place, right time,'" she says. "Everyone was suddenly locked inside. And they

were horny. And it just all came together." By September 2020, she had earned enough money to buy her own house—a goal that had always seemed elusive with a traditional career path. "I never, ever thought that I would be stable enough to buy a house, period, in my lifetime," she says.

That sense of stability was put to the test by the new policy—briefly. OnlyFans backtracked just days later. Yet, historically, the conditions of sex work serve as an indicator of the health of a society. And the OnlyFans incident may well predict the future of the growing digital-creator economy and its workers.

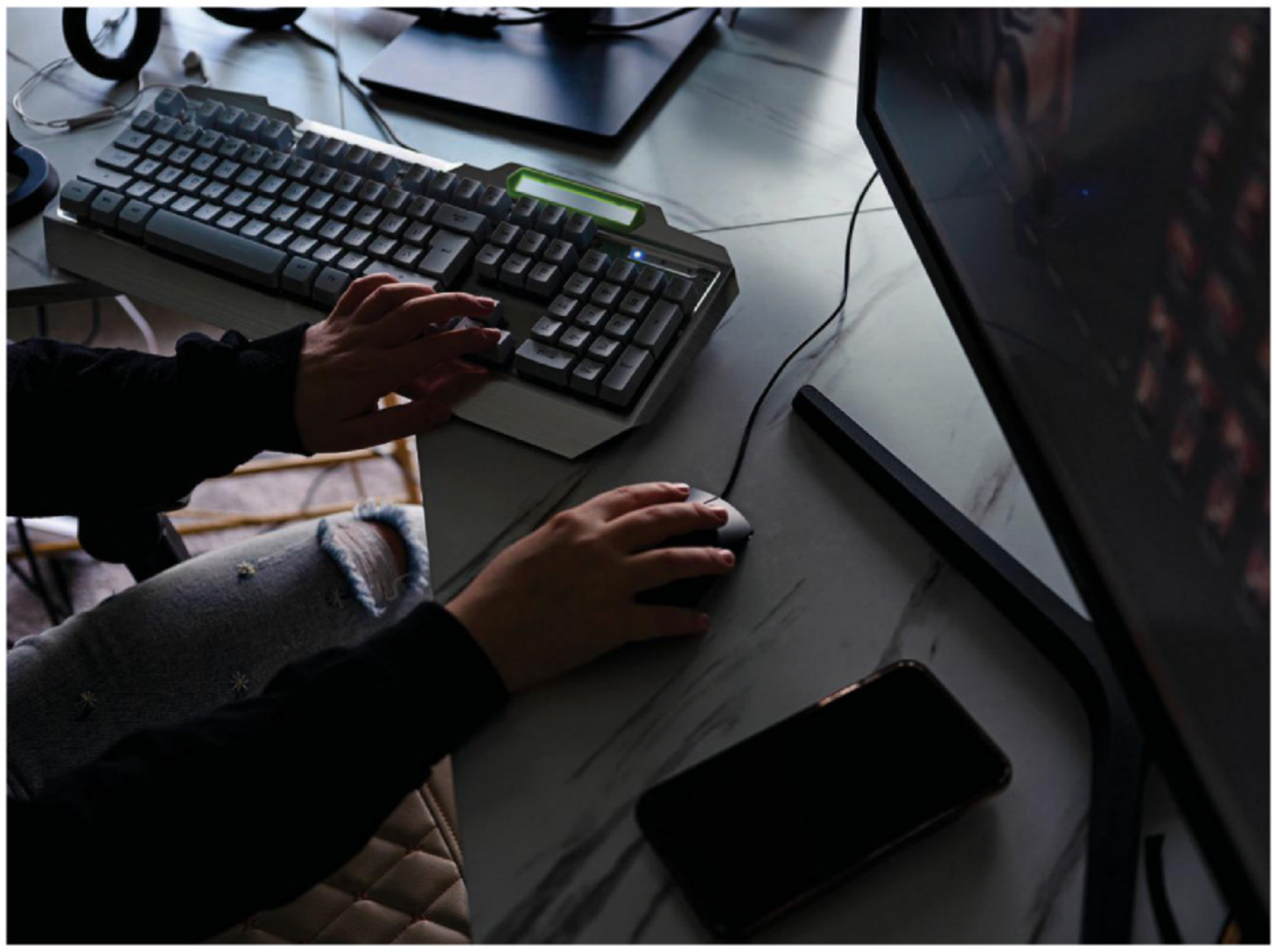
Savannah considers herself half sex worker and half "online creator," a burgeoning and nebulous category of workers who have turned to online platforms to profit off their talents and speak to niche audiences. But the creator economy that took off around 2011 with YouTube has evolved as creators seek autonomy over their IP and freedom from brand sponsorships. Writers, gamers, academics, sex workers, chefs, athletes, artists: anyone with a point of view, or a video to share, has flocked to sites like Twitch, OnlyFans, Patreon and Substack in hopes of selling their skills directly to their fans.

A September study from the Influencer Marketing Factory estimates some 50 million people around the world participate in the creator economy—that's a third the size of the entire U.S. workforce. The study valued the creator market north of $100 billion in 2021. Direct-subscription creators are a fraction of that, but a rapidly growing one. There are over 2 million creators on OnlyFans; streaming platform Twitch boasts over 7 million active streamers monthly; Patreon, which hosts pay-to-view visual and written content, says it has over 250,000 active accounts. And the money generated by this new class keeps going up, with OnlyFans announcing it has facilitated over $6 billion in payouts since its founding in 2016. Patreon says its creator accounts have brought in more than $3.5 billion. Twitch's in-app purchases neared $200 million in the first half of 2021 alone.

Creators skew millennial and Gen Z; digital natives are, after all, more prepared to capitalize on and take risks online. One study from research firm PSFK suggested that over 50% of Gen Z Americans—ages 9 to 24—are interested in becoming "influencers" as a career. But some of the most successful subscription creators—historian Heather Cox Richardson, musician Amanda Palmer, photographer Brandon Stanton and model Blac Chyna—are in their 30s or older, and were well established in their careers before selling their skills online, a fact that lends the subscription-creator economy more credence.

These days, Savannah—who goes by Savannah Solo on her Twitter, Instagram, TikTok and OnlyFans pages—counts hundreds of thousands of subscribers, including 6,500 paying subscribers, to her more risqué content on OnlyFans. She doesn't want to stop. "Not only has it absolutely changed the trajectory of my life forever, but I have fun: I'm my own boss, I wake up, and I put on makeup and I wear a stupid costume and make fun content. You can decide if you want to be a persona—or if you just want to be yourself," she says. But, as she learned in August, the reality of a creator career is more complicated.

THE JOB TITLE "CREATOR" is a new invention, born in the past decade, thanks to the rise of self-publishing. First there was YouTube, the ur-influencer platform. Then Facebook, Twitter and Instagram. This wave of tech behemoths offered anyone the ability to build a fan base with little more than an Internet connection. At first, little money was transferred into the hands of the creators; wide viewership was a badge of honor, not a moneymaking scheme.



That changed with the rise of models in which creators received a cut of advertising associated with their content (like pre-roll video ads on YouTube) and sponsored content and ambassadorship programs (like many of Instagram's influencer programs). This kept content free for fans while paying the creators, and it's the model that still dominates the market. But there are drawbacks: positioning image-conscious brands between fans and creators who value authenticity is not always a natural fit. Brands drop creators when they post something the brand doesn't like. And creators lose autonomy when they spend all their time crafting sponsored content.

Enter the paid social media model, in which audiences can contribute directly to their favorite creators. "From the creators' point of view, it gives them more control and empowerment," says former OnlyFans CEO and founder Tim Stokely. He left the company in December, succeeded by chief marketing and communications officer Amrapali Gan. Stokely sees direct-to-creator payments as the economic engine of the online future, a vision Gan shares. The company is famous for featuring sex-worker creators like Savannah, but Stokely pushed the platform's PG accounts, where users can subscribe to a chef's cooking videos or a trainer's workouts. Gan says OnlyFans is "committed to being an inclusive platform," as long as content meets their terms of service.

Twitch was early to this game, launching in 2011. "The digital patronage model we see popping up today in other iterations exists because of Twitch's early entry in and focus on the creator economy," says Mike Minton, vice president of monetization at Twitch. Twitch prefers to consider itself a "service" rather than a platform: it serves creators with access to audiences and monetizes their viewership, and serves fans by making it easy to watch and contribute.

But it's not all profit for creators. Hidden in the slick appeal of be-your-own-boss social media entrepreneurialism is the role of the platforms themselves, and sticky questions of ownership. Twitch, for instance, takes a 50% cut of any subscriptions. OnlyFans says the 20% it takes helps offset the costs of the security and privacy features that adult content in particular requires. Patreon takes 5% to 12%; Substack takes 10%, minus processing fees. Consummate middlemen, these companies have created low barriers to entry while still gatekeeping.

"There's a history of artists being taken advantage of, and artists have to keep criticizing and keep skepticism at a high level," says Jack Conte, CEO of Patreon. "I think that's mission-critical. Artists have to be educated, and choose wisely and watch platforms carefully." Patreon offers users full access to their email lists in an attempt to offer greater control over their audience relationships.

Patreon has had its share of controversy: a 2018 kerfuffle surrounded its choice to ban certain politically extreme voices from the platform; payment snafus have ruffled feathers; and its current content policies exclude sexually explicit content, to the frustration of some.

Stokely didn't promise financial stability or freedom to OnlyFans' 2 million creators, especially given the complications of banking regulations (on which the company blamed the brief August ban of sexual content). He knew that change is inevitable, but he did promise one thing: OnlyFans would not become "littered with paid posts and adverts" like the free platforms. It's a promise that Gan plans to uphold.

WRITER AND MUSICIAN Amanda Palmer, 45, is intimately acquainted with the challenges of creative autonomy. Palmer, the frontwoman of indie rock duo the Dresden Dolls, extricated herself from

"I wake up, and I put on makeup and I wear a stupid costume and make fun content," Savannah says

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At a photo shoot, she reviews selects with her assistant, Cay

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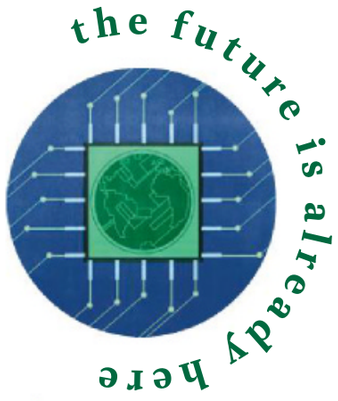
Later she edits content to post across her online platforms: Twitter, Instagram, TikTok and OnlyFans



an album deal a decade ago, choosing to embrace independence—with all its financial risks—and gather income from her fans directly.

"There's been a general shift in consciousness, that people are no longer scratching their heads when an artist or a creator comes to you directly and says, Hey, I need $10," she says. "You're seeing it in right-wing podcasting. And you're seeing it in feminist journalism on Substack. And you're seeing it with musicians on Patreon, and you're seeing it with porn stars on OnlyFans."

Palmer started a Patreon account in 2015, where she now posts music, videos and blog posts to 12,000 paying subscribers. The direct, monetized line of communication with her fans has meant she could weather the pandemic storm, when she couldn't play live concerts. She says she has made over $5 million in subscriptions to support her creative endeavors, although her net profit after production costs mostly just pays rent and living expenses. Still, it has been an effective solution to the conundrum of monetizing fame and artwork for a niche audience.

Palmer's experience with Patreon is a prime use case for the company: a nonmajor artist finds financial freedom through direct-to-consumer content sharing. "Because of what's happened over the last 10 years, there's now hundreds of millions of creative people who identify as creators, putting their work online and already making a lot of money, [who] want to be paid and want to build businesses," Conte says. Almost 40% of the money that Patreon processes goes to creators who are making between $1,000 and $10,000 per month. "It's not Taylor Swift–rich; it's not Rihanna-rich. It's a middle class of creativity: a whole new world of creators that are being enabled by this," he says.

Still, even Palmer, who has "very warm feelings" about Patreon, recognizes that it can't be trusted forever. "I've been ringing the warning bells for years about how dangerous it is to get into bed with a for-profit company and use them as the only avenue to reach your audience, right? It is dangerous, because at any moment, Patreon could sell to Facebook and decide to change all of the rules of engagement. I really hope that doesn't happen. But there are no guarantees in this dog-eat-dog tech world," she says. "In order to protect myself, I always keep a lot of phone lines open with my community."

It can be isolating to have a screen as a coworker. When Jahara Jayde streams herself playing *Final Fantasy XIV* on Twitch for five-plus hours every evening, it's just her and her thousand-plus viewers. But she has discovered how vital it is to have a community of creators.

On Twitch, people watched over 1 trillion minutes of content on the site in 2020 alone. By nature of its freewheeling live-video DNA, it's a place that is hard to regulate and populated by a wide array of characters. "I deal with racism on all of the platforms," says Jahara, a 30-year-old BIPOC woman, citing in particular a recent influx of "hate raids" targeting BIPOC and LGBTQ+ creators on Twitch. Some creators even led a daylong streaming boycott to draw attention to the issue. Twitch has had to regulate the use of certain words and emotes (its version of custom emojis) in user chats in order to limit problematic language and content.

Jahara didn't mean to become a full-time gaming streamer when she first tried out Twitch in August 2020; she was already a business analyst with a side gig as a Japanese tutor, making use of her college degree. But soon she was gaining steam, and after just four months on Twitch, Jahara quit her day job. These days, she brings in about $2,000 a month via Twitch's subscription system. With her tutoring clients, whom she picked up because of her Twitch, she's now matching her prior income.

"It's awesome, because it's doing the two things that I absolutely adore," she says. She has the freedom to be herself professionally, the flexibility to take care of her 4-year-old daughter in the mornings, and the hope that her fiancé will eventually be able to leave his job as a manual laborer to support her online presence full time.

That doesn't make dealing with the racism any easier. So Jahara built a keenly supportive, tight-knit community that is expanding the definition of what it means to be a gamer or a creator, and who gets rewarded for the work. She's a member of the Noir Network, a collective of Black femmes who work in content creation and help one another navigate the often confusing Wild West of digital work, one that she is committed to continuing with. She loves the work; she just wants to make it better.

To her, it feels good to be a part of something. "I get a lot of messages, parents and teens and kids that tell me, like, 'My daughter saw your photos, and her friends told her that she couldn't copy that character because it's not the same color as her, but now she's excited to do it,'" Jahara says. "People tell me that they feel more comfortable, they feel represented, and they feel seen just by being able to see my face in the space. It wasn't something that I expected when I set out for it. But it's something that definitely keeps me going every day."

It's networks like that one that have helped organize and provide a modicum of power to creators who are learning as they go.

Longtime adult performer Alana Evans, 45, has an inside view of how this works; as president of the Adult Performance Artists Guild, she has helped hundreds of performers navigate issues with tech platforms including Instagram, TikTok and, of course, OnlyFans. These days she preaches the gospel of diversification, and of making sure that

At home in bed, Savannah checks messages from her subscribers on OnlyFans

performers understand who owns and profits from the platforms they share on. Beyond that, Evans has her sights set on the big picture: working through legal avenues to classify restrictions against sex work, like those set by payment companies, as "occupational discrimination." It's only once they deal with the banking side of things, Evans explains, that online sex workers will be able to participate in the creator economy fully and safely.

Creators in the music industry are trying to find power by banding together too. By day, David Turner, 29, is a strategy manager at the music-streaming service SoundCloud. By night, he publishes a weekly newsletter about the streaming industry called Penny Fractions. After publishing with Patreon for a few years, Turner realized only a small segment of creators were truly generating the income the platform touted. "They don't care about me," he says he realized.

Now, Turner hosts his newsletter on an independent service and serves on the board of Ampled, a music-services co-op whose tagline is "Own Your Creative Freedom." Collectivization, as Turner sees it, is the safest way for this next generation to protect themselves from the predations of the market.

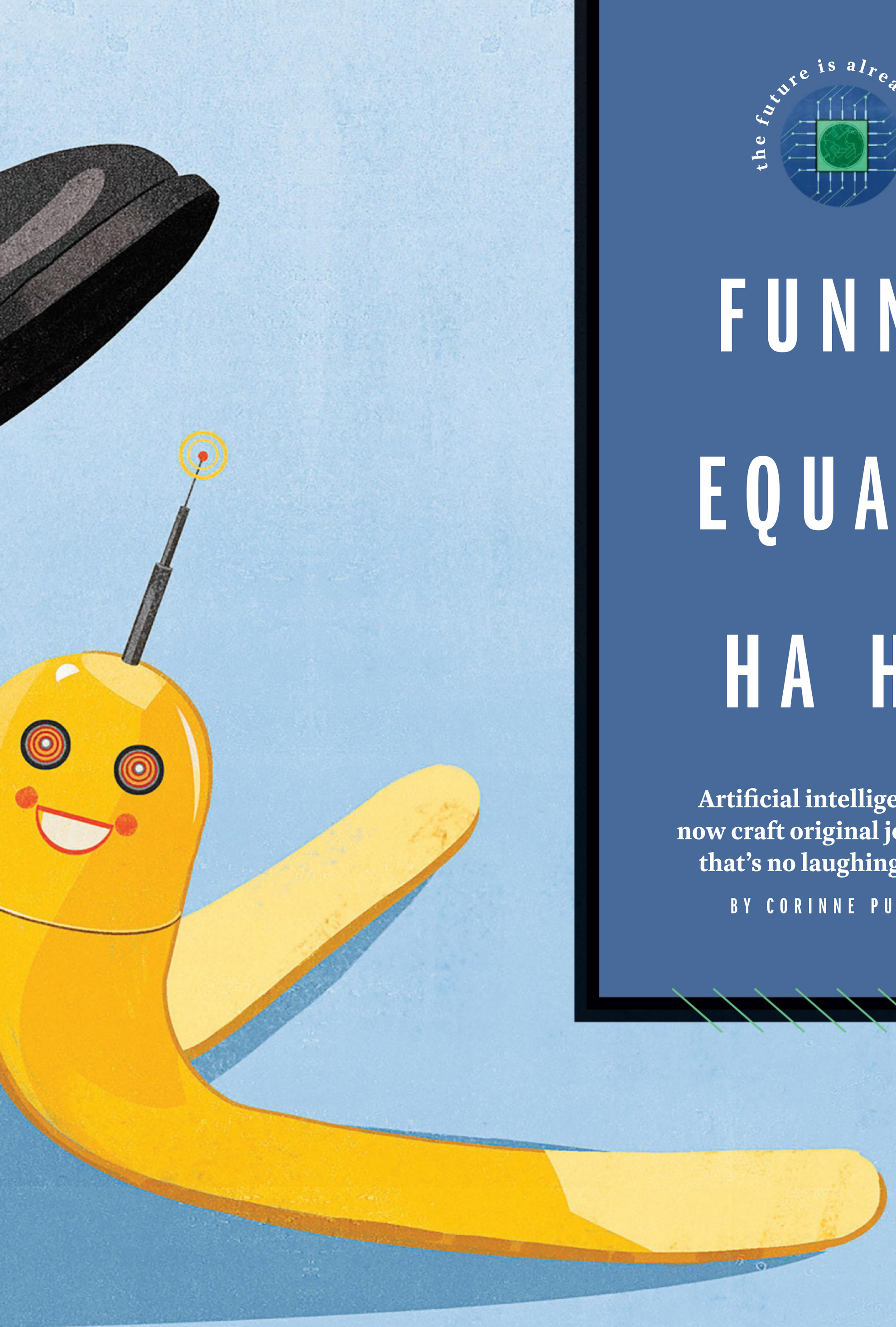
Other decentralized social platforms like Mastodon and Diaspora, music-streaming services like Corite and Resonate, and sex-worker-backed sites like PocketStars have popped up to provide alternatives to the more mainstream options. Their selling point: bigger payouts to creators, and opportunities for creators to invest in the platforms themselves. But mass adoption has been slow. If the calling card of the independent platforms is their bottom-up approach, that is also their limiting factor. By nature, they are scrappier, less funded and less likely to be able to reach the wide audiences that the top user-friendly sites have already monopolized.

WHEN ONLYFANS MADE its policy change in August, collectivization is what got sex workers through. To Evans, who helped lead the charge, it was just the latest iteration of exploitation from more powerful overlords. She saw her community speaking up against the change—particularly on Twitter, where sex workers and performers quickly renounced the policy and began proactively publicizing their accounts on other, friendlier platforms. To her surprise, their vocal opposition worked, and OnlyFans moved quickly to find a solution.

But Evans knows this golden era of online work is already ending. "The writing is on the wall," she says. Even successful creators like Savannah have begun promoting accounts on alternate platforms like PocketStars and Fansly. They know no solution, and no single site, will be forever.

"The advice I've been given is to expect it all to crumble, and to have to rebuild," Savannah says. That advice isn't specific to OnlyFans; it's echoed by Palmer about Patreon and Jahara about Twitch. As platforms inevitably seek a better bottom line, the creator workforce has little choice but to trust the tech companies will do right by them.

In the meantime, they're taking a note from the labor movement that has risen up in other industries this year: solidarity works. ☐



the future is already here

FUNNY EQUALS HA HA

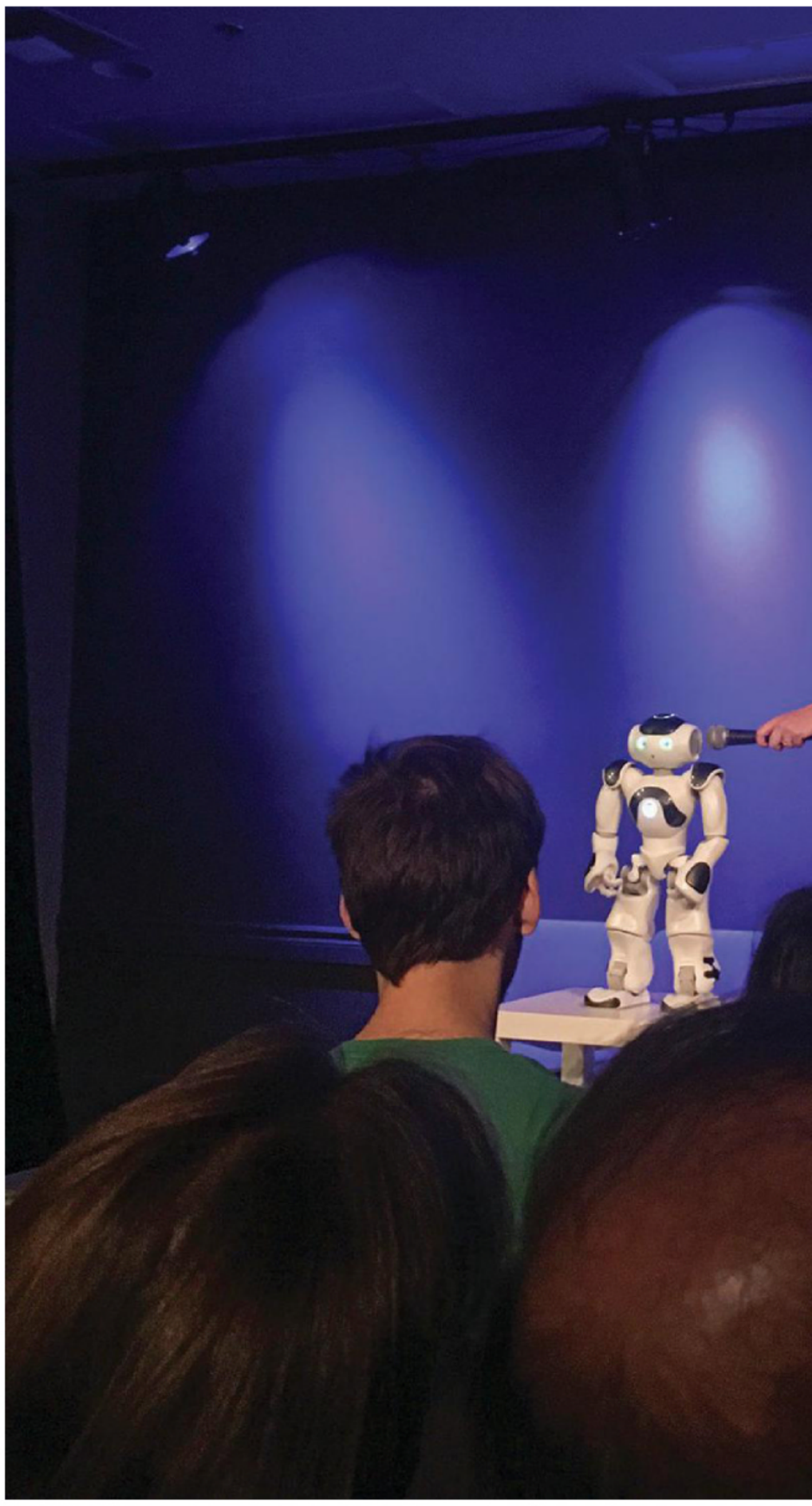
Artificial intelligence can now craft original jokes—but that's no laughing matter

BY CORINNE PURTILL

"DON'T YOU HATE IT," SAYS JON THE ROBOT, gesturing with tiny articulated arms at an expectant crowd, "when you're trying to solve inverse kinematics equations to pick up a cup and then you get 'Error 453, no solution found'?" The crowd laughs. "Don't you hate that?"

An experiment billed as a comedy act, Jon is the brainchild of Naomi Fitter, an assistant professor in the School of Mechanical, Industrial and Manufacturing Engineering at Oregon State University. The tiny android performs when a handler (who must also hold the mic) presses a button, then tells the same jokes in the same order, like a grizzled veteran comic at a down-market Vegas casino.

But the robot's act is more human than it might first appear. Jon is learning how to respond to its audience—it can now vary the timing of its delivery based on the length of the audience's laughter, and append different responses to jokes based on the level of noise in the room. It can deliver one line if a joke gets a roar of laughter ("Please tell the booking agents how funny that joke was") and another if there are crickets ("Sorry about that. I think I got caught in a loop. Please tell the booking agents that you like me … that you like me … that you like me").



THE PROSPECT OF AN AI that understands why we are laughing, and that can generate its own genuinely funny material, is sort of a holy grail for a subset of AI researchers.

Artificial intelligence can diagnose tumors, read maps and play games, often faster and with more accuracy than humans can. For the moment, however, linguistic humor is still primarily a people thing. Jon can work blue, with a whole bit on robot dating that involves cryptic texts, encrypted text and the eggplant emoji—but only because a human has written and programmed a set list for it. Finding a way to teach machines to be funny on their own would be a major breakthrough—one that could fundamentally reshape the way we relate to the devices around us. To understand a person's humor is to know what they like, how they think and how they see the world. An AI that understands all that has the power to do a lot more than just crack jokes.

The first step is to attempt to break down the nuts and bolts of human humor. Machines learn by taking vast amounts of data and feeding it through algorithms—in other words, formulas or detailed sets of instructions—in search of patterns or unique features. This process works when it comes to, say, identifying the difference between photos of dogs and photos of cars, but it can effectively destroy a joke, deconstructing it in a painfully unfunny operation. "Explanations are to jokes what autopsies are to bodies: if the subject isn't already dead, it soon will be," wrote Tony Veale, an associate professor at University College Dublin, in his recent book *Your Wit Is My Command: Building AIs With a Sense of Humor.*

Humans have vast mental libraries of cultural references and linguistic nuances to draw upon when hearing or telling a joke. AI has access only to the information that humans choose to give it, which means that if we want an AI to make us laugh, we have to be clear about the kind of humor we want to teach it.

One theory of humor is that the degree to which we find something funny matches the degree to which a joke's punch line deviates from the listener's unconscious expectation. Thomas Winters, a doctoral student in artificial intelligence at

COURTESY NAOMI FITTER

Jon the Robot and Naomi Fitter perform onstage at the Majestic Theatre in Corvallis, Ore., in October 2019

Katholieke Universiteit Leuven in Belgium, uses this one as a case study: Two fish are in a tank. Says one to the other: "You man the guns, I'll drive."

"In the beginning, you see this aquarium, this water tank. But then you hear 'You man the guns, I'll drive,' and you're like, Well, aquariums generally don't have weaponry or wheels or drivability," Winters says, in a heroic effort to parse the mechanics of a fish joke. "This mental jump from one interpretation to another one is something that most jokes or things we find funny have."

AI IS EXCEPTIONALLY good at following a formula. So are a lot of successful comedy writers.

Joe Toplyn broke into comedy in the 1980s when a friend from the *Harvard Lampoon* tipped him off that a writing job was opening up at David Letterman's late-night show. He sent in some jokes—a bit about a periscope-enabled refrigerator made it onto the air—and landed the job. He spent the better part of the next two decades writing for comedy and talk shows, racking up four Emmy Awards and head-writer credits at both *Late Show With David Letterman* and *The Tonight Show With Jay Leno*.

In 2014 Toplyn published *Comedy Writing for Late-Night TV: How to Write Monologue Jokes, Desk Pieces, Sketches, Parodies, Audience Pieces, Remotes, and Other Short-Form Comedy*. The book is a distillation of a course he taught in New York City after scrutinizing decades of monologues and reverse engineering the most successful jokes.

Toplyn isn't precious about comedy writing: it's a job, one that a person can learn to do well if given the right inputs. The jokes that got the biggest laughs for Leno and Letterman follow identifiable formulas populated with "handles"—people, places, things and other references—each with a variety of related associations that can be combined to form a punch line. Given enough time and data, he realized, a computer could potentially learn to make these jokes too.

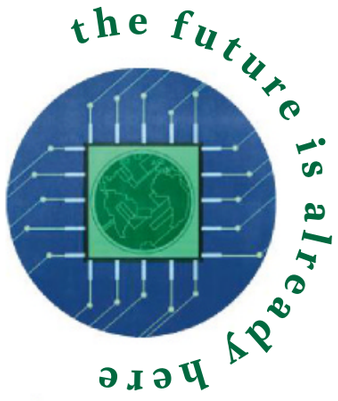
Earlier this year, at the International Conference on Computational Creativity, Toplyn presented a research paper outlining Witscript, a joke-generation system trained on a data set of TV-monologue jokes that detects keywords in entered text and creates a relevant punch line. Unlike other forms of robot comedy, the system—which Toplyn has patented—can generate contextually relevant jokes on the spot in response to a user's text. A chatbot or voice assistant enabled with the software can respond with humor to users' queries (when appropriate) without derailing the interaction.

Toplyn sees Witscript as an extension of the work he did for decades in late-night TV: making people laugh, and therefore making them feel less alone.

"That's basically the goal," Toplyn says. "It's to make chatbots more humanlike, so people will be less lonely."

Very few professionals love the idea that a computer can reliably do their jobs. Comedy writers are no different. When Winters posted a joke-writing software prototype to a Reddit forum for stand-up comics, he got some colorfully worded responses insisting that no machine could replicate the nuance of human comedy.

Toplyn counters that critics overlook how much communication follows simple formulas, even the funny kind. "Rodney Dangerfield: 'I get no respect.' That's a formula. Or Jeff Foxworthy: 'You may be a redneck if.' There are plenty of



formulas in comedy, and some of them are right on the surface," Toplyn says.

There are, obviously, people who do not laugh at the comedy of Jeff Foxworthy or the light topical banter of a late-night talk show. A separate camp argues that the better use of artificial intelligence in comedy and the arts is as sort of an infinite idea generator freed from the blinders and biases of human thinking, one that can toss up endless themes and potential associations that human writers and performers can run with themselves.

Piotr Mirowski was working as a search engineer at Bing when he noticed the similarities between his day job and his personal passion, improv. The principle of search engineering is to teach the computer how to identify the best result for a given query. In improv, Mirowski says, performers are also trained to follow their instincts and do what feels best in that scene. It's not always perfect, and the results sometimes have a hilarious absurdity, as anyone who has started typing a Google query with the predictive search feature on knows. Mirowski cofounded Improbotics, an international improv troupe that works alongside an AI that tosses out prompts and lines that human performers have to work into the show.

"I don't think it's really possible to build a true AI-based comedy that relies on understanding the emotions of another person or the context," he says. "What we can do is to bring that into life ourselves."

IMPROV COMEDIANS OFTEN DRAW UPON cues shouted out from the audience. An AI can draw upon ideas from all over the world and across history. The goal isn't to build a thing that will make the laughs for us, Mirowski says, but instead one that can help humans find new things to laugh about. As with any new technology, its power will come from the way users choose to interact with it, with results that no one may yet have imagined.

"I see what we're doing as kind of like building the electric guitar. It's not very clear how to play it or what it's going to do, and it sounds really weird and distorted and there are enough acoustic guitars anyway," says Kory Mathewson, Improbotics co-founder and cast member and a Montreal-based research scientist with DeepMind. "Then Jimi Hendrix gets an electric guitar, and it's like, 'Oh. That's what this is about.'"

On the flip side, of course, a tool with the power to influence and entertain can also be used to exploit. Understanding someone's sense of humor is a window into how they see the world, what their preferences are, maybe even where they are vulnerable. It's not a power that people are entirely comfortable with computers having.

In one 2019 study, researchers recruited pairs of people who already knew each other as friends, romantic partners or family members. They gave participants a list of jokes and asked them to choose which ones their friend or partner would find funny, based on a limited sample of the person's responses to other jokes. They had computers guess the same thing, based on the same data, then showed the list to the buddy so that they could verify which gags they liked. The machines predicted people's favorite jokes more accurately than their friends or partners did.

'Explanations are to jokes what autopsies are to bodies: if the subject isn't already dead, it soon will be.'

TONY VEALE,
ASSOCIATE PROFESSOR,
UNIVERSITY COLLEGE DUBLIN

The computers performed better than humans at guessing which jokes a participant would like in a second experiment as well. But in this one, people liked the recommended jokes less if they thought they came from a machine. They didn't trust them. Other studies have also found that people rate humor as one of the tasks they trust humans with far more than AI, along with writing news articles, composing songs and driving trucks (all of which AI has some success in doing). Jokes are about a shared view of the world, a willingness to violate the same norms and laugh at the same things. We know what it means when a friend sends something along and says, "I thought you'd find this funny." What's a robot getting at when it does the same thing? And who ultimately benefits if its humor wins us over?

There's a common saying that robots should do the jobs that are too dirty, dangerous or dull for humans. Comedy can be all of those things, but we still want it for ourselves.

As for Jon the Robot, its live appearances have so far been limited to a series of pre-pandemic shows. The act is not at the point where it might threaten the livelihood of Netflix-special-level comedians—yet. Before powering down, Jon always signs off with the same line: "If you like me, please book me and help me take your jobs." ◻

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ON THE LINE

Born in the U.S. and skiing for China, Eileen Gu navigates the road to Beijing

BY CHARLIE CAMPBELL

Gu at a beach near her childhood home in San Francisco in April 2021

PHOTOGRAPH BY CAROLYN FONG FOR TIME

EILEEN GU GOT INTO EXTREME SPORTS because of an overprotective mother.

The older Gu hated seeing her daughter plunge down California's Tahoe ski slopes in a furious blur, so she enrolled the 8-year-old in free-skiing school, not knowing exactly what it entailed but confident that anything would be safer than racing. Little did she know that she would one day be watching her child perform death-defying flips, spins and jumps instead. But that comes with the territory when your daughter is one of the sport's top stars, with golds and podium finishes at X Games and World Cups to her name.

"I've probably been an adrenaline junkie from day one," laughs the younger Gu, who is still just 18 years old.

In February, that adrenaline will be taking her all the way to the Winter Olympics in Beijing. It's where her mom was born and a place she visited regularly during childhood, her fluent Mandarin betraying the Chinese capital's distinctive twang. These will be Gu's first Games and, unusually, she is entered in all three free-skiing disciplines: half-pipe, big air and slopestyle.

Internationally, Gu competes for China, where she is nicknamed "Snow Princess," and has modeled for the local editions of *Elle, Harper's Bazaar* and *Vogue*. Professionally, she is part of the star-studded Red Bull team and in December became the first woman to land a double-cork 1440 in competition on her way to big-air gold at the World Cup at Colorado's Steamboat Resort.

Commercial endorsements have flooded in for Gu, along with media attention and social media buzz; she has 173,000 Instagram followers. She is also academically gifted, graduating from high school a year early (despite her punishing training schedule), scoring 1580 on her SATs and getting accepted into Stanford for 2022, where she wants to explore interests as wide-ranging as molecular genetics and international relations.

It's a rapid rise that she hopes will inspire others. A speech she made to her seventh-grade class, urging her peers to "show the boys that girls are just as powerful as they are," was selected as the voice-over for an Adidas campaign promoting female empowerment. Gu certainly walks the talk: after fracturing a finger and tearing a ligament in her thumb, she was expected to miss March's world championships in Aspen. She instead chose to compete without ski poles and took home two gold medals and a bronze.

"Honestly, I'm a little nervous about getting the poles back, because I've gotten so used to skiing without them," she told TIME after the event.

Naturally, you don't soar to such heights without picking up some bruises. Speaking to TIME in two interviews over last spring and summer, she revealed how her decision, at the age of 15, to switch from Team USA to Team China at the Olympics elicited savage trolling that escalated to death threats.

"My direct messages were absolutely flooded," she recalled. "It's hard to read through thousands of assumptions and just hateful things when you're at such an impressionable stage of your life."

SUPPORT FROM FRIENDS, family and especially former colleagues on the U.S. Olympic Team helped Gu navigate the abuse and emerge a "stronger, better person," she says. But tensions between the U.S. and China have only escalated since.

On Dec. 6, President Joe Biden announced a diplomatic boycott of the Beijing Olympics over human-rights abuses. The furor has thrust Gu—born to an American father and a Chinese mother—into the unenviable position of trying to walk a line between the two sides of her heritage.

'SPORT REALLY IS BLIND TO RACE, GENDER, RELIGION AND NATIONALITY.'
—EILEEN GU

Her experience offers an insight into what it means to be trapped between clashing cultures. Across the U.S., anti-Asian bigotry and attacks have reached alarming levels, stoked in no small part by former President Donald Trump's racializing the pandemic with terms like "China virus" and "kung flu." (During his re-election campaign, Senate Republicans even distributed a 57-page strategy document advising candidates that the best way to address COVID-19 was to "attack China.") Violence against Asian Americans gave strong impetus to the COVID-19 Hate Crimes Act, which Biden signed in May, decrying "the ugly poison that has long haunted and plagued our nation."

Yet his Administration continues to be tough on Beijing, and just five days later introduced the Ensuring American Global Leadership and Engagement (EAGLE) Act, which aims to confront China in technology, trade and human rights. In September, the U.S., U.K. and Australia unveiled the AUKUS security partnership, widely seen as a bid to counter China. On Nov. 24, the U.S. blacklisted a dozen Chinese firms involved in quantum computing because of possible military applications.

Two weeks later, Biden hosted a virtual Summit for Democracy, inviting more than 100 countries—but conspicuously not China. The appearance in the online gathering of several countries under far-from-democratic leadership—Poland, Brazil, India and the Philippines—suggested that the Biden Administration's real aim was the creation of another geopolitical counterweight to Beijing.

The global backlash over Chinese tennis star Peng Shuai, whose freedom and autonomy are unclear after she accused a retired top Chinese Communist Party (CCP) leader of sexual abuse, has meanwhile re-energized demands for greater overall accountability from Beijing, with the World Tennis Association banning China from the tour circuit in protest.

Still, Gu maintains that sports offer the best hope of uniting people and nations of such radically different viewpoints.

China's "Snow Princess" beams from a poster at an Olympics merchandise store in Beijing

"It's really easy to use sport as a form of unity and communication and friendship, because everybody is working toward a common goal," she said earlier. "Because sport really is blind to race, gender, religion and nationality; it's all just about pushing the human limit."

THE FIRST REAL TEST of Gu's idealism will be the upcoming Olympics, when Beijing becomes the first city ever to host both a Winter and Summer Games.

Gu says her decision to represent China was taken to help promote winter sports in the world's most populous nation. Since being awarded the 2022 Winter Games in 2015, China's government has unleashed ambitious targets to get 300 million Chinese—almost a quarter of the population—onto slopes and rinks. Authorities are subsidizing equipment hire and building sprawling new resorts. Some of these can be reached from central Beijing in just 45 minutes by high-speed rail—a flash compared with the grueling eight-hour round-trip to the slopes that Gu endured growing up in San Francisco.

Gu recalls a time when she could go skiing in China and recognize the faces of everyone around her, because so few locals had taken up the sport. "Now, there's thousands of people [skiing], and that's amazing. It's a huge opportunity to spread the sport that I love and that brings me so much joy."

But skiing for China has also required her to keep her head below the parapet when it comes to the Olympics and politics. In November 2019, just six months after Gu made her decision to compete for China, the International Consortium of Investigative Journalists published the China Cables. The purported collection of official CCP documents apparently details sweeping surveillance and extrajudicial detention of Muslim minorities in China's Xinjiang autonomous region. Since then, the controversy has deepened amid allegations of the forced sterilization of Uighur women, and the shaving and sale of their tresses to the makers of hair extensions. China strongly denies such allegations, and says it has had to take tough measures in Xinjiang to counter radical Islamism and lift a struggling, poorly educated region out of poverty. It claims the China Cables are fabricated.

Last year, a coalition of 180 rights groups called for a boycott of Beijing 2022, citing not only the Uighur issue but also eroding political freedoms in Hong Kong and Tibet. Days later, Canadian lawmakers voted unanimously to declare the treatment of the Uighurs as genocide—as the Trump Administration had already done—and urged the International Olympic Committee (IOC) to strip Beijing of the 2022 Games unless abuses cease.

Speaking at a regular press briefing just after the U.S. diplomatic boycott was announced, White House press secretary Jen Psaki said, "We simply can't"

KEVIN FRAYER—GETTY IMAGES

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treat the Games "as business as usual in the face of [China's] egregious human-rights abuses and atrocities in Xinjiang."

Following the U.S. move, the No Beijing 2022 coalition of over 250 protest groups—representing exiled Tibetans, Uighur refugees, dissident Hongkongers, Southern Mongolians, Taiwanese and members of other disaffected minorities—released a joint statement that praised the U.S. for setting "an example for other governments to follow." On Dec. 8, Australia, Canada and Britain announced they would also not send any officials to the Games, and diplomatic boycotts are now being mulled across the Western world.

Calls are also building for a corporate boycott. After Biden's announcement, the chair and co-chair of the bipartisan Congressional-Executive Commission on China called on Olympic sponsors—which include Procter & Gamble, Coca-Cola, Visa, Intel and Airbnb—not to send senior management to Beijing. "We continue to argue that a diplomatic boycott is not enough," said Senator Jeff Merkley, an Oregon Democrat, and Representative James P. McGovern, a Massachusetts Democrat, in a statement to media. Attendance, they argued, was tantamount to "condoning genocide or crimes against humanity."

In response, Chinese officials have accused Washington of "posturing and political manipulation," and there is an element of truth in that. There is little doubt that, even if relations were rosy, very few diplomats, foreign politicians or CEOs would have likely contemplated traveling to China for the Winter Games, given the onerous travel and quarantine regulations stemming from the COVID-19 pandemic. There is also an undeniable echo in Washington's latest decision of the Cold War boycotts of the Moscow Games in 1980 by the U.S., and of the Los Angeles Olympics in 1984 by the Soviet Union.

Unsurprisingly, Gu declined to comment when asked about these human-rights concerns. Few competitors, if any, want to see their shot at gold upended by politics. "For an athlete, the most important competition of his whole sports career is the Olympic Games," says Zhang Dan, who won silver for China in figure skating at the 2006 Winter Olympics in Turin, Italy. "It's unfair if the athlete's competition is affected by the political relations of the country."

There are also question marks hanging over the effectiveness of sporting boycotts. Jules Boykoff, a professor at Pacific University in Oregon who studies the Olympics and who represented the U.S. in soccer, cites the exclusion of apartheid-era South Africa as a successful example of forcing change, with "athletes putting their careers on the line to stand up for what they believe in."

But for IOC president Thomas Bach, such actions achieve little by themselves. Speaking to TIME before the Tokyo Summer Games, he argued that "It was not sport alone" that helped dismantle racial segregation and oppression in South Africa. "You had an economic boycott, cultural boycott, with regard to apartheid."

For Bach, the role of the Olympics is "first of all, about sport, and our social role is to unify and not to divide people."

GU HASN'T BEEN IMMUNE to day-to-day bigotry. A trip to the Walgreens a few blocks from her home in the early days of the pandemic had to be cut short when a customer started verbally abusing the Asian American store manager, telling him to "go back to your own country" and yelling about the coronavirus.

"I was really scared that things might get violent," says Gu, "so I grabbed my grandma and ran out of the store. That was the first time that I actually felt in danger because of a racial thing."

In the U.S., such bigotry has a long, painful history. At the time of the Chinese Exclusion Act of 1882, Asians were blamed for spreading leprosy, cholera and smallpox. When the bubonic plague broke out in the 1900s, Asians were quarantined in their communities, and Honolulu's Chinatown was razed. "Today, history is repeating itself," says Russell Jeung, professor of Asian American studies at San Francisco State University and co-founder of Stop AAPI Hate.

There is an unfair perception that Chinese Americans have split loyalties, which doesn't help. Under President Xi Jinping, China has courted the 60 million-strong Chinese diaspora, blurring the distinction between *huaqiao* (Chinese citizens overseas) and *huayi* (ethnic Chinese of foreign nationality). "The great rejuvenation of the Chinese nation requires the joint efforts of Chinese sons and daughters at home and abroad," Xi told China's state-run news wire, Xinhua.

The fear that overseas Chinese communities will blindly heed such calls has created suspicion of China's influence across the Anglosphere and elsewhere. In the U.S., distrust has been institutionalized by visa limits on Chinese researchers and students, as well as bans of popular Chinese-owned apps like TikTok and WeChat.

"Treating Asians as perpetual foreigners, as a yellow peril, got translated into racist policies," says Jeung.

The situation has prompted Gu to take a stand against racism on social media and re-evaluate the microaggressions she encounters on a daily basis: tropes about Asians excelling at school, not being athletic and owing their successes to overbearing Tiger Moms.

"I dismissed it for a long time, because I am a nerd," she told TIME. "I am academically involved, and I take pride in that. But it's destructive when it becomes limiting in the sense that you are dismissed for that role or expected to have this attribute."

All of which only makes Gu more determined in her mission to break down barriers. Her hope is that by the time she touches down in Beijing, the world will be ready to focus on sport. Already, Chinese friends have told her there are more girls on skis in China than ever before. For Gu, that was always the dream.

"To have inspired even a little part of that," she said, "makes it all really worthwhile." —*With reporting by* CHAD DE GUZMAN/HONG KONG

'IT'S UNFAIR IF THE ATHLETE'S COMPETITION IS AFFECTED BY POLITICAL RELATIONS.'
—ZHANG DAN, CHINESE SKATER

18+

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NATION

THE SUPER RICH STEPPED IN TO SAVE A CITY. SOME SAY THEY MADE IT WORSE

BY ALANA SEMUELS/KALAMAZOO, MICH.

A view of the city of Kalamazoo, Mich., on Oct. 27

PHOTOGRAPHS BY AKILAH TOWNSEND FOR TIME

Stephanie Williams, former city commissioner and activist, in Kalamazoo's Northside neighborhood

A sign on the city limits of Kalamazoo, Mich.

ON THE STEPS OF CITY HALL, MAYOR David Anderson hollered a guttural "Wahhh!!!" and shot his arms into the sky in celebration, looking like an inflatable air dancer blowing in the wind.

"Four! Hundred! Million! Dollars!" he shouted to city residents gathered in July in Bronson Park, a leafy plaza adorned with bronze busts and plaques honoring pioneers and philanthropists.

Anonymous donors had just given what is thought to be the largest ever gift to support a municipality, and for city officials, it was like winning the lottery. It was also a win for two of Kalamazoo's richest men, philanthropists William Parfet and William Johnston, who created the foundation that received the money and that will determine how most of it is spent.

Since the Two Bills, as they're known to locals, launched the Foundation for Excellence in 2017 to close budget gaps in their cash-strapped city—reportedly pledging $70 million of their own money to do so—the nonprofit has distributed around $26 million a year to close budget holes, lower property taxes and fund a wish list of projects.

Instead of the empty storefronts and vacant lots that characterize many Rust Belt cities, Kalamazoo today is a busy hive of spending. City crews are repairing sidewalks, building a splash pad for kids in a low-income neighborhood and replacing lead pipes, their work marked by orange and white construction barrels and closed roads. Hundreds of children have been able to attend free summer camp and go online, thanks to routers paid for by the foundation.

But beyond the construction crews and new pickleball courts, a tension hums below the surface of Kalamazoo's budget miracle. There's a long history in the U.S. of the rich stepping in to fund cultural amenities like museums, but lately they've started funding projects—in Kalamazoo and elsewhere—that have long been perceived as the government's responsibility. It's a scenario that critics say sets the stage for the super wealthy to control more and more aspects of public life.

"The way things are supposed to work in a democracy is that there's one person, one vote," says Shannon Sykes-Nehring, who was a city commissioner when the Foundation for Excellence was approved and who has remained a vocal skeptic. "But now the consideration is, How can we keep the city afloat if we upset the people paying our bills?"

Kalamazoo (pop. 74,000) is used to serving as a model; in 2005, anonymous donors started the Kalamazoo Promise, which pays for college tuition at Michigan colleges and universities for students graduating from the city's public

Kalamazoo Mayor David Anderson at city hall

schools. Now, as billionaires control more wealth than half of the U.S. population combined, Kalamazoo is trying to harness the power of extreme riches to balance its budget.

"For years and years—centuries to come—we can improve, grow, invest, create, aspire differently than we've ever been able to do before," Bobby Hopewell, Kalamazoo's longest-serving mayor, who stepped down in 2019, told me recently.

But criticism is growing. In agreeing to raise money for the foundation, Parfet and Johnston required the city to scrap a proposed income tax and decrease property taxes. The foundation funds don't come in one lump sum but in annual installments, a system that critics say undercuts democracy by essentially holding Kalamazoo hostage to the whims of wealthy donors. While only a handful of people know where the additional $400 million announced over the summer is coming from, suspicion falls on none other than the Two Bills, which would give them even more control over Kalamazoo and its people.

The foundation says it does not disclose the identity of its anonymous donors; the $400 million pledge is revocable if any of the staff who know the donors disclose that information publicly. And the Bills disagree with the idea that giving money to the city buys them influence. "Nobody feels that they've got power over anyone else, or they're better than anyone else," Johnston told me. "We're all equals in this, trying to make this a great city for everybody."

HOWEVER ONE FEELS about the foundation, Kalamazoo is a case study of the power of the super rich at a time of growing wealth inequality. There were roughly 745 U.S. billionaires by October 2021, about 11 times the number that existed in 1990. They are worth $5 trillion—by contrast, the bottom 50% of U.S. households are worth a total of $3 trillion, according to Americans for Tax Fairness. Billionaires are sending tourists into space, deploying the National Guard to the border and funding the budgets of cities like Kalamazoo, while the rest of us look on, some awed, some disgusted.

Meanwhile, since the tax cuts of the 1980s, there are more cities that need help funding public services that have been eliminated, and more rich people who have money to give, says David Callahan, the author of *The Givers: Wealth, Power, and Philanthropy in a New Gilded Age*. But those deals can set a dangerous precedent.

"What could go wrong is [if] the billionaires don't like what the city is doing and say, We're not going to keep giving

you money unless you do things differently," Callahan says.

Extreme wealth has always had a comfortable home in Kalamazoo. You can't walk a few blocks without seeing a building with names of prominent philanthropists like Upjohn or Stryker. A century-old private dining club perches by the front steps of city hall, where a crowd of mostly white patrons dined on white tablecloths on a warm evening.

The Two Bills have long been at the center of this philanthropic community, and multiple people told me that elected officials factored how the Two Bills would react to policy decisions.

Johnston, a former school principal and teacher, is married to Ronda Stryker, an heir to the Stryker Corp., a medical-equipment company. In 2011, the couple gave $100 million to create a new medical school in Kalamazoo named after Ronda's grandfather, Homer Stryker.

Johnston now runs an asset-management company whose real estate arm owns and manages 2.5 million sq. ft. of property across the region, including the Radisson Plaza Hotel, a centerpiece of downtown Kalamazoo. He's given to both Republican and Democratic candidates in Michigan.

Parfet, a political conservative who has donated heavily to state and national Republican campaign committees and to Donald Trump, is an investor who spent decades as an executive and board member at big companies like Stryker and Monsanto. His great-grandfather founded the Upjohn pharmaceutical company, which was acquired by Pfizer in 2002.

Despite this wealth, Kalamazoo has been struggling. Over the past few decades, wealthy white residents fled to the suburbs, while companies moved outside of city limits. Although Kalamazoo is home to two hospitals, a university and a college, these big nonprofit institutions don't pay property taxes. Politics plays a role too; former Michigan governor Rick Snyder, to whom Parfet has contributed, changed the state's revenue-sharing model so that local communities kept fewer sales-tax dollars. These changes meant that the city was approaching what assistant city manager Laura Lam calls the "*X* of death," where revenues and expenditures would permanently cross.

After a series of panels examined ways for the city to turn itself around, the commission concluded in 2016 that it would have to ask voters to pass an income tax. Sykes-Nehring, who was a city commissioner at the time, says there were some advantages to such a tax. Around 81% of Kalamazoo workers lived outside city limits, and an income tax would capture some of their earnings. The city planned to lower property taxes to offset the creation of the income tax, so some residents would pay less in taxes than before, Sykes-Nehring says.

THE CITY WAS in the process of designing a calculator to help residents figure out what they'd owe under the new plan when Sykes-Nehring says she was called to city hall on a weekend. The city manager told her that the Bills did not support the income tax and were threatening to spend heavily to defeat it. They had an alternative proposal: if the city scrapped the tax, they'd fund Kalamazoo with money from a new foundation.

With lower taxes, "we felt we could be more competitive, that would create more investment in the city, thereby creating more tax revenue in the future," Johnston said, speaking from a vacation home in Key Largo, Fla. "That would be good for the city."

Once the alternative to the income tax was suggested, most city commissioners got on board. The Foundation for Excellence was formally established in 2017. Sykes-Nehring was one of two commissioners to vote against it; she says her colleagues made life very difficult for her afterward, and she resigned her post in 2019.

According to the agreement signed between the Bills and the city, Kalamazoo would receive a grant from the foundation each year and spend the money in two ways: reimbursing Kalamazoo for reducing property taxes, and stabilizing the city budget. In fiscal year 2021, that amounted to $13 million and $4.2 million respectively. Then, the city "may" fund a third bucket, $8.5 million for 2021, which goes toward "aspirational projects" for the city.

Exactly how those aspirational projects are chosen is a little unclear. In 2016, the city launched a project called Imagine Kalamazoo 2025, holding open houses, community picnics and online surveys that asked residents what they wanted to see in their city. They got about 4,000 "points of contact"—roughly 5% of the population—to offer ideas. Imagine Kalamazoo 2025 "is the vision that guides the funding," says Steve Brown, the foundation's manager.

But there are growing complaints that the foundation has not addressed some of the most pressing needs of Kalamazoo. The foundation was created with the pledge to "end generational poverty," but the largest chunk of money goes toward the cost of offsetting property-tax breaks for people who have already accumulated wealth through homeownership, including some who own property in Kalamazoo but don't live there. More than half of the foundation grant for 2022—nearly $14 million, as proposed—will go to tax breaks.

Though Imagine Kalamazoo "guides" funding, the foundation staff and board tell the city how they think the money should be spent. The city commission has always agreed to the foundation's proposed projects.

"There is a public stance by the city that citizens have input; I have not seen any instance where the public has significant input," says David Benac, who lost to Anderson in the 2019 mayoral race and who is a vocal opponent of the foundation. "There's an outside unelected entity that holds the purse strings."

In spring 2020, as the nation's focus turned to racial inequity in the wake of George Floyd's death, some residents calculated that the money wasn't being distributed in an equitable way. Since about half of the annual grant to the city goes to lowering property taxes of Kalamazoo residents, this disproportionately benefits white people, who are the

'Nobody feels that they've got power over anyone else.'

—WILLIAM P. JOHNSTON, FOUNDATION FOR EXCELLENCE

A new parking lot, left, under construction; Steve Brown, manager of the Foundation for Excellence, outside city hall

majority of Kalamazoo's homeowners and whose homes are worth more than those of Black homeowners.

"If you think that hundreds of millions of dollars given to a city is automatically a good thing, you're so wrong," says Matt Smith, a local librarian who gives talks about the history of redlining in Kalamazoo. Smith is outspoken about the racial inequities he says are fueled by the foundation: "It's widening the wealth gap."

I walked around the city's primarily Black neighborhood of Northside, and many of the people I asked had never heard of the Foundation for Excellence. Same with Imagine Kalamazoo 2025. Many Northside residents are more concerned with Graphic Packaging International, a paper factory that announced a $600 million expansion of its current Northside property. Residents have long complained about odors and pollution from the factory and oppose a tax abatement recently approved by the city commission. They wonder why property owners are getting tax breaks while low-income neighborhoods still struggle.

This inequity isn't a problem that bothers just Smith. I visited a dusty lot across the Kalamazoo River, where hundreds of people were living in a homeless encampment. There was resentment toward the city and its lack of resources for people like Terre Haywood, who'd been laid off but couldn't quickly access unemployment benefits and who was going through a divorce. For a little while during the pandemic, the city paid for hotel rooms for the homeless, and if the program had lasted, Haywood says he might have been able to get on his feet. But the program ended, and it was left to volunteers to drop off food and bottled water at the encampment, he told me.

When I asked Haywood what he thought about the Foundation for Excellence, he brought up the property-tax breaks. "It's $400 million for the already pampered," he said. In October, the city cleared Kalamazoo's homeless camps, including the one where Haywood was living, enraging many residents.

I BROUGHT SOME of these concerns to Bobby Hopewell, who was Kalamazoo's mayor for 12 years and who is the founding director emeritus of the Foundation for Excellence. He disputes the idea that the Bills dictated anything to the city. Hopewell says it was initially his idea to ask philanthropists for this money, because he didn't want the income tax to create a financial burden on people who were already struggling.

"We've never thought about the two Bills," he tells me from the garden of a bar in Kalamazoo, talking over the music from a festival a few blocks away. "They have never asked me for anything when we've been doing work in this community. There's never been a

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phone call to me to say, 'Vote this way.'"

The city agreed to lower property taxes because it was going to do so if the income tax passed, he says; this would have kept it in compliance with a state law on how much cities may tax residents. Funding a city with philanthropy might be an unusual approach, but that doesn't mean it's bad, he says. "I'm always about doing things that have never been done before. No one had a cell phone until it was created," he says.

The property-tax cut may benefit white people more, but there are more white people than Black people in Kalamazoo, says Hopewell, who is Black. And just because a policy helps one group more than another, that doesn't mean a city shouldn't fund it; it still builds bike paths, even though some people don't ride bikes.

Supporters of the foundation say the setup is democratic because the city commission, which is elected by voters, has to approve each year's grant from the Foundation for Excellence. The commission also has a say in who is on the Foundation for Excellence board, which includes stakeholders from different neighborhoods and groups like health care, the arts and education.

"I don't see anybody else gaining other than our children, our neighborhoods, the folks that need jobs, our businesses that we were able to help get through COVID," Hopewell says.

He's right that the money is funding a lot of good things. I stopped by a program that more than doubled the number of young adults it was able to match with summer work experience since getting a grant from the Foundation for Excellence. I walked on a newly paved sidewalk near a Northside elementary school. I got stuck in traffic near the Kalamazoo farmers' market, and I talked to Tiyanna Williams, who was about to lose her home because she'd fallen behind on her property taxes until the city stepped in. One of the aspirational projects receiving foundation funding aims to have zero residents lose their homes to tax foreclosures.

Construction at the Kalamazoo farmers' market, where a renovation is being partially funded by the Foundation for Excellence

THERE HAS BEEN TALK of exporting this model to other cities. Ron Kitchens, the former head of Southwest Michigan First, the region's economic-development organization, calls this type of public-private partnership "community capitalism" and wrote a book about it. In a 2018 interview, he predicted that other cities would replicate it, as they did the Kalamazoo Promise. "It's a completely different way of doing government and community—it's unheard-of. But it will be a model," he said at a policy conference.

The city of Jacksonville, Fla., has appointed a chief philanthropy officer to recruit donor money; the state of Michigan created an Office of Foundation Liaison "to broker innovative funding partnerships."

And skeptics are coming around to the idea that they can't beat the Bills. But maybe they can tame them.

"The bear is already in the room," says Nathan Dannison, one of the foundation's first board members. "We can pretend that it is not … or we can learn how to become bear trainers and start to get our hands around this thing."

'If you think that hundreds of millions given to a city is automatically a good thing, you're so wrong.'
—MATT SMITH, RESIDENT

Though Dannison, a pastor, says he was stonewalled when he tried to find out if the endowment was being invested in companies that made tobacco products or weapons of war, he hopes the foundation will succeed. The GOP-led Michigan statehouse has made it so hard to make any other model of financing work, he says. Other troubled cities in Michigan have filed for bankruptcy or been taken over by an emergency manager—an unelected person who takes power from elected officials in order to implement unpopular budget cuts. These emergency managers have contributed to long-standing problems, including Flint's drinking-water crisis.

"A municipal endowment at least is a way to have some kind of local autonomy," says Dannison.

But he doesn't want to be involved. After he organized a counterprotest to a Proud Boys rally in Kalamazoo last year, the city denied Dannison reappointment to the local citizens' safety committee, saying he couldn't perform his duties "without bias."

In March, he left his position as senior pastor at the First Congregational United Church of Christ and quit the Foundation for Excellence board. Like Sykes-Nehring, he now lives outside of Kalamazoo, in a rural area. He wants to teach his kids to fish and hunt—and to avoid city politics. —*With reporting by* LESLIE DICKSTEIN *and* SIMMONE SHAH ☐

CULTURE

Shonda Rhimes' Second Act

TV'S MOST INFLUENTIAL CREATOR IS RESHAPING THE STREAMING LANDSCAPE—JUST LIKE SHE DID WITH NETWORK TV

BY JUDY BERMAN

PHOTOGRAPH BY DJENEBA ADUAYOM FOR TIME

"I don't make shows and wonder, Is this going to be part of the cultural zeitgeist?" says Rhimes, TV's highest-paid creator

Shonda Rhimes and I are deep into a conversation about what makes a healthy work environment when she has to stop me from saying something ridiculous. I've been waxing indignant about the professional world's unfair assumption that employees with kids are not fully present at work.

"But I'm not fully present at work," Rhimes, who is TV's highest-paid and, arguably, most successful showrunner, as well as a single mother of three daughters, interjects. We're in the sitting room of a midtown Manhattan hotel suite that, with its tasteful cream-and-wood decor, feels like the natural habitat of Rhimes' elegant *Scandal* heroine, Olivia Pope. I don't need to have kids myself to sense she's onto something, and I can see her mentally racing toward a more incisive read.

"I don't think anybody who has kids is fully present at work," she tells me, speaking as quickly as one of her hypercommunicative characters, but with a deliberateness that suggests she's already processed these thoughts. "The idea of pretending that we have no other life is some sort of fantasy out of the 1950s, where the little lady stayed at home. I don't have a little lady at home. So if I am excelling at one thing, something else is falling off. And that is completely O.K."

She's right. How could someone who's responsible for at least one small, vulnerable human—responsible in a real way, not in a '50s-dad way—ever be fully present when that child is out of earshot? The problem isn't that people can't help but bring their whole lives to the office; it's that workplaces fail to accommodate those lives.

This is not the kind of sentiment you expect to hear from a person known for her work ethic. At her most prolific, Rhimes was responsible for producing around 70 episodes of TV across up to four ABC dramas each year. Then in 2017, she signed an industry-shaking deal with Netflix that the parties reupped this past summer at a reported value of $300 million to $400 million, complete with a "significant raise" and a five-year extension.

It was not a foregone conclusion that her jump from network prime time to the platform that has become the vanguard of the streaming revolution would prove so remarkably successful. In 2017, Netflix was still midway through its own transition from licensing the bulk of its library to producing an endless torrent of original programming. Creators with Rhimes' clout, from Ryan Murphy and *black-ish* mastermind Kenya Barris to Beyoncé and the Obamas, inked their Netflix deals in subsequent years. And instead of immediately cranking out content—as her production company Shondaland did at ABC after forming in 2005, and the way Murphy has done, sometimes to the detriment of his shows' quality—Rhimes slipped off the pop-cultural radar for a few years.

But if one thing has become clear about Rhimes, it's that she has little use for conventional wisdom. And why should she, when her own instincts have so often yielded superior results? Now she's getting ready to release the highly anticipated

second season of *Bridgerton*, the steamy Regency romance that is Netflix's second-most-watched original show ever. She's also stepped back into the role of creator for the first time in the decade since her ABC smash *Scandal*. *Inventing Anna*, a limited series about the real high-society scammer Anna Delvey, debuts on Netflix on Feb. 11.

For the millions-strong global audience that not only watches her shows but also listens to Shondaland podcasts and consumes content on Shondaland.com—and for the 50 staffers the company employs following the transition to Netflix—Rhimes' approach isn't just effective. It also feels truer to the complexity of human existence in the 21st century than any set of axioms that worked for white guys in gray flannel suits generations ago.

RHIMES' AVERSION to the path of least resistance is a recurring theme in her origin story. The youngest of six, she was born in 1970 and raised in the Chicago suburbs by parents in academia. "I grew up in a family where hard work was not optional," she wrote in *Year of Yes*, a best-selling 2015 memoir that traces her transformation from wallflower writer to confident public figure. A solitary child who would entertain herself by constructing elaborate fictions, Rhimes matriculated at Dartmouth with dreams of becoming an author but ended up earning an M.F.A. in screenwriting from USC's film school. The program caught her eye when she read that it was harder to get into than Harvard Law School.

After graduating in 1994, she broke into film, scripting the 1999 HBO biopic *Introducing Dorothy Dandridge*, starring Halle Berry, and Britney Spears' 2002 big-screen debut, *Crossroads*. Then, as she told Oprah in 2015, the 9/11 attacks brought home that "If the world is gonna end tomorrow, there are things that I need to do." The most urgent was motherhood. She adopted her eldest daughter, Harper, now in college, and committed to raising the baby without a co-parent.

Rhimes pivoted to TV in the early 2000s, following an inevitable immersion in the medium while at home with her infant, and secured a deal with Touchstone/ABC Studios. She teamed up with producer Betsy Beers, another film-industry alum who shared a passion for character-driven stories. "From very early on, it was clear that Shonda was incredibly curious," Beers recalls. The partnership is still going strong two decades later.

An early pilot script about female war correspondents never made it to air. *Grey's Anatomy*, which followed a cohort of attractive, ambitious surgical interns and combined the eternal appeal of a hospital show with a soapy yet self-aware vibe, proved more palatable to the network. As a first-time creator, Rhimes defaulted to her own judgment. That meant color-blind casting—which yielded Sandra Oh as cool, cutthroat Dr. Cristina Yang, the platonic soulmate to Ellen Pompeo's Meredith Grey—and OR scenes that didn't shy away from blood and guts.

As Rhimes recalls, ABC didn't push back on her less conventional choices. "Nobody said, 'There are too many people of color on that show,'" she tells me now, sitting on an ivory wrap-around couch, between sips of coffee. But ABC didn't recognize its potential either, debuting *Grey's* as a midseason replacement with an order of just nine episodes. In one early interview, Rhimes joked that she waited so long to hear whether the show would make it onto the schedule, she was ready to start "selling episodes out of the trunk of my car." Now, she reflects, "I just don't think they knew what they had."

But viewers got it immediately. *Grey's* premiered on March 27, 2005, and quickly became a phenomenon. The first season's finale attracted more than 22 million viewers. By 2007 it had a successful spin-off in *Private Practice*. And although its audience has shrunk, like everything on network TV, and Rhimes handed off showrunning duties to Shondaland vet Krista Vernoff in 2017, *Grey's* is now midway through its 18th season. With no end date announced, its run is among the longest in prime time.

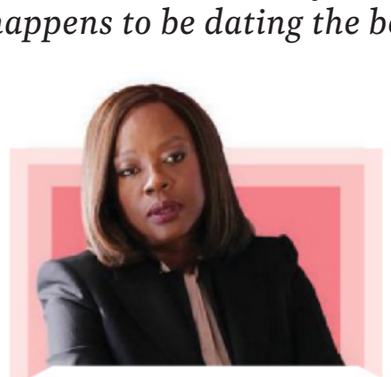
CAST OF CHARACTERS

GREY'S ANATOMY
MEREDITH GREY
CRISTINA YANG

Ambitious surgeons, spirited rivals, platonic soulmates

SCANDAL
OLIVIA POPE

A shrewd White House fixer who happens to be dating the boss



HOW TO GET AWAY WITH MURDER
ANNALISE KEATING

A superstar defense attorney with a closet full of skeletons

BRIDGERTON
PENELOPE FEATHERINGTON
DAPHNE BRIDGERTON

Two eligible women in Regency London's marriage market

INVENTING ANNA
VIVIAN KENT
ANNA DELVEY

The journalist and her subject the pretender, respectively

MEREDITH GREY: ABC; CRISTINA YANG: WALT DISNEY TELEVISION; OLIVIA POPE: GETTY IMAGES TELEVISION NETWORK; ANNALISE KEATING: GETTY IMAGES TELEVISION NETWORK; PENELOPE FEATHERINGTON, DAPHNE BRIDGERTON: NETFLIX (2); VIVIAN KENT, ANNA DELVEY: NETFLIX (2)

BEFORE SHE WAS an executive, a superproducer and a media mogul, Rhimes was a writer. So central is this vocation to her worldview that what unites most Shondaland protagonists is that they too are storytellers. ("I'm horrified that you pointed that out," she laughs, when I ask her about it, "because I had not noticed that myself.") *Inventing Anna*'s Vivian Kent is a journalist, while her subject Anna Delvey's entire life is a self-constructed fiction. Pseudonymous *Bridgerton* narrator Lady Whistledown is a gossipmonger among London's gentry. *Scandal*'s D.C. fixer Olivia and Annalise Keating, the exacting lawyer and professor at the center of creator Peter Nowalk's Shondaland hit *How to Get Away With Murder,* are professional builders of compelling counternarratives to messy truths. Even *Grey's* is framed by Meredith's (or sometimes another character's) voice-over.

One reason for the latter show's longevity is that it has always been funnier, sexier and more cognizant of its own excesses than predecessors like *ER* and *Chicago Hope*. The female characters are exhilaratingly ferocious, from the independent Cristina to Miranda Bailey (Chandra Wilson), a secretly bighearted surgeon who's so tough on her interns they call her "the Nazi." But what really set the show—and just about every subsequent Shondaland title—apart from anything else on TV was the rhythm of its storytelling.

The prototypical Shonda Rhimes screenplay is like a 42-minute dance track: the tempo builds and builds until finally the beat drops, in a series of last-act twists to be untangled in next week's episode. Observing how quickly her mind works in conversation, it occurs to me how dramatically that preference for briskness manifests in her stories. Like pop lyrics, her dialogue is laced with choruses ("You're my person," Meredith and Cristina tell each other, repeatedly) and callbacks (Olivia and her sometime lover the President have a recurring fantasy in which they move to Vermont to make jam). As such, while these lines sometimes look trite on paper, they gain emotional resonance through repetition and intensity.

Rhimes' second zeitgeist-snatching hit for ABC, *Scandal,* upped the velocity—and defied network norms—even more than *Grey's*. Inspired by a meeting with crisis-management guru and George H.W. Bush Administration alum Judy Smith, Rhimes cast Kerry Washington as Smith's fictionalized counterpart, Olivia. When the series premiered in 2012, Washington became the first Black woman to play the lead in a prime-time network drama since the mid-'70s. If that sounds inconceivable now, it's probably because of how rapidly *Scandal* changed the TV landscape, leading to roles for Black women like Taraji P. Henson in *Empire,* Viola Davis as *Murder*'s Annalise and the stars of Zahir McGhee's recent ABC musical drama *Queens*.

> 'The girlboss archetype is bullsh-t that men have created to find another way to make women sound bad.'
>
> **SHONDA RHIMES**

By the mid-2010s, when ABC started airing a Thursday-night lineup of *Grey's, Scandal* and *Murder* that the network dubbed TGIT, an archetypal Shondaland heroine had taken shape. She was smart, strong, gorgeous, successful and still driven to achieve. Although in most cases she strove to do good, an allergy to failure made her prone to ruthlessness. In its original cultural context—a TV universe heavy on male antiheroes and light on female agency—that version of the Shondaland protagonist felt refreshing. These women wanted things, worked hard, made tough choices, loved fiercely, fought with impossible parents, then went home and drank about it.

"There was a brand that I specifically created for ABC. It has some hallmarks, and one of them is fierce, incredibly successful career women," Rhimes says. "It was highly successful and highly financially viable for them."

But one season's breakthrough is the next season's new normal, and at that point saturation becomes inevitable. The pop-feminist renaissance Rhimes helped launch was diluted by a wave of imitations, from Téa Leoni in *Madam Secretary* to Piper Perabo's cable-news tycoon in *Notorious*. Shondaland's own output grew redundant; the downside to zooming through plot points at five times the speed of most other shows is that all the bed-hopping and betrayal can become too predictable after a few seasons. Procedurals like *The Catch* and *For the People* served watered-down Rhimes characters. In 2017, Shondaland's first foray into period drama, Heather Mitchell's *Romeo and Juliet* sequel *Still Star-Crossed,* was canceled after a single season.

Meanwhile, the culture at large was starting to question the wisdom of celebrating wealthy, powerful, assertive women just for being wealthy, powerful and assertive. When Nasty Gal founder Sophia Amoruso popularized the term *girlboss* in a 2014 memoir, and her company declared bankruptcy just two years later, it was open season on girl power for anticapitalists on the left and misogynists on the right. Soon other female business leaders who'd come up espousing feminist values were losing control amid reports that they treated their employees poorly. By the end of the 2010s, the Shondaland brand had begun to feel a bit anachronistic. So too did network TV, as the streaming wars heated up and the young social-media-savvy audiences that fueled Shondaland's rise decamped for Netflix and YouTube.

RHIMES HAS LITTLE PATIENCE for a backlash to pop feminism that she views as just more misogyny. "I think the girlboss archetype is bullsh-t that

INVENTING ANNA: NETFLIX

men have created to find another way to make women sound bad," she tells me, more exasperated than defensive. The word *girlboss,* as Rhimes sees it, is "a nice catchphrase to grab a bunch of women into one group and say, 'This is what women are doing right now.' Nobody ever says, 'This is what men are doing right now.'" Such flattening of female identity doesn't sit right with a woman who's spent her career crafting unique female characters—who come off as aspirational, in large part, because they rise above sexist assumptions.

Which is not to say Rhimes believes that the way a leader treats her employees is irrelevant so long as she is a woman. Over the years, Shondaland has grown from a vehicle for Rhimes' own creations to a platform to also shepherd other creators' work to a multimedia force; Rhimes essentially runs a mini-studio under the Netflix banner, a digital publisher since the launch of Shondaland.com in 2017 and a podcast network since Shondaland Audio was announced in 2019. During that rise from showrunning phenom to mogul, she has put quite a bit of effort into creating a workplace that reflects her own feminist ideals.

"In the span of a year we went from nine employees to 50. There are a lot of things that go into running a company, in terms of culture," Rhimes says. That has meant building out offerings aimed at fans and extending relationships with cast members, through Shondaland.com articles on politics and clothes and podcasts by stars such as *Inventing Anna*'s Laverne Cox. In perhaps its most ambitious project to date, Shondaland Audio has optioned the Washington *Post* story "Indifferent Justice"—about a serial killer whose dozens of murders went unsolved for decades because he preyed on marginalized, often Black, women—in partnership with *Surviving R. Kelly* creator dream hampton.

And as Rhimes herself has become a household name, part of that work involves aligning the company's identity with what she calls "brand Shonda," which leveraged *Year of Yes* into a deal that made the creator a face of Peloton in 2021.

Shondaland newcomer Julia Garner, left, stars alongside Rhimes vet Kate Burton in Inventing Anna

Rhimes and Beers have also taken responsibility for creating a work environment that takes employees' needs into account. "I don't want to sound sexist, but I never tried to lead like a man," Rhimes says. "I was a single mom with kids. The idea that I would lead any differently than my needs required never occurred to me." There is, for instance, a playroom at the offices. Katie Lowes, an *Anna* cast member who played Quinn Perkins on *Scandal* and now hosts Shondaland Audio parenting podcast *Katie's Crib,* says that when she was pregnant and shooting *Scandal,* "I had a PA who would get me a peanut butter and jelly sandwich when I had cravings."

The way Rhimes describes her approach to management could be read, by one familiar with the frustrations that catalyzed her departure from Disney-owned ABC, as a rejoinder to bosses who undervalue employees. A buzzy 2020 *Hollywood Reporter* profile included the allegation that she moved to Netflix after a "high-ranking executive" at the company replied to her request, amid contract negotiations, for an extra Disneyland pass by demanding, "Don't you have enough?"

Her frequent collaborators cite supportive, detail-oriented staffers and an atmosphere of cooperation over competition as the reason why they return to her sets. "It is a chaos-free environment," says Anna Deavere Smith, the actor, playwright and academic who appeared in *For the People* and is now developing an adaptation of Isabel Wilkerson's *The Warmth of Other Suns* for Shondaland. Smith recalls, "I had a question about hair early on in *For the People*. I was nervous to raise it," because Black hair has so often been a third-rail topic. But "all of a sudden, I'm in a meeting with the head of hair and Betsy and the director. That's never happened before in my career."

Unlike writing, helming Shondaland as a manager and mentor didn't come naturally at first. Although Rhimes enjoys fostering a happy workplace, she doesn't necessarily enjoy management tasks. But as with everything, she was determined to excel. That has entailed becoming conscious of the reality that "leadership style is the thing that trickles down." If, say, she wants employees to log off outside work hours—and she does—then she has to resist sending late-night Slack DMs that they might feel pressure to address.

For Rhimes, adhering to the boundaries she sets for her employees and

Rhimes, second from right, with cast and crew on the set of Grey's Anatomy *during its first season in 2005*

offering them the same flexibility and independence she enjoys simply comes down to practicing what she preaches. "I wouldn't want a workplace that didn't feel equitable for me," she says, "so why would I want a workplace that didn't feel equitable for anybody else?"

IF THIS SECOND ACT of Rhimes' TV career has expanded her responsibilities and influence, it has also expanded her palette as a writer and producer. No longer tethered to the network procedural template, she has at Netflix offered up new kinds of stories and heroines while continuing to satisfy fans' demand for fast-paced, suspense-packed shows that center on fascinating women.

Adapted from Julia Quinn's period romance novels, *Bridgerton,* which dominated social media for weeks following its December 2020 premiere, displayed a refreshing frankness about sex in all its hot, hilarious and confusing glory. Rhimes worked closely on the inaugural season with Chris Van Dusen, a first-time creator but longtime member of the Shondaland family. The 19th century English setting ensured that the characters would include none of the "incredibly successful career women" who were once a fixture of Shondaland. Instead, early episodes track the machinations of plucky debutante Daphne Bridgerton (Phoebe Dynevor), who falls for a dreamy duke played by Regé-Jean Page. Like the books, each season will focus on the love life of one of eight Bridgerton kids.

Van Dusen and Rhimes casually (and a bit confusingly) tweaked history in order to cast plenty of BIPOC actors as aristocrats, including the queen. Quietly radical though its reimagining of British period drama is, the show's nonchalance about race also reflects Rhimes' career-long conviction that identity markers need not be central to character—a sensibility that separates her work from that of many millennial creators of color. Lushly produced, with swooning romance, sumptuous costumes and elaborate balls, *Bridgerton* is the kind of show that seems like it should've been a no-brainer in a post–*Downton Abbey* world but that no one thought to make before Rhimes read Quinn. Rhimes seems equally baffled. "It's very obvious to me," she says. "Then again, a show with a woman of color as leading lady is obvious to me as well. That *Grey's* had a cast that looked like the world is very obvious to me. I don't know why anybody else wasn't making them."

The appeal of *Inventing Anna,* the first show that credits Rhimes as creator since *Scandal,* also seems obvious for a storyteller who specializes in complicated women. Based on Jessica Pressler's 2018 *New York* feature, it toggles between two quintessentially New York worlds: media and high society. Anna Delvey (Julia Garner, doing the oddest vaguely European accent that has ever actually worked), a 26-year-old Russian-born scammer posing as a German heiress, faces grand-larceny charges in connection with shady fundraising for an arts center. In pursuit of Anna is Pressler surrogate Vivian Kent (Anna Chlumsky), a disgraced, pregnant journalist who's desperate to redeem herself by getting to the bottom of the Delvey deception. The project also requires some scheming on Vivian's part, because Anna isn't sure she wants to talk.

Upon reading Pressler's story, Rhimes was immediately intrigued by Delvey's chameleonic nature. "She was such a complex, interesting, unknowable person," the creator says. "If she had been a man, would she have gotten in so much trouble? Would people have even been as fascinated by her? If Anna Delvey had been what is typically called a hot chick, would people have been so outraged?"

I ASSUME THE WOMAN who created Olivia Pope is aware of one of the oldest PR tricks in the book: answer the question you wish they had asked. But Rhimes doesn't play that game. If I pose a question whose premise doesn't sit right, she tilts her head, bouncy curls spilling over one shoulder of her turtleneck—perplexed but not unkind—and takes a moment to think before explaining why.

So when I ask why she thinks her shows tend to become era-defining sensations, she demurs. "I don't make shows and wonder, Is this going to be part of the cultural zeitgeist?" she says. She's not moving on from heroes who might be read as girlbosses to messier or more lighthearted protagonists because the discourse has turned against them. But the best popular artists channel the mood of the culture intuitively, and Shondaland's first two Netflix series feel right on time—albeit in completely different ways.

Inventing Anna might oversell Delvey's Robin Hood qualities. But in its own glossy uptempo way, it is as critical of the super-rich as *Succession* or *The White Lotus*. "You understand why someone like Anna would do what she did," Rhimes says. "Because we press everyone's nose to the glass of a different kind of life, and then we tell them they can't have it." The show will emerge into a post-Trump cultural conversation where scammers occupy an almost aspirational place in pop culture; gall, guts and ingenuity—often met with grudging admiration, if not unconditional praise.

In conversation and in her work, Rhimes demonstrates an abiding aversion to hypocrisy, and so it bothers her that Delvey served almost two years while certain Presidents and Wall Street bankers walked free. "People were outraged by her arrogance, her use of social media to create a frenzy around herself—all things that we applaud in many a person right now," Rhimes says.

Meanwhile, she has put her convictions, antithetical to those of her latest protagonist, into action in the political sphere, including in a divisive 2016 election ad for Hillary Clinton that found Shondaland actors connecting their characters' strength to the nominee's. Rhimes has sat on the boards of Time's Up and Planned Parenthood. Anna Deavere Smith, who spent time with her on a planning committee for Barack Obama's presidential library, observes, "She takes the world around her seriously, even as she is doing entertainment. And it will be in American history the way that things politicians do have been in American history."

Yet Rhimes insists that her shows are not intended as political statements: "I don't like to be preached at, and I'm not interested in preaching." As important as she feels it is, particularly as *Roe v. Wade* hangs in the balance, that viewers get to see beloved women, including Olivia Pope and Cristina Yang, terminate unwanted pregnancies without shame, her loyalty as a writer is to story and character. In fact, with politics and the pandemic leading so many into despair, she has grown weary of the dark tone endemic to a certain kind of prestige drama. Hence the progression from *Scandal*'s sinister D.C. (Rhimes wrapped up that Obama-era show "when it felt like the world had caught up to the stories we were telling") to the fantasy that is *Bridgerton*, which brought comfort to the winter of a COVID-stricken world's discontent.

The show—whose second season, debuting March 25, will center on Anthony Bridgerton (Jonathan Bailey)—is slated to become a franchise as Rhimes pens a spin-off about breakout character Queen Charlotte (Golda Rosheuvel), based on a real British queen who may have had African ancestors. Other ambitious projects Shondaland and Netflix announced early in the partnership are moving forward, from the *Warmth of Other Suns* deal with Smith to an adaptation of Silicon Valley gender-equity activist Ellen Pao's memoir *Reset*.

But more of the escapism Rhimes says she craves these days could be on tap in the form of VR and video games, both of which are cited as mediums for development in her Netflix contract. These technologies simply offer more space for doing what she loves: telling stories. She is still awed every time she sees the words she types realized in physical spaces crafted by artisans and populated by actors, even now that she understands how the magic of TV is made, better than just about anyone. "She also understands what it takes to make that much television: What does that look like in PR and marketing?" says Bela Bajaria, Netflix's head of global TV. Amid all that stress, Bajaria says, "She's done a beautiful job never losing the quality of writing."

When you've been in the game as long as she has, adapting to tectonic shifts in the medium and industry she's built her career around, it has to come back to those basic building blocks. "I always used to joke, people turned 12 and discovered *Grey's Anatomy*. That's been happening for 18 years now. At this point, it's sort of generational. We're building communities, and those communities are having children, watching their shows together." At home, in the office, or wherever it is that life as we recognize it actually takes place. —*With reporting by* JULIA ZORTHIAN

> 'People were outraged by her arrogance, her use of social media, things we applaud in many a person right now.'
>
> **RHIMES, ON THE REAL-LIFE SCAMMER IN *INVENTING ANNA***

CRAIG SJODIN—DISNEY GENERAL ENTERTAINMENT CONTENT/GETTY IMAGES

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Time Off

The Year Ahead

Brilliant

Guide

ALL NEW FOR 2022

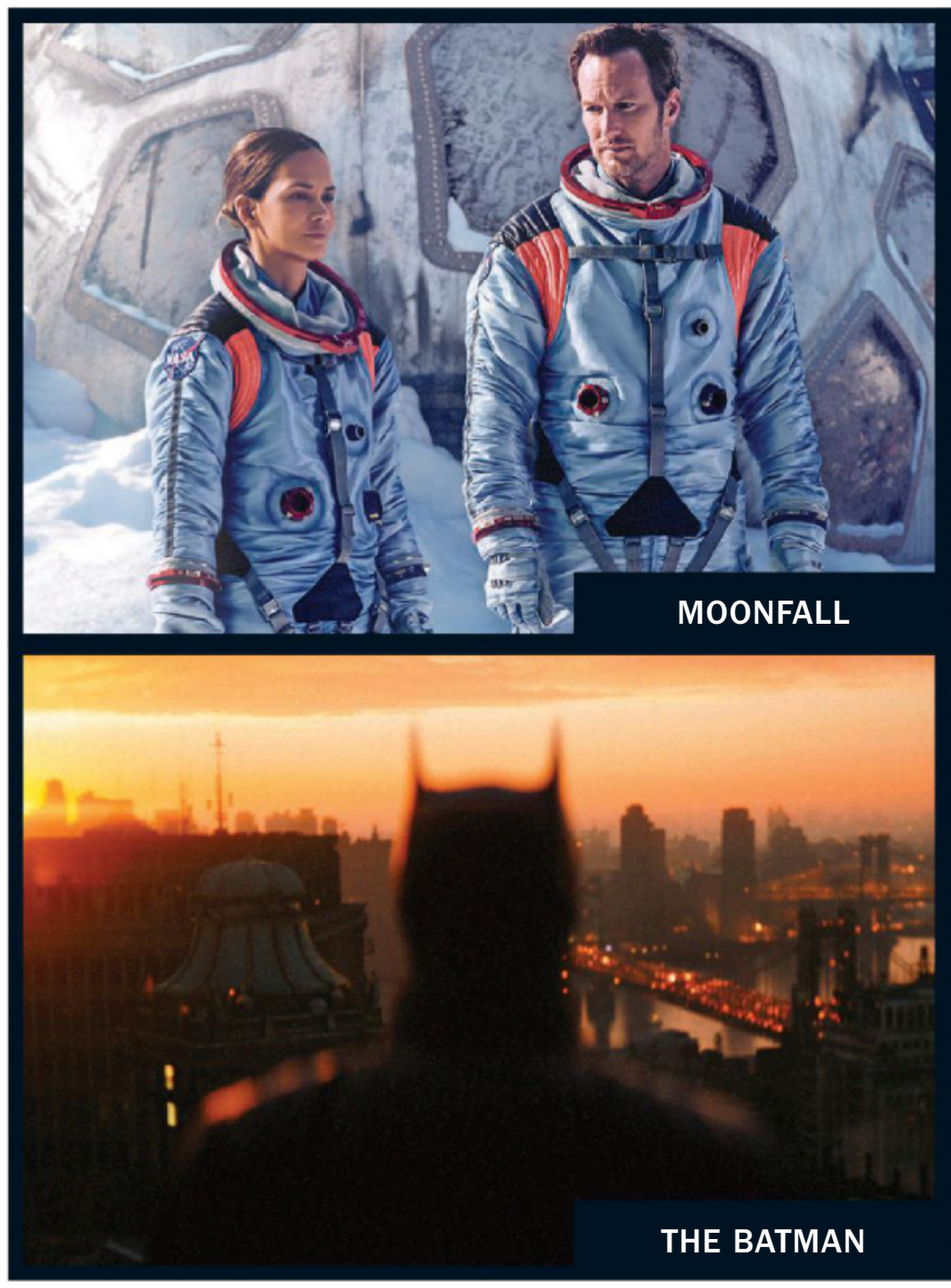
The movies, TV, books and albums that will captivate and entertain us in the year to come

INSIDE

ILLUSTRATION BY JILLIAN ADEL FOR TIME

THE MOST ANTICIPATED MOVIES OF 2022

BY SHANNON CARLIN



MOONFALL

Halle Berry stars in disaster-film auteur Roland Emmerich's latest, in which a NASA exec, an astronaut and a conspiracy theorist travel to space to stop the moon from crashing into Earth. (Feb. 4)

MARRY ME

Jennifer Lopez plays a pop star who's publicly humiliated by her famous fiancé and then decides to wed a stranger (Owen Wilson). (Feb. 11)

THE BATMAN

Robert Pattinson's Bruce Wayne faces off against Paul Dano's Riddler, whose take on the villain feels more Zodiac killer than Jim Carrey's merry prankster. (March 4)

THE LOST CITY

Sandra Bullock's reclusive romance novelist and her Fabio-esque cover model (Channing Tatum) get kidnapped by an über-rich fan (Daniel Radcliffe). (March 25)

THE NORTHMAN

Robert Eggers' follow-up to 2019's hallucinatory *The Lighthouse* is a thriller set in 10th century Iceland, starring Alexander Skarsgard as a Viking prince. (April 22)

THE UNBEARABLE WEIGHT OF MASSIVE TALENT

Nicolas Cage plays "Nic Cage," a CIA informant trying to take down a superfan (Pedro Pascal) who's also a Mexican drug lord. (April 22)

TOP GUN: MAVERICK

No longer the young hotshot 36 years after the original film, Tom Cruise's Maverick is now training the next generation of top Navy pilots. (May 27)

ELVIS

Elvis Presley gets the Baz Luhrmann treatment in this musical biopic. Austin Butler plays the King, and Tom Hanks is his manager. (June 24)

BULLET TRAIN

This adaptation of Kotaro Isaka's satirical novel follows an assassin (Brad Pitt) who finds himself on a fast-moving train with four other hit men and women. (July 15)

NOPE

Jordan Peele follows up 2019's *Us* with a new horror movie starring Keke Palmer, Daniel Kaluuya and Steven Yeun. (July 22)

WHERE THE CRAWDADS SING

This coming-of-age film about a girl in 1950s North Carolina is based on Delia Owens' popular but controversial 2018 novel. (July 22)

BLACK ADAM

Dwayne "The Rock" Johnson makes his superhero debut as the DC Comics antihero opposite Pierce Brosnan and Aldis Hodge. (July 29)

BROS

Billy on the Street's Billy Eichner writes and stars in this history-making queer romantic comedy about two gay men who kinda, sorta fall in love. (Aug. 12)

DON'T WORRY DARLING

Olivia Wilde directs Florence Pugh and Harry Styles as a 1950s couple who join a commune in the California desert. (Sept. 23)

TILL

Danielle Deadwyler portrays Emmett Till's mother, Mamie Till-Mobley, in her fight for justice after the 1955 lynching of her 14-year-old son. (Oct. 7)

TICKET TO PARADISE

George Clooney and Julia Roberts play an estranged couple trying to persuade their daughter not to marry a man she just met, hence repeating their own mistake. (Oct. 21)

BLACK PANTHER: WAKANDA FOREVER

Chadwick Boseman's legacy as Black Panther will live on in this Ryan Coogler–directed sequel starring Angela Bassett, Lupita N'yongo and many others. (Nov. 11)

SHE SAID

Carey Mulligan and Zoe Kazan play New York *Times* journalists Megan Twohey and Jodi Kantor in a drama inspired by the reporting that led to the downfall of Harvey Weinstein. (Nov. 18)

AVATAR 2

The sequel to James Cameron's love-it-or-hate-it effects-heavy blockbuster finally arrives, 13 years later. (Dec. 16)

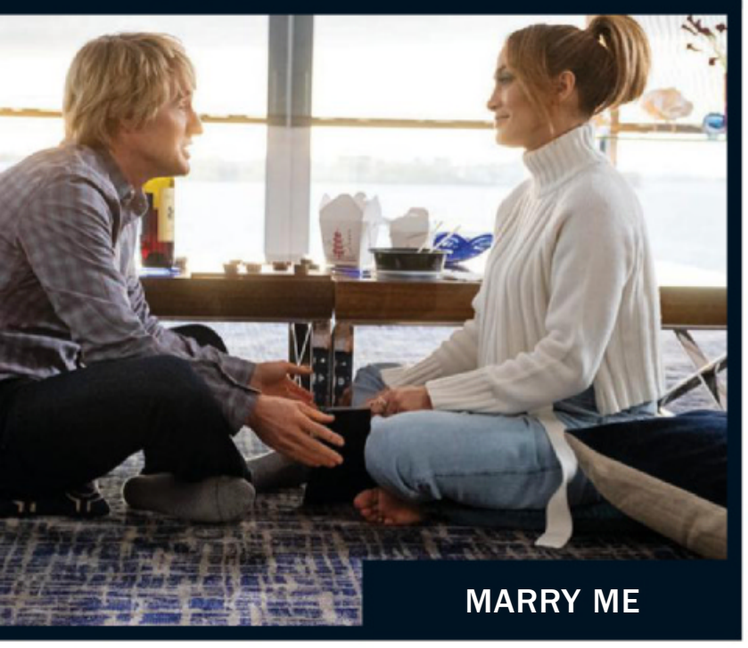
I WANNA DANCE WITH SOMEBODY

Whitney Houston gets a biopic, with Naomi Ackie as the singer and Stanley Tucci playing music executive Clive Davis. (Dec. 23)

MOONFALL: LIONSGATE; TOP GUN: PARAMOUNT PICTURES; THE BATMAN: WARNER BROS.; MARRY ME: UNIVERSAL PICTURES; ABDUL-MATEEN: BRIAN ACH—GETTY IMAGES

Time Off is reported by Nik Popli and Simmone Shah

TOP GUN: MAVERICK



MARRY ME

BABYLON

Damien Chazelle *(La La Land)* sets another movie in Tinseltown, during its transition from silent films to talkies; Brad Pitt and Margot Robbie star. (Dec. 25)

BEAUTY

Lena Waithe wrote this queer drama about a gifted young Black woman who gets a big record deal and must fight to keep her voice. (TBA)

KILLERS OF THE FLOWER MOON

Martin Scorsese reunites with Leonardo DiCaprio and Robert De Niro for an adaptation of David Grann's nonfiction book about the mysterious 1920s Osage tribe murders. (TBA)

KNIVES OUT 2

Daniel Craig and his Kentucky Fried accent are back to solve another fishy death in a star-studded sequel to Rian Johnson's 2019 murder mystery. (TBA)

Yahya Abdul-Mateen II

THE EMMY-WINNING *WATCHMEN* STAR CONTINUES HIS ASCENT IN 2022 WITH *AMBULANCE* AND *AQUAMAN 2*

You're starring in Michael Bay's newest action thriller, *Ambulance* (April 8). Are the sets of his films as big and chaotic as the movies themselves? Mike reminds me of a 15-year-old kid with an unlimited imagination and an unlimited budget. He's excited to show you his new cameras. He has a passion that I truly have not seen before. That's saying a lot, because I just came from working with Lana Wachowski on *The Matrix Resurrections.* I'm really just making my rounds with eccentric directors in Hollywood.

You play a veteran who can't afford to pay his wife's medical bills, so you and your brother (Jake Gyllenhaal) decide to rob a bank. When things go wrong, you hijack an ambulance carrying a wounded cop and an EMT. There are no superheroes. No Transformers. It feels like a throwback Michael Bay movie. That's right. I play a guy with his back up against the wall, someone who is seen as a hero but doesn't get much support. It's an exciting movie, but I think people will be surprised by the amount of heart embedded in it. That's just the type of actor I am. That's definitely the type of actor Jake is.

You play the villain Black Manta in *Aquaman and the Lost Kingdom* this December. Can you find humanity in a supervillain? Yeah, admittedly, in the first *Aquaman,* there wasn't an opportunity to show how multifaceted the character was. But now I get to explore what drives him not just as a villain, but as a human. He is someone experiencing a lot of paranoia, who is dreaming about revenge. With these big, fantastical movies, I get to take human feelings and just paint with a really large brush in really bright colors. But if there isn't something real at the root, it's just caricature.

I heard Hugh Jackman (who played Wolverine in the *X-Men* films) advised you to pick supervillain roles over superhero roles. He said the bad guys are the best because you work the least amount of days, get the best lines and win all the fights except the last one. I don't know about that, man. I think most of those were true. But I definitely worked a lot of days on *Aquaman 2.* It felt like the Black Manta movie. But I'm not complaining.

You mentioned *Matrix Resurrections* director Lana Wachowski and her eccentricities. What was the most important thing she told you about the Matrix? I brought questions to Lana at different times, but Lana was never really one to give us answers. I think that was intentional. The Matrix is very dense. You can always go deeper, explore further. The answer is never as simple as it may seem. If anything seems simple, you're probably not thinking about it in a complex enough way. To that end, I'm still thinking about the character and what I would do if I had a second crack at it. I think that's kind of cool. Most of the time I don't do that. I'm pretty good at putting things down and walking away. But the Matrix continues to grow and change as technology matures, and as a society we've changed our relationship to the virtual world. It's still perplexing. I land on clarity at different times. —*Eliana Dockterman*

THE MOST ANTICIPATED TV SHOWS OF 2022

BY ELIANA DOCKTERMAN

PEACEMAKER

The Suicide Squad director James Gunn spins off a series around John Cena's character, who straddles the hero-villain divide. (Jan. 13 on HBO Max)

AS WE SEE IT

Friday Night Lights and *Parenthood* producer Jason Katims brings a new drama to Amazon, centered on three autistic 20-something roommates navigating work and love. (Jan. 21 on Amazon)

THE GILDED AGE

Downton Abbey creator Julian Fellowes' new drama is set in 1880s New York City, where old-money families clash with newcomers amassing fortunes in railway, coal and copper. (Jan. 24 on HBO)

PAM & TOMMY

Lily James and Sebastian Stan star as Pamela Anderson and Tommy Lee, whose honeymoon sex tape became one of the first viral videos ever when released without their permission in 1995. (Feb. 2 on Hulu)

INVENTING ANNA

Shonda Rhimes' latest dramatizes the true story of Anna Delvey (Julia Garner), a con woman who sneaked her way into New York high society until two high-profile magazine features exposed her grifting. (Feb. 11 on Netflix)

PACHINKO

This multilingual adaptation of Min Jin Lee's novel is a saga of forbidden love that spans Korea, Japan and the U.S. (Spring on Apple TV+)

THE LORD OF THE RINGS SERIES

The most expensive season of television ever produced, with a budget of nearly half a billion dollars, this prequel is set in Middle-earth thousands of years before *The Hobbit* and *The Lord of the Rings.* (Sept. 2 on Amazon)

AMERICAN GIGOLO

Jon Bernthal stars in this present-day reimagining of Paul Schrader's 1980 film about the sex industry. (TBA on Showtime)

ANATOMY OF A SCANDAL

Big Little Lies' David E. Kelley adapts this 2018 book, which traces the ripple effects of a rape accusation through the British elite. Sienna Miller, Michelle Dockery and Rupert Friend star. (TBA on Netflix)

AVATAR: THE LAST AIRBENDER

A beloved animated series gets a live-action adaptation starring Daniel Dae Kim, Ken Leung and *Kim's Convenience* patriarch Paul Sun-Hyung Lee. (TBA on Netflix)

BRIDESHEAD REVISITED

Call Me by Your Name's Luca Guadagnino adapts Evelyn Waugh's novel about a British man who gets entangled in an aristocratic family's drama,

RETURNING SHOWS

AMAZON ▪ FEB. 18
The Marvelous Mrs. Maisel
Season 4

NETFLIX ▪ NOVEMBER
The Crown
Season 5

FX ▪ TBA
Atlanta
Season 3

NETFLIX ▪ MARCH 25
Bridgerton
Season 2

HBO MAX ▪ TBA
The Flight Attendant
Season 2

DISNEY+ ▪ TBA
The Mandalorian
Season 3

NETFLIX ▪ TBA
Russian Doll
Season 2

APPLE TV+ ▪ TBA
Ted Lasso
Season 3

with Andrew Garfield, Rooney Mara and Cate Blanchett. (TBA on BBC)

HOUSE OF THE DRAGON

The first *Game of Thrones* prequel is set 200 years before the events of *Thrones,* and centers on infighting within the Targaryen household. (TBA on HBO)

THE LAST OF US

The morally complex video game about a hardened survivor (Pedro Pascal) tasked with ushering a girl across the U.S. during a zombie apocalypse makes its way to TV, care of *Chernobyl* creator Craig Mazin. (TBA on HBO)

MARVEL SHOWS

The TV expansion of the Marvel Cinematic Universe continues with *Ms. Marvel, Moon Knight, She-Hulk* and *Secret Invasion,* bringing Oscar Isaac, Ethan Hawke and Tatiana Maslany into the fold. (TBA on Disney+)

THE OLD MAN

Jeff Bridges plays a retired CIA agent living off the grid when an assassin arrives to try to take him out, forcing him to revisit his past. John Lithgow co-stars. (TBA on FX)

THE STAIRCASE

A fictional version of the true-crime doc of the same name centers on Michael Peterson (Colin Firth), who was accused of murdering his wife (Toni Collette) in 2001. (TBA on HBO Max)

STAR WARS SHOWS

This year will bring the long-awaited *Obi-Wan Kenobi* series, starring Ewan McGregor, and *Rogue One* prequel *Andor* with Diego Luna. (TBA on Disney+)

THE LORD OF THE RINGS, AS WE SEE IT: AMAZON STUDIOS; THE GILDED AGE, HOUSE OF THE DRAGON: HBO; HADDISH: RICH FURY—GETTY IMAGES

Tiffany Haddish

THE COMEDIAN LEADS AN ENSEMBLE CAST IN THE APPLE TV+ MURDER-MYSTERY COMEDY *THE AFTERPARTY* (JAN. 28)

You play a detective investigating the murder of a pop star (Dave Franco) at his high school reunion afterparty. It's a whodunit but also a comedy. Was there a lot of improv? Yeah, they let me add icing on the cake. Like, I brought these cute little trinkets to the interrogations to make the suspects feel more comfortable. In one scene, Ike [Barinholtz, who plays a suspect] and I were messing around, and I was really getting mad at him for talking mess about Steve Urkel, who I had a crush on. And that's in the show.

Wait, you had a real-life crush on Steve Urkel? Girl, for years. Him and Mr. T were the only Black men I know of that had their own series.

Did you know who the murderer was from day one of shooting? No, I didn't find out until two weeks before we shot the finale. I just hadn't read the script, I think. *[Laughs.]* And I was like, "What?" 'Cause I was set on one person, but it was not that person.

You're coming off a dramatic film, *The Card Counter,* with Oscar Isaac. What made you want to return to comedy? Lord and Miller. I love Phil Lord. I love Chris Miller [who created *The Lego Movie, 21 Jump Street* and *The Afterparty*]. I want to do whatever they want to do, as long as it doesn't compromise my morals.

Where do you draw that line? Anything that I feel promotes hatred or extreme violence. I'm super against certain horror films.

There's been a debate recently about what comedians can say. How do you make that call? There's morality and ethics in comedy. I personally believe you can talk about anything, but how are you talking about it? Are you asking people to pay attention to other people's experiences? Are you promoting love? Or are you promoting hate and violence?

You won a Grammy for your comedy album *Black Mitzvah.* In it, you discuss having a bat mitzvah at 40. I think for many teenagers, the bat mitzvah is their last serious experience with the Jewish faith. What's your post–bat mitzvah experience been like as an adult? I give at least 30 minutes every single day to reading and learning. I have Shabbat dinners on Fridays. I hang out with my rabbi. I'm always asking questions. I'm getting emotional, but I think the things I've been through in life, I wouldn't have been able to get through without my loyalty to God.

I feel like I would have appreciated my bat mitzvah experience more as an adult. I wish I had done it when I was a teenager. That was a tumultuous time in my life. I was [in foster care]. I was moved around. All these adults were paid to be in my presence. Which, it's actually kind of messed up even now, as a successful adult, people are paid to be in my presence. Anyway, I wish I had a rabbi to talk to then, and a mama and daddy to make me go to Hebrew class. I remember when I was that little 12-, 13-year-old girl feeling excited to go to school because it was the only thing that was normal and the place I felt safest. I'm sorry. I feel like I'm in therapy! Anyway, I believe I'm here now to facilitate joy. —*E.D.*

THE MOST ANTICIPATED BOOKS OF 2022

BY ANGELA HAUPT, CADY LANG AND SIMMONE SHAH

OLGA DIES DREAMING

XOCHITL GONZALEZ

Prieto is a rising star in New York City politics and Olga is a wedding planner to the local elite, but their lives are turned upside down when their mother, a radical activist for Puerto Rico's independence who left them as kids, returns to Brooklyn. (Jan. 4)

FIONA AND JANE

JEAN CHEN HO

Bonded by their shared experience of coming of age in Los Angeles in immigrant families, Fiona and Jane find their friendship challenged over the years by distance, romantic relationships and betrayal. (Jan. 4)

TO PARADISE

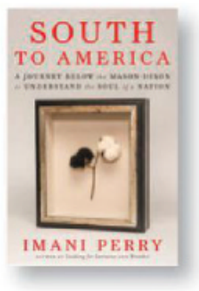
HANYA YANAGIHARA

Tracing three narratives across distinct timelines, *To Paradise* follows the lives of characters who, despite being separated by centuries, find connection through the shared space of a Manhattan townhouse. (Jan. 11)

MANIFESTO

BERNARDINE EVARISTO

Evaristo makes a dazzling nonfiction debut with her memoir, a meditation on her life as a writer, a Black woman and an activist. (Jan. 18)



SOUTH TO AMERICA

IMANI PERRY

Perry shows readers that there is no one archetype of the American South, as the Alabama native considers everything from immigrant communities to the legacy of slavery to her own ancestral roots. (Jan. 25)

MOON WITCH, SPIDER KING

MARLON JAMES

In the second installment of his *Dark Star* trilogy, James retells the thrilling, fantastical events of *Black Leopard, Red Wolf* from the perspective of 177-year-old Sogolon, the Moon Witch. (Feb. 15)

WHEN I'M GONE, LOOK FOR ME IN THE EAST

QUAN BARRY

Estranged twins in Mongolia set out to find the reincarnation of a spiritual leader. One of the brothers is a novice Buddhist monk, the other has renounced his religion, and their relationship and faith are inevitably tested during their travels. It's another metaphysical journey from the author of *We Ride Upon Sticks.* (Feb. 22)

IN THE MARGINS

ELENA FERRANTE

Though Ferrante's true identity remains unconfirmed, curious fans can at least get a candid look inside her writing process through this collection of razor-sharp essays. (March 15)

ANCESTOR TROUBLE

MAUD NEWTON

Newton has long been fascinated by her family's colorful history, but a closer look prompts her to reckon with darker secrets, like her family's role in slavery and Native genocide. (March 29)

THE TRAYVON GENERATION

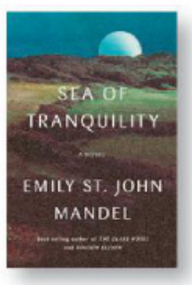
ELIZABETH ALEXANDER

Alexander examines the experiences of the generation of Black kids in the U.S. born after Trayvon Martin was killed—a generation that has grown up in the glare of racial trauma. (April 5)

THE CANDY HOUSE

JENNIFER EGAN

More than a decade after winning a Pulitzer for *A Visit From the Goon Squad,* Egan delivers an anticipated sibling novel. The book follows many of *Goon*'s characters into their futures and pasts, examining a new technology that makes individuals' memories viewable to others. (April 5)



SEA OF TRANQUILITY

EMILY ST. JOHN MANDEL

In 1912, the notes of a violin playing from an airship terminal send a shock to the system of a man in the forest. Two centuries later, a writer, far from her home on one of the moon's colonies, is traveling across earth on tour for her novel—which contains a striking passage about a man playing a violin on an airship terminal, surrounded by trees. (April 5)

YOUNG MUNGO

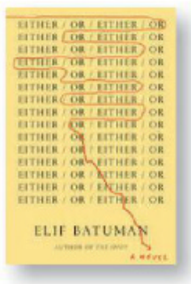
DOUGLAS STUART

Stuart's follow-up to *Shuggie Bain* centers on a first romance between Mungo and James, young men from different religious backgrounds who must hide their relationship from their community. (April 5)

TIME IS A MOTHER

OCEAN VUONG

Vuong plumbs the depths of loss in his tender and heartbreaking second volume of poetry, written after the death of his mother. He traverses the intensely personal and the broadly political with grace and courage. (April 5)



EITHER/OR

ELIF BATUMAN

Batuman's witty campus novel *The Idiot* introduced readers to Selin, a Harvard freshman, as she embarked on an intoxicating, ill-fated quest for love. Now, Selin is back for a sophomore year that's just as messy. (May 24)

RAINBOW RAINBOW

LYDIA CONKLIN

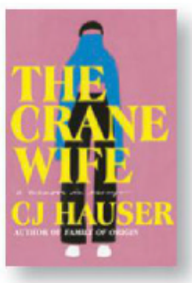
In this collection of stories, Conklin highlights queer, gender-nonconforming and trans characters as they seek some sense of connection, from a young

lesbian who tries to have a baby using an unscrupulous sperm donor to a nonbinary person who tests an open relationship during the pandemic. (May 31)

TRACY FLICK CAN'T WIN

TOM PERROTTA

Nearly 25 years after *Election*, Perrotta returns to Tracy Flick, now a high school assistant principal who is finally up for a promotion. An unwelcome trip down memory lane brings her to re-examine how sexism has continued to impact her life. (June 7)



THE CRANE WIFE

CJ HAUSER

Hauser returns to her viral essay "The Crane Wife," about a research trip that helped her understand her decision to call off her wedding, and offers 17 additional pieces about redefining love and living life outside of traditional boundaries. (July 12)

UNTITLED PRINCE HARRY MEMOIR

Few details about this book have been confirmed, but it's already buzzy. Described by Harry as "accurate and wholly truthful," it promises to cover everything from his childhood to his experiences as a father. (TBA)

UNTITLED PAUL NEWMAN MEMOIR

The late actor began recording an oral history in the 1980s, and 14 years after his death, his family has decided to turn the transcripts into a memoir about Newman's boyhood, his rise in Hollywood and his thoughts on fame and love. (TBA)

Delia Ephron

THE NOVELIST AND SCREENWRITER GETS A SECOND CHANCE WITH *LEFT ON TENTH* (APRIL 12)

Your memoir chronicles your leukemia diagnosis in 2017, five years after losing your sister Nora to the same cancer. Throughout the book, you repeat this mantra: "You are not your sister." Do you still find yourself saying that? I never said that to myself until I got sick and my doctors began to say it. They wanted me to believe that I could survive. Nora and I were so close. Being a younger sister, I tried to do everything she did when I was young. So the idea that they were saying to me, "You are not your sister" and I had to believe that, maybe, to survive, it was mind-blowing. I felt like I was betraying her. All they really meant was your disease under a microscope is different from Nora's, so you can have a different outcome, but they knew how much my mind was bound up with my sister. It was empowering and it was traumatic, both things at once.

You describe in vivid terms what it was like to fall into a deep depression after your stem-cell transplant. What was it like to revisit that dark period in your life? It's a very bleak place to be—to be intensely depressed. You can't be allowed by anyone to make decisions for yourself when you're depressed like that. My husband Peter knew he could not let me make a decision, and my doctors knew that I was not going to be in control. The most important thing is to let people who love you take care of you. I'm embarrassed to say this, but it was so joyful to write this book because I was able to take control of it. I was able to get to the other side of it.

EPHRON: MIKE COPPOLA—GETTY IMAGES

Speaking of joy, you also tell the story of falling in love with Peter after losing your first husband to cancer shortly before your diagnosis. You wrote this about the first time you spoke with Peter on the phone: "We were both 72 and age meant nothing." How did you come to realize that? Life is about being alive to things, right? With me, I didn't have a choice—I just fell in love. I must have been open to it. Some people are and some people aren't, and having had a really wonderful marriage made me more trusting. I knew what it was like to fall in love. My mind was on Peter all day—I could feel the chemistry through the bone. We were emailing a million times a day.

You might not know this, but there is a great little rom-com movie about emails. What is it about emails that can be so romantic? Oh! They're playful and very spontaneous. It's a little bit more than a text. It's something you can shape. It's not more romantic than endlessly talking at night on the phone, but there's something about that feeling: you've got mail.

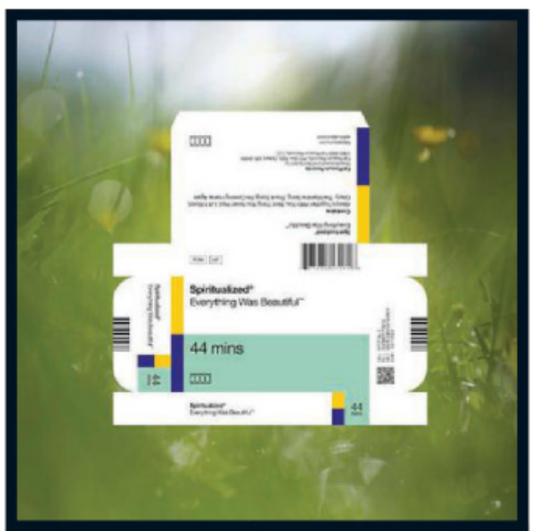
Your book beautifully blends these high, wonderful feelings with the very real darkness of loss. How has death changed your relationship with love? We were 72 when we met. It's right there—death is all around us all of the time. It's some sort of defiance of it, as well as just thinking that you want to get every single thing out of life while you can get it. Peter makes every day better. It's different to be older and fall in love—I know who I am. One of the hardest things about falling in love when you're younger is you're also trying to figure out everything else.

—Annabel Gutterman

THE MOST ANTICIPATED ALBUMS OF 2022

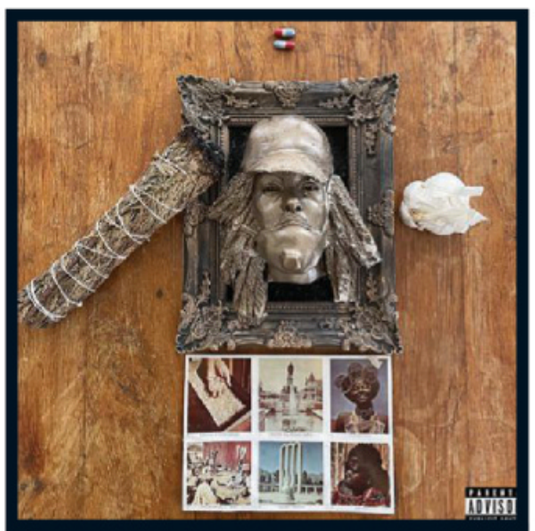
BY ANDREW R. CHOW

CAT POWER



SPIRITUALIZED

MITSKI



EARL SWEATSHIRT

DAWN FM
THE WEEKND
What comes after *After Hours*? The *Dawn,* obviously. The most recent Super Bowl performer said in October that his fifth studio album was essentially finished, and that it was inspired by artists ranging from Britney Spears to Nas. (Jan. 7)

COVERS
CAT POWER
Singer-songwriter Chan Marshall has long excelled at reinventing other people's songs. Her new record includes tracks by Frank Ocean, Iggy Pop and Billie Holiday. (Jan. 14)

SICK!
EARL SWEATSHIRT
Tyler the Creator's longtime compatriot is a hip-hop trendsetter in his own right. A brooding lyrical technician and a head-spinning sonic experimentalist, he often seems to float his words hazily over his soul samples. Sweatshirt says these songs, written during the pandemic, "are what happened when I would come up for air." (Jan. 14)

LAUREL HELL
MITSKI
After a few years out of the public eye, the indie-rock powerhouse returns with a collection of songs that, true to form, pair elegance with existential dread. "I used to think I'd be done by 20," she sings on "Working for the Knife." "Now at 29, the road ahead appears the same." (Feb. 4)

EVERYTHING WAS BEAUTIFUL
SPIRITUALIZED
The British shoegaze icons return with their ninth studio album, then tour Europe and North America. (Feb. 25)

CRASH
CHARLI XCX
The English songwriter has cycled through several musical identities over her decade-long career: mainstream hook belter, sulky pop-punk princess and now hyperpop figurehead. (Charli herself, perhaps not surprisingly, says she doesn't identify with music genres.) Her latest album features a *Who's Who* of the pop avant-garde, including Caroline Polachek, Rina Sawayama and Oneohtrix Point Never. (March 18)

FOREVER
PHIFE DAWG
Known as the Five Foot Assassin, the rapper from A Tribe Called Quest became a hip-hop legend in the '90s for his raspy flows, punchy one-liners and infectious enthusiasm. He died in 2016 from complications related to diabetes. His posthumous album will be released six years from the date of his death, and features collaborators like Busta Rhymes and Redman. (March 22)

UNTITLED
BROCKHAMPTON
The unruly, genre-bending self-described "boy band" has gained a cult following over the past few years. But their next album will be their last as a unit. "Everybody just getting a lil older and got a lot to say outside of group projects," leader Kevin Abstract explained. (TBA)

UNTITLED
CARDI B
While Cardi B constantly gets bombarded on social media with requests for a new album, the Bronx rapper is taking her time. "I think I've got like 50 songs recorded, and I'm just still not satisfied," she said last February. Since then, she's dropped verses on two hits: Normani's "Wild Side" and Lizzo's "Rumors." Don't be surprised if the album packs just as much firepower. (TBA)

UNTITLED
LIZZO
Lizzo faces a tall task in trying to replicate the Cinderella success of her last album, *Cuz I Love You:* she scored a pack-leading eight Grammy nominations in 2020, with the single "Truth Hurts" inescapable for months. While the numbers for her latest single, the bubbly "Rumors," pale in comparison with those of her prior hits, the song still has a cool 90 million Spotify streams and counting. (TBA)

MOTOMAMI
ROSALÍA
Even as Rosalía has become one of the world's biggest stars, she's kept her avant-garde impulses in both music and visual style. So don't expect her to aim for the center on her upcoming album. "I didn't begin my career by making hits," she told *Rolling Stone.* "I think I'll try to continue working like this … making music I believe in." (TBA)

WHERE WE STARTED and COUNTRY AGAIN: SIDE B
THOMAS RHETT
Last year, the Georgia-born superstar scored yet another No. 1 U.S. Country Airplay hit with "Country Again." He recently announced not one but two albums slated for 2022. (TBA)

Maggie Gyllenhaal The filmmaker on adapting Elena Ferrante's *The Lost Daughter* and realizing her power as a director

The Lost Daughter contains such emotionally complex, intricate material. Did you choose it specifically for the challenge? I chose it because Elena Ferrante spoke to me. When I first read her, I got a kind of shock. She was saying things that felt so true, things that as a culture we've agreed not to talk about. It was disturbing—and comforting. I thought it would be interesting to create a communal experience where you could actually hear these words spoken out loud.

The movie directly confronts that which is truly disgusting—like when Leda (Olivia Colman) discovers the bowl of fruit in her room is rotten. What is the appeal of exploring the gross yet unavoidable aspects of life? I'm trying to get in touch with the unconscious—the character's unconscious, the audience's unconscious. On a rudimentary level, you could say, "Oh, this looks like a bowl of fruit," and yet, look what's underneath. And, yes, that's the same thing we're saying about Leda, but it's almost a little campy. You know this story; you know something lurks beneath the surface. But what actually lurks is very difficult to articulate in words.

The movie is set on a Greek island and features an international cast. What went into the choice to film there? That was one of the first moves I made where I realized, "I am the director." The book takes place in a southern Italian beach town—it's a world I don't know. I had set it in an unnamed Eastern seaboard beach town, like lobster rolls and a boardwalk, but with a gothic feeling to it. We toured Cape May in New Jersey, but I always had this feeling that it wasn't right.

You realized you wanted to be a film director while playing one in *The Deuce*, finding that you liked collaborating with all kinds of people. What did you find was better in this experience?

I know what it feels like when the people at the helm are not interested in your mind. It's never the way the best work is made. I really enjoyed creating that space.

DAVID M. BENETT—GETTY IMAGES

Part of directing is being able to compromise, but also knowing what you can't compromise on. I said, "New Jersey is wrong artistically." Then I thought, I could do this in Greece. Olivia was already going to play Leda as British; I'm an outsider, she's an outsider. Greece has this almost idyllic vacation quality you can then toy with—this isn't a typical vacation movie, but you need that fantasy as a basis.

You have said you want to explore what "women's filmmaking" can mean. With _The Lost Daughter_, you're in part setting the definition. What do you hope it turns out to mean? When there's space for us to express ourselves freely, it's gonna look different. You see things like *Fleabag*—I didn't even know I was hungry for this. I probably saw *The Piano* when I was 16 or something; I still have in my head that image of Holly Hunter at the bottom of the sea. Why? It was speaking to something feminine in me.

Did you hope to give women an outlet for the complicated feelings that come with motherhood? What I hope to offer is if you watch this, know the feelings you're having are in the spectrum of normal: ambivalence, deep frustration, terror, even, along with the intensity of love and need and the ecstacy that comes along with mothering. Leda's feelings about everything, not just mothering, are about everything that goes into being a human being. Despite making choices that are really painful and have huge consequences for herself and her family, she is brave enough to look at them. Going back into that painful stuff is ultimately where life is. —MAHITA GAJANAN

NERVIVE

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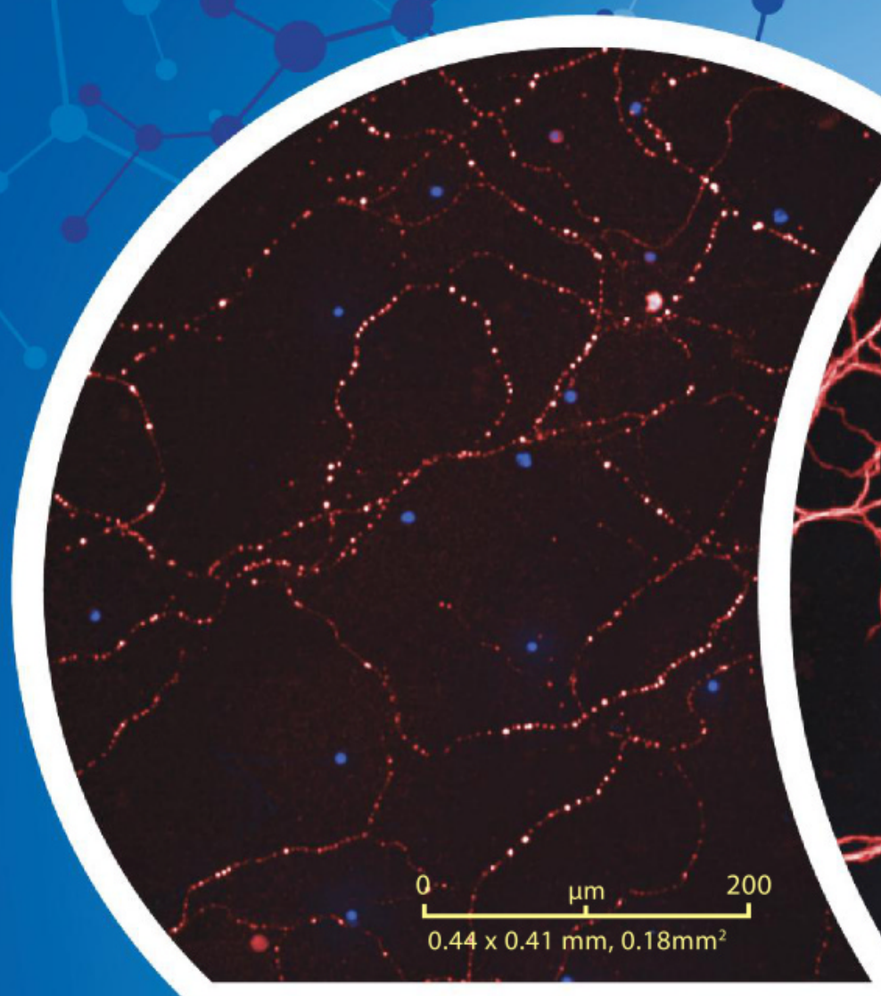
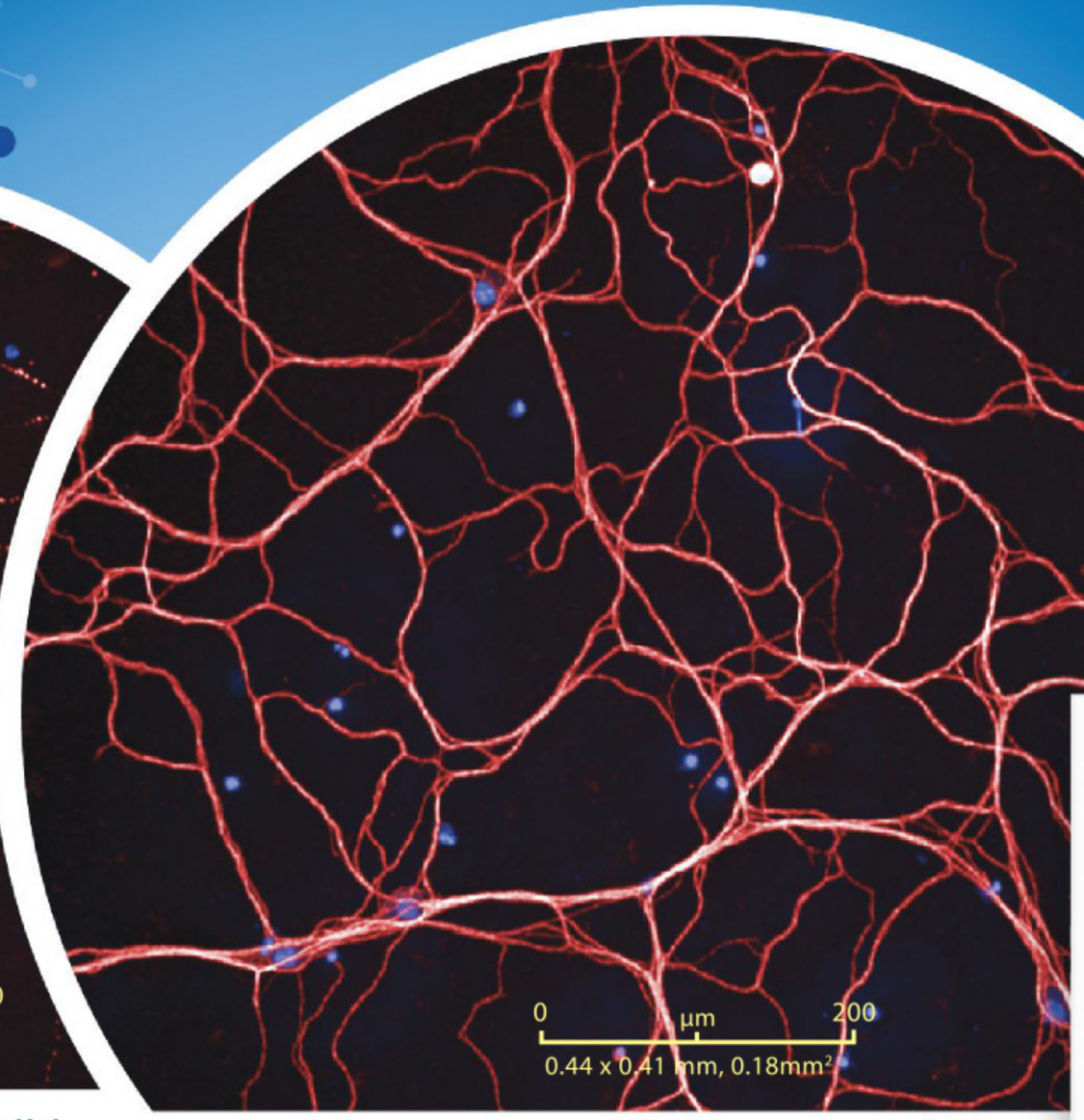


BEFORE: HEALTHY NERVES



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