DOUBLE ISSUE

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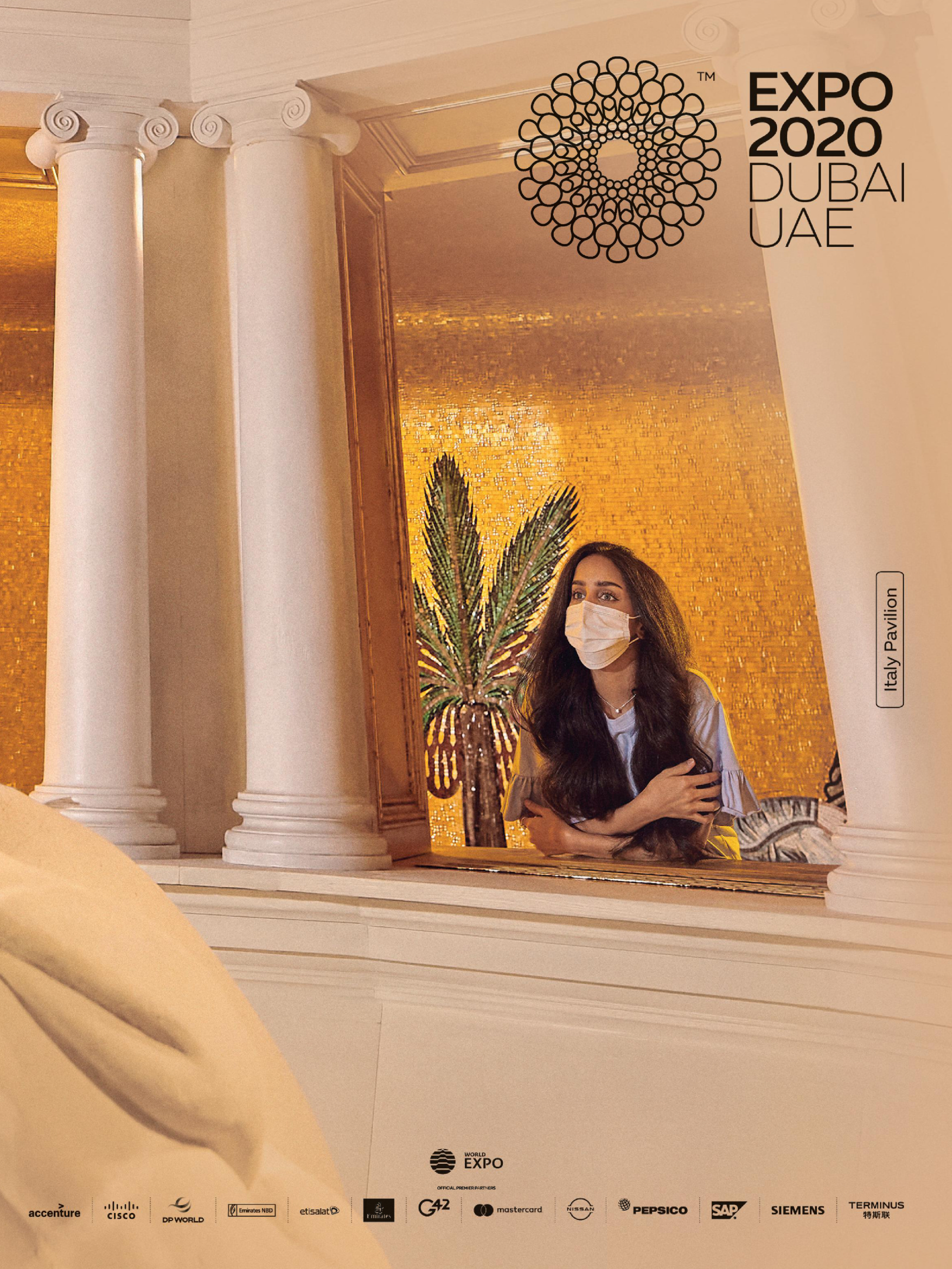
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Construction for the Olympics continues in the Yanqing district of Beijing on Jan. 12

Photograph by Noel Celis—AFP/Getty Images

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State of the world

LAST OCTOBER, *TIME*'S SIMON SHUSTER reached out to Russian opposition leader Alexei Navalny with an interview request. It had been 10 months since Navalny's voluntary return to Russia and imprisonment, and more than a year since he had been nearly killed by a chemical weapon. Simon has interviewed Navalny a half dozen times since he first emerged as a political force a decade ago, and the response suggested Putin's public enemy No. 1 was happy to hear from him.

In the town of Pokrov, where Navalny's prison is located, "there is probably just one subscriber to TIME magazine," he wrote back to Simon. "And that's me." His lawyers had just brought him a recent issue that morning, which included an article Simon wrote about a Holocaust memorial in Ukraine. "I read it and thought: let's do the interview," Navalny said, drawing a little smiley face.

With that, the two started a correspondence that lasted well into January. The result is the powerful and moving profile of Navalny in this issue, a portrait of his life and of the political organization he continues to operate, improbably, from his barrack. Navalny's last letter arrived in mid-January, and its tone was a lot darker than the other letters had been. Navalny had been watching the U.S. negotiate with Russia about NATO and Ukraine, and it pained him to see the Americans get played, he said, "just like a frightened schoolboy who's been bullied by an upperclassman."

No journalist knows this terrain better than Simon, whose family immigrated to the U.S. from Russia in 1989 and who has covered the region insightfully and courageously for us for over a decade. In exile, Navalny "would be just another gadfly, too easy for Putin to ignore," Simon writes. "In prison he is a reminder of what Russia has become, and a symbol of the freedoms that it lost."

From top: A letter from Navalny; Shuster at a press conference in Moscow in 2015

IN EARLY DECEMBER, I caught up with Klaus Schwab, chairman of the World Economic Forum. It was his first visit to New York since the pandemic began, and though we covered a wide range of topics, the theme we kept coming back to is one that has been pervasive for all of us across the past two years: the importance of physical connection. "To really establish trust in human relationships," he said, "you need personal contact. You need to have some moments on the side of the video screen."

With the Omicron variant on the march, the seemingly endless physical-virtual conundrum we find ourselves in continues. And yet collaboration is more crucial than ever to tackling our many problems.

That theme runs through the special section in this issue, created with the forum and with the support of our partners at SOMPO. Leaders in the worlds of policy, business, arts and advocacy share their most powerful partnerships—from former U.N. climate chief Christiana Figueres, who writes about a covert effort that helped pave the way for the 2015 Paris Agreement, to actor and activist Don Cheadle, who describes how one strand of his personal activism came about on the sets of the *Avengers* movies. Former PepsiCo CEO Indra Nooyi makes the case that collaboration is key for creating a much needed new balance of work and life, and Yuval Noah Harari, best-selling author of *Sapiens,* asks the world to invest together in mitigating climate disaster. TIME's Billy Perrigo profiles Timnit Gebru, one of the world's leading thinkers on artificial intelligence, and veteran TIME contributor Vivienne Walt has a remarkable interview with former Danone CEO Emmanuel Faber. He talks openly—rare for a CEO—about being fired, and stands by the purpose-driven focus of his tenure even as some say it cost him his job. "In no way should that discourage progressive CEOs," he says. "They have, ultimately, the backing of large shareholders."

And soon, the beginning of the Olympic Games in Beijing will put to the test our capacity in this moment to gather from all corners of the earth. As part of our coverage of the lead-up to the games, TIME's Sean Gregory profiled champion snowboarder Chloe Kim. After a rocky period following her dominance at the last Winter Olympics, she told Sean, she found greater peace with herself—and saw how that sense of self was what she needed to bring to Beijing. Perhaps that message is what we all need to remember when we're finally able to come together again.

Edward Felsenthal,
EDITOR-IN-CHIEF & CEO
@EFELSENTHAL

COURTESY SIMON SHUSTER (2)

Transforming Capitalism for Sustainability

As well as profits, measuring a company's value must include its worth to society

The world continues to battle a global pandemic, but I am confident that with our determination and capacity for innovation, we will ultimately prevail. What COVID-19 has made clear, however, is that we cannot build a sustainable future unless we resolve global challenges: inequality, human rights, and climate change. Many have come to realize that the current form of capitalism is at the heart of these challenges. While a global discussion on redesigning capitalism has begun, a new and more suitable model has yet to be found.

One of the critical points that a new model of capitalism should be able to address is how to measure the value of a company. For a sustainable future, we need to make the most of companies' innovations and growth potential. Traditionally, the value of a company has been judged primarily by its market capitalization: the profit generated is the basis of the valuation. Companies must indeed achieve profits to ensure their own sustainability. Still, companies exist to provide social value, such as by creating and delivering products or services people need or desire. In doing so, they contribute to improving people's lives, increasing people's happiness, and solving social issues. If companies optimize only their shareholders' value and not the value of their multi-stakeholders, society cannot be sustainable.

Last year, the sum of the market capitalization of the five U.S. tech giants exceeded that of all the 2,170 companies on the First Section of the Tokyo Stock Exchange combined. However, I do not believe that those five companies provide more value to society than the 2,170. For example, SOMPO's nursing care business serves 80,000 senior citizens. If our nursing care business, which replaces part of the public health care system, generates no profit, can it be said that this business has no value? Determining the value of a company should include a metric of the worth it provides to society, not just its financial profit.

Determining the value of a company should include a metric of the worth it provides to society, not just its financial profit.

To develop a new measure of corporate value, companies, governments, and citizens need to collaborate to set shared goals for the common good of society. How can we optimize people's happiness, and how do we balance it across various measures, such as money and quality of life? Multi-stakeholders should discuss and decide this together.

Then, each of us must play a role in realizing our agreed-upon goals. Businesses must return to what is truly important. Companies need to achieve organizational ambidexterity; committing to creating social value in the long term based on their purpose while generating profits in the short term.

I recently wrote a book entitled "Bushido Capitalism." It draws on the moral code of Japan's Samurai. I believe the "Bushido" framework could help us think about the future of capitalism and that critical point – a new measure of corporate value. Bushido is based on the belief that a person cannot live without society. It prioritizes the common good over personal interests. It emphasizes a balance between self-interest and altruism, total optimization and harmony. Bushido is not a religion or an abstract philosophy, but practical wisdom for the sustainability of society and a code of conduct for people and companies that should be truly respected. Bushido leads to the "Golden Mean," which emphasizes a balanced middle path between extremes, and "Sanpo-yoshi," which translates as three-way satisfaction through business transaction: good for the seller, good for the buyer and good for society. The focus is on multi-stakeholders.

The theme for the World Economic Forum in 2022 is "working together, restoring trust." I believe the Bushido framework can serve as a compass to guide world leaders to work together based on trust and tackle global challenges.

KENGO SAKURADA
Group CEO
Sompo Holdings, Inc.

What you said about ...

TV'S GREATEST Fans of the showrunner Shonda Rhimes raved about finding her on the cover of the Jan. 17/Jan. 24 issue and the accompanying profile by TIME's TV critic Judy Berman. "An incredible creative mind, storyteller and leader to look up to," tweeted Allie O'Connell of Rhimes; Tarika Barrett applauded Rhimes' "honesty" and wisdom in the piece, also labeling her an "incredible leader and role model." "How is it possible to have so much brilliance in one person?" wrote Joanna Green on Facebook.

Many readers took the opportunity to share what Rhimes and her shows mean to them. "Thank you for the characters we all love, hate, want to love or be like," Deborah Phillips Carroll wrote on Facebook. "If I need an inspiration or a way to articulate a feeling, I do one of three things," tweeted Janie Octia. "Watch a favorite *Grey's Anatomy* episode, listen to a speech or a podcast with Shonda Rhimes or read a profile about her." Judy Smith, the public relations mogul and crisis manager who inspired Rhimes' show *Scandal,* shared Berman's profile, tweeting, "Love seeing Shonda Rhimes honored for the amazing shows she has brought to TV and honored to have been a part of *Scandal* with her."

TIME Studios at Sundance

Three documentaries produced by TIME Studios are screening during the 2022 Sundance Film Festival: *The Territory,* above, profiles Brazil's Indigenous Uru-eu-wau-wau people amid their fight to protect their rain-forest territory; *Tantura* addresses an alleged massacre—and cover-up—in the Palestinian town of the same name in 1948 during the war that established Israel; and "Vision," Part 1 of *jeen-yuhs: A Kanye Trilogy,* a feature on the oft-controversial rapper Kanye West.

TIME100 Talks

Complementing the World Economic Forum features in this issue (starting **page 57**), TIME on Jan. 14 hosted a TIME100 Talks broadcast featuring Mads Nipper, CEO of sustainable energy company Ørsted, and environmental activist Brianna Fruean discussing the power of collaboration and how to build a more sustainable future. Watch their conversation in full at **time.com/ time-100-talks**

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THE TERRITORY: ALEX PRITZ

AMERICAN CRUISE LINES

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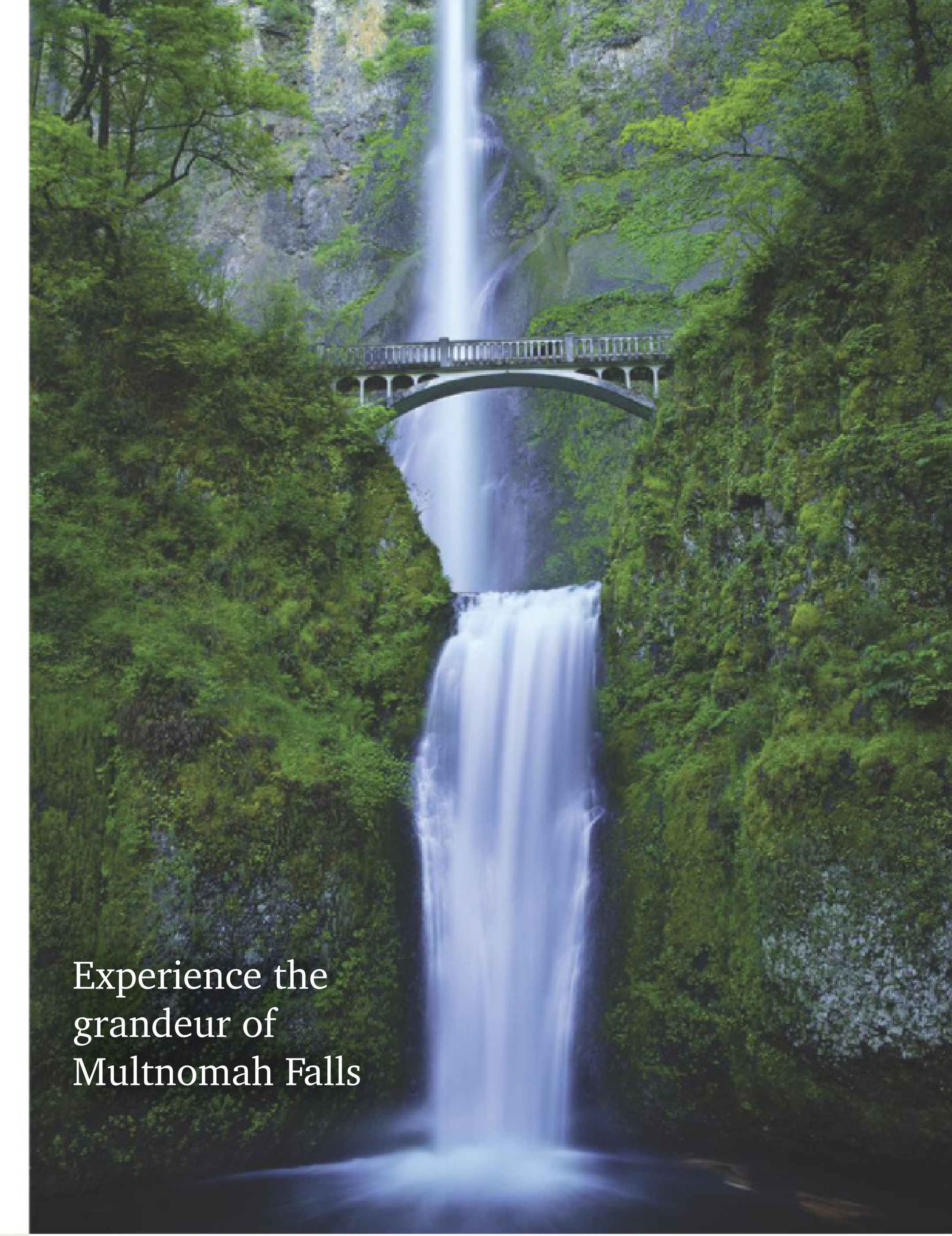
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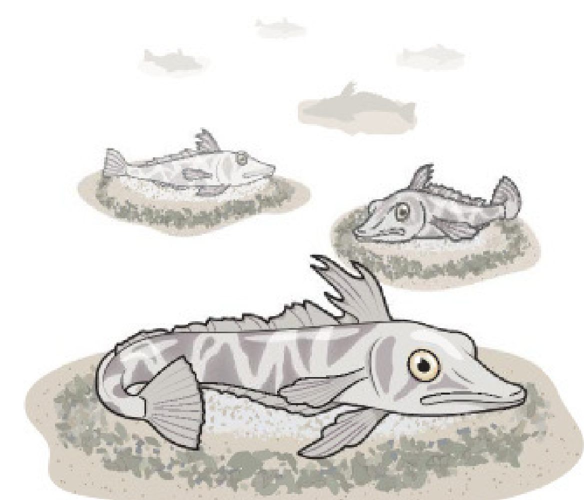
'KEEP YOUR HAMSTERS AT HOME. DO NOT TAKE THEM OUT.'

LEUNG SIU-FAI, director of Hong Kong's Agriculture, Fisheries and Conservation Department, confirming on Jan. 18 that authorities will kill some 2,000 of the rodents and other small animals after around a dozen hamsters tested positive for the COVID-19 virus in a pet store where an employee was also infected



60 MILLION

Number of icefish discovered in 2021 in a breeding colony—believed to be the world's largest—in Antarctica's Weddell Sea, per a scientific paper published on Jan. 13

'We have all felt the squeeze and changes of these transformational times.'

JASON MOMOA AND LISA BONET, in a joint statement released on Jan. 12 confirming their plans to end their marriage

'I told them to go. I threw a chair at the gunman. And I headed for the door.'

RABBI CHARLIE CYTRON-WALKER, describing the Jan. 15 hijacking of his Colleyville, Texas, synagogue by a 44-year-old British man in a Jan. 17 interview

$1.7 BILLION

Amount of student-loan debt to be canceled by the loan-collecting company Navient, as part of a settlement announced Jan. 13

$3.36 MILLION

Sale price for a single page of artwork from a 1984 *Spider-Man* comic at a Jan. 13 auction

'Every partisan action taken to protect a cherished value has led us to more division, not less.'

SENATOR KYRSTEN SINEMA (D., Ariz.), in a Jan. 13 speech reconfirming her opposition to filibuster reform, seemingly dooming President Biden's hopes for voting-rights legislation

'The West's boycott is futile and pointless. China does not care about it at all.'

AI WEIWEI, exiled Chinese artist and activist, on not sending diplomats to the Beijing Olympics, to the Associated Press on Jan. 18

ILLUSTRATIONS BY BROWN BIRD DESIGN FOR TIME

SOURCES: AP; THE NEW YORK TIMES; NPR; CBS NEWS; THE GUARDIAN

The Brief

A FOSSIL-FUEL FUTURE

BY CIARA NUGENT

With a focus on "less bad" energy sources, are E.U. leaders gaslighting themselves?

INSIDE

AUSTRALIAN OPEN CLOSES DOOR ON NOVAK DJOKOVIC

DIANE WARREN REMEMBERS THE RONETTES' RONNIE SPECTOR

BRITAIN'S PRIME MINISTER UNDER FIRE FOR PANDEMIC PARTIES

PHOTOGRAPH BY SEAN GALLUP

CAN NATURAL GAS—A FOSSIL FUEL THAT EMITS 50% less carbon dioxide than coal, but still contributes to global warming—help us achieve a transition to green energy? The question has long divided policymakers, but the debate is now coming to a head in Europe.

After years of delays, the E.U. wants to finalize its green "taxonomy"—an official list of investments the bloc classifies as sustainable for the planet—by the end of January. The taxonomy aims to help Europe's private sector, which is trying to overhaul spending to meet recent environmental pledges, move its money to the right places. A draft version, sent to member states on Dec. 31, says natural-gas projects should count as green under certain conditions; natural gas is labeled as a "transitional fuel," and investments in it will count as green if power plants produce emissions below 270 g of CO_2 equivalent per kilowatt-hour. Any new natural-gas project must also replace a more polluting fossil-fuel plant, receive a construction permit by Dec. 31, 2030, and be equipped to transition to lower-carbon gas by 2035.

The technical document has become a political battleground for warring visions over the future, as the E.U. aims to cut its greenhouse-gas emissions by 55% by 2030 to stay on track to avoid the worst of climate change. And it has divided the E.U.'s two largest economies: Germany's government has said the draft taxonomy amounts to "greenwashing," while France has backed it, largely because it includes nuclear energy, the country's main energy source. (The taxonomy's inclusion of nuclear power, which does not emit greenhouse gases but carries other environmental risks, as a green investment has also proved controversial.)

ON ONE SIDE, countries including Italy and many Central and Eastern European nations argue that Europe needs to invest more in natural gas, which currently provides 22% of the bloc's energy, as a "bridge fuel" and complement to renewable-energy sources like solar and wind power.

Classifying some natural gas as green is a pragmatic decision to help member states shift off even dirtier coal and oil more quickly, according to Christian Ehler, a German member of the European Parliament (MEP) from the center-right European People's Party. "Poland is not jumping from coal to wind—there will be a step in between. So politically there needs to be a compromise," he says. "This politics of symbolism has to come to an end if you really want to reach those [emissions] goals."

The other side—including Austria, Denmark, Spain, Ireland and Green Party lawmakers across the bloc—rejects that idea, and says that the E.U. needs to push all possible investment toward renewables, which make up only around 16% of Europe's energy supply.

"This transitional mentality arguing in favor of 'less bad' energy sources could have worked a couple of decades ago," says Jakop Dalunde, a Green MEP from Sweden. "But today, in a climate emergency, we have to have full focus on energy sources that are truly sustainable."

Granting natural gas a "green stamp" will unnecessarily encourage more fossil-fuel infrastructure, Dalunde argues, and could divert funding from clean energy—a problem, given renewables capacity needs to expand by 12% every year to stay on track for net zero at 2050, per the International Energy Agency, a Paris-based intergovernmental organization.

'In a climate emergency, we have to have full focus on energy sources that are truly sustainable.'

—JAKOP DALUNDE, MEMBER OF THE EUROPEAN PARLIAMENT

And although the taxonomy includes fairly stringent conditions for natural-gas projects to be classed as green, campaigners are concerned that it will be difficult to hold projects accountable for meeting them, says Tsvetelina Kuzmanova, a sustainable-finance-policy adviser at European climate think tank E3G. She also argues that any expansion of natural gas will threaten the E.U.'s 2030 goal to reduce methane emissions by 30%. The main component of natural gas, methane is a potent greenhouse gas with more than 80 times the near-term warming power of CO_2. Leaks from natural-gas infrastructure are a major source of methane emissions.

MANY OBSERVERS WORRY about the signal that the move sends to the rest of the world, which looks to the E.U. as a leader in climate policy. Analysts say policymakers in South Korea followed the E.U.'s discussion closely when drafting their own sustainable-energy taxonomy, which also classifies natural gas as a transitional fuel.

On Jan. 12, a coalition of investors including most of the world's largest asset managers sent an open letter to E.U. representatives urging them not to classify natural gas as green. Such a move, they wrote, "would seriously compromise Europe's status as a global leader in sustainable finance, potentially triggering a 'race to the bottom' that could dilute the level of climate ambition" in other regions. "As a bloc, we are losing a lot of the legitimacy we need to convince others to shift their policies in order to achieve climate sustainability," says Mounir Satouri, a Green MEP from France. "This is a huge mistake." □

The Brief is reported by Eloise Barry, Madeleine Carlisle, Tara Law, Sanya Mansoor, Ciara Nugent, Billy Perrigo and Olivia B. Waxman

NEWS TICKER

Parole hearing for Norway mass shooter

Anders Breivik, who in 2011 murdered 77 people in a bombing in Oslo and a mass shooting at a summer camp on the island of Utoya, **asked to be released at a Jan. 18 hearing.** Experts say Breivik's parole is unlikely; during the hearing, he claimed to have renounced violence, but gave a Nazi salute upon arriving in court.

NYC museum loses Roosevelt statue

On Jan. 19, the American Museum of Natural History in New York City began **removing its statue of U.S. President Teddy Roosevelt,** which depicted him on horseback flanked by African and Native American men. The removal was greenlighted last year amid protests labeling the tableau racist and colonialist.

Births fall to precipitous low in China

Chinese authorities on Jan. 17 announced that birth rates in the country **declined for the fifth straight year in 2021.** Although China has taken steps to boost births, including relaxing its one-child policy, experts warn of a demographic crisis that could threaten economic growth and political stability.

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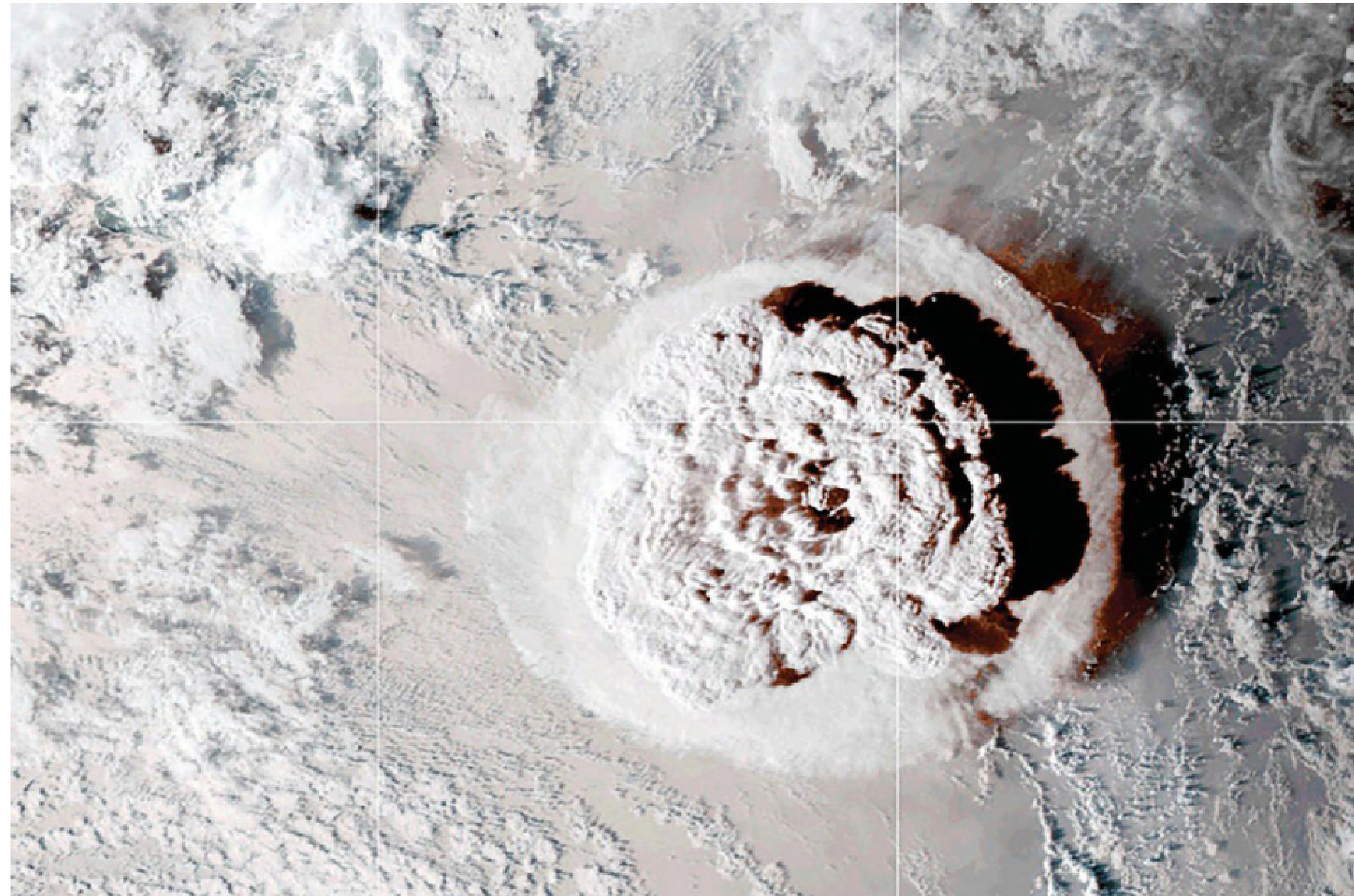

A seismic shock

A photograph taken by the NOAA GOES-West satellite on Jan. 15 and obtained via NASA shows a huge eruption from the Hunga Tonga-Hunga Ha'apai volcano in the South Pacific Ocean, just 40 miles from the island nation of Tonga. In a Jan. 18 statement, Tonga's government called the eruption, which unleashed clouds of ash and tsunami waves reportedly as high as 15 m, an "unprecedented disaster." —*Madeleine Carlisle*

THE BULLETIN

Prince Andrew's royal mess forces the Palace's hand

QUEEN ELIZABETH'S SECOND SON WAS barely mentioned during the December trial of Ghislaine Maxwell on charges of sex trafficking minors, which ended with a guilty verdict Dec. 29. But Prince Andrew, a former friend of late sex offender Jeffrey Epstein, faces a reckoning of his own in a civil case brought against him by Virginia Giuffre, Epstein's most outspoken accuser. Giuffre alleges Epstein and his then girlfriend Maxwell groomed, abused and forced her to have sex with powerful men. Andrew, she alleges, was one of them.

CIVIL CASE Giuffre, 38, is suing Andrew under a New York State law that allows victims of childhood sexual abuse to seek justice outside the standard statute of limitations. Andrew has repeatedly denied Giuffre's allegations, and claimed in a 2019 interview with the BBC that he had "no recollection" of meeting her. His lawyers made several attempts to have the case thrown out before a Manhattan judge ruled on Jan. 12 that it could proceed to trial.

IN DISGRACE Following the judge's decision, Buckingham Palace released a statement on Jan. 13 saying the Queen had stripped her son of his military titles and his honorary patronages—Andrew will no longer be referred to as His Royal Highness. Implying a more permanent separation, the Palace added that Andrew (who stepped back from public-facing duties in 2019, when the scandal first hit) would be "defending this case as a private citizen."

NEXT STEPS Andrew could seek to settle out of court with Giuffre. This would not necessarily make him liable, but might cost him a hefty sum. If the case does go to court, he could face further embarrassment, as Giuffre and other victims of Epstein might be called to testify. The case now moves to discovery, which usually involves sworn interviews. However it proceeds, it has already thrown a shadow over the Queen's platinum jubilee—her 70-year anniversary on the British throne.

—ELOISE BARRY

GOOD QUESTION

Why aren't American children learning about the Reconstruction era?

RECONSTRUCTION, THE PERIOD OF political and social progress in the 12 years after the American Civil War, can help put into context many of the country's most seminal recent events, from the Jan. 6 insurrection at the U.S. Capitol to the police killing of George Floyd. But despite the era's timeliness, many students in public schools will not get a full education on Reconstruction until they get to college.

Whether a topic appears in state standards determines how much it's taught in K-12 schools. And in social-studies standards for 45 out of 50 states and the District of Columbia, discussion of Reconstruction is "partial" or "nonexistent," according to a new report produced by the education nonprofit Zinn Education Project. The report's authors say they are concerned that American children will grow up uninformed about a critical period of history—one that helps explain why full racial equality remains unfulfilled today.

While many states expected students to know why Reconstruction failed, the report found less of a focus on the era's successes, which included work toward full citizenship for Black Americans. The researchers also found that standards tended to focus on events at the federal level, at the expense of highlighting stories of Black Americans' resilience, such as the building of mutual-aid organizations and church communities.

In interviews, educators said they had barely learned about the period themselves and would need more professional development to feel comfortable with the material. Many were also concerned that the recent spate of state laws prohibiting the teaching of "divisive concepts" would limit instruction on the history of racism in America.

Jesse Hagopian, a high school teacher and Zinn Education Project staffer who helped develop the report, says the teaching of Black progress during Reconstruction is key to imagining a more equitable future. "If children don't grow up learning the incredible strides forward that were made in that time period, then it's hard to imagine freedom today," Hagopian says. "That's what I think we lose when we don't teach it properly." —OLIVIA B. WAXMAN

WORLD

Grand Slam shutdown for Novak Djokovic

The Australian Open began Jan. 17 without Novak Djokovic. But the pre-tournament back-and-forth over whether the world men's No. 1 would be allowed into Australia amid COVID-19 travel restrictions played out like a marathon match.
—Amy Gunia

Dec. 16, 2021
Djokovic tests positive for COVID-19—which he later says allows him to enter Australia without vaccination

Jan. 4, 2022
Djokovic says he's received a travel visa with vaccine "exemption permission"

Jan. 5
In Melbourne, border agents question the validity of Djokovic's visa application and detain him

Jan. 10
Citing a legal technicality, a judge rules Djokovic should be released and allowed to enter the country

Jan. 14
Australia's Immigration Minister cancels Djokovic's visa

Jan. 16
Djokovic is deported after an appeals court upholds the government's decision

May 2022
His participation in the French Open is now unclear; France said Jan. 17 that vaccination will likely be compulsory for players

June 2022
But Wimbledon may still be in the cards: current U.K. rules rely on negative tests and/or quarantine periods

NEWS TICKER

Militia leader arrested over Jan. 6 riots

The FBI on Jan. 13 arrested Stewart Rhodes, **founder of the far-right group Oath Keepers,** along with 10 other people, charging them with seditious conspiracy for allegedly plotting to attack the U.S. Capitol following President Joe Biden's election, and impede the certification of electoral votes.

First same-sex couple adopt in Taiwan

Two married men became the **first same-sex couple in Taiwan to legally adopt a child** neither is related to on Jan. 13. Taiwan legalized same-sex marriage in 2019, but LGBT couples were prevented from applying for adoption rights together until a Dec. 25 court ruling that activists hope will spur broader change.

U.S. rolls out free COVID-19 tests, masks

Amid a huge surge in COVID-19 cases, Americans can, as of Jan. 18, **request free at-home rapid tests online—four per household;** 400 million N95 masks will also be made available. The Biden Administration offered the mass distribution as the U.S. Supreme Court on Jan. 13 rejected a vaccine mandate for large employers.

JAMES ROSS—EPA-EFE/SHUTTERSTOCK

Blackmagicdesign

Introducing ATEM Mini Pro

The compact television studio that lets you create presentation videos and live streams!

Blackmagic Design is a leader in video for the television industry, and now you can create your own streaming videos with ATEM Mini. Simply connect HDMI cameras, computers or even microphones. Then push the buttons on the panel to switch video sources just like a professional broadcaster! You can even add titles, picture in picture overlays and mix audio! Then live stream to Zoom, Skype or YouTube!

Create Training and Educational Videos

ATEM Mini's includes everything you need. All the buttons are positioned on the front panel so it's very easy to learn. There are 4 HDMI video inputs for connecting cameras and computers, plus a USB output that looks like a webcam so you can connect to Zoom or Skype. ATEM Software Control for Mac and PC is also included, which allows access to more advanced "broadcast" features!

Use Professional Video Effects

ATEM Mini is really a professional broadcast switcher used by television stations. This means it has professional effects such as a DVE for picture in picture effects commonly used for commentating over a computer slide show. There are titles for presenter names, wipe effects for transitioning between sources and a green screen keyer for replacing backgrounds with graphics.

Live Stream Training and Conferences

The ATEM Mini Pro model has a built in hardware streaming engine for live streaming via its ethernet connection. This means you can live stream to YouTube, Facebook and Teams in much better quality and with perfectly smooth motion. You can even connect a hard disk or flash storage to the USB connection and record your stream for upload later!

Monitor all Video Inputs!

With so many cameras, computers and effects, things can get busy fast! The ATEM Mini Pro model features a "multiview" that lets you see all cameras, titles and program, plus streaming and recording status all on a single TV or monitor. There are even tally indicators to show when a camera is on air! Only ATEM Mini is a true professional television studio in a small compact design!

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TECHNOLOGY

The best gadgets from CES 2022

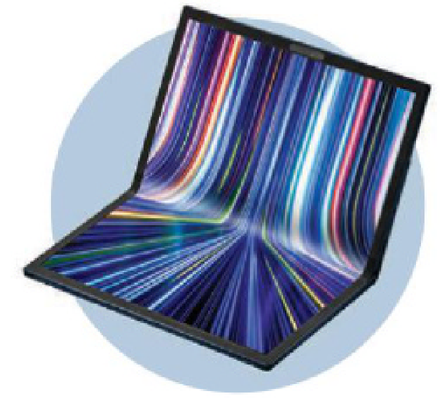
AMID THE CONTINUING COVID-19 PANDEMIC, TECH SHOWCASE CES HAD to reinvent itself a little this year, running a hybrid calendar of in-person events in Las Vegas alongside virtual presentations from big names like Microsoft and Google. The innovations on display included color-changing cars, transparent TVs, and PCs optimized for our virtual future. Here are some of the most exciting products. —PATRICK LUCAS AUSTIN

BMW iX Flow
With a trick worthy of a sci-fi movie, BMW's new electric iX Flow SUV uses e-ink technology to transform its color scheme from black to white and anywhere in between. It can also showcase complex patterns and designs, and can potentially keep cars cool on hot days by reflecting light.

Anker Nebula Cosmos Laser 4K Projector
Anker's newest projector is here to make sure you never go to a theater again. The Nebula Cosmos Laser 4K features 2,400 lumens of brightness and built-in 30-watt speakers, so any night—or every night—can be movie night at home. Now, about the popcorn ...

TP-Link AXE200 Omni
Whether a convenient excuse or an unfortunate reality, dropped calls and wi-fi dead zones at home may have met their match in TP-Link's new AXE200 router. Looking like a gadget from a Christopher Nolan film, its four antennas move based on whichever position offers the best signal.

Nvidia RTX 3050
From the chipmaker whose cards power everything from gaming consoles to self-driving cars, Nvidia's RTX 3050 is the next iteration of its consumer-friendly graphics cards. At a relatively affordable $249, the cards make cutting-edge graphics technology like ray tracing more accessible.



Asus Zenbook17 Fold OLED
Is it a tablet? A laptop? A big folding Netflix screen? No matter how you slice (or bend) it, the Zenbook 17 Fold OLED is raising the bar. Its 17.3-in. display is all OLED, granting vivid colors. With its portable keyboard and huge screen, it's the perfect portable productivity tool.

Sony PlayStation VR2
Sony's new PlayStation VR2 headset and Sense controller take advantage of the PS5's processing power to provide a high-resolution experience. The headset is full of high-end features, like a 4K OLED HDR display for improved realism; the controllers, meanwhile, offer more tracking fidelity.

HEALTH

At CES, companies reimagined telehealth

TELEHEALTH HAS MADE ACCESSING health care easier and more convenient, especially for patients with mobility issues and other obstacles. But some types of care and monitoring are difficult to do remotely. Health care companies at the 2022 CES tech convention tried to bridge that gap, all while gathering new sources of patient health information and potentially improving care.

Patients using Abbott's NeuroSphere Virtual Clinic app, for instance, can access complex treatments remotely. While a patient sits in their living room, clinicians can connect to an implanted medical device via wi-fi and perform treatments for chronic pain and movement disorders like Parkinson's disease, including deep brain stimulation therapy.

Many new telehealth tools require patients to interact with a device, but EarlySense InSight+ asks them only to sleep in their own bed. A sensor placed under a person's mattress collects data overnight about breathing patterns, heart rate, body movements and more; providers can access that information and review issues like an irregular heartbeat or breathing rate.

Wearable devices are also being tweaked to better serve remote doctor-patient relationships. The disposable BioSticker and BioButton by BioIntelliSense can record skin temperature, respiratory rate and other vital signs, and transmit them straight to providers. When UCHealth in Colorado first vaccinated health care workers against COVID-19, it used the BioButton to track vital signs and detect any adverse reactions.

Other innovations, like the Jasper digital oncology platform, help make treatment regimens more seamless and keep them connected to care. It records appointments and medications to keep patients organized and lets them easily track any symptoms, connecting them to clinical care and case management when needed.

—TARA LAW

TOP, FROM LEFT: TOM KIRKPATRICK—BMW; COURTESY ANKER; TP-LINK; BOTTOM, FROM LEFT: NVIDIA; COURTESY ASUS; COURTESY SONY INTERACTIVE ENTERTAINMENT

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Q&A

What's behind the racial disparities in 'accidental' deaths

THE APARTMENT FIRE THAT killed 17 people, including eight children, in the Bronx on Jan. 9 was one of the deadliest fires in modern New York City's history. It was also the second major fire incident of the New Year in the U.S., after a row house in Philadelphia caught fire on Jan. 5, resulting in the deaths of 12 people—nine of whom were children.

The deaths in these incidents, which took place in predominantly Black neighborhoods, have been labeled "accidental." That makes them part of a larger trend: statistically, the Americans who typically die as a result of accidents, including fires, are disproportionately people of color.

Jessie Singer is the author of the forthcoming book *There Are No Accidents,* which looks at the current and historical racial and economic disparities in accidental deaths. Singer spoke to TIME about how fires fit into this dynamic—and why she believes the discussion around accidental deaths should change.

TIME: You've studied the disparities that exist when accidents happen. How does the fire in the Bronx fit into that story?

SINGER: The accident in the Bronx could have been prevented with sprinklers, with self-closing doors that actually worked, with a functional alarm system, with a heating system that worked so that people didn't have to use supplement heat. We know where these accidents are most likely to happen—to [people of color] who live in poverty.

Accidental deaths have been growing since the early '90s, and with that, the racial and economic disparities are growing. *Accident* is just a magic word we use to delegate some horrors that we'd rather not look at too closely, and that we'd rather not talk about. We can say, "It was just an accident," and move on.

Accidental deaths are extremely affected by deregulation, so as the federal government shrinks and our agencies that are meant to protect us become smaller and more defanged, we are less protected from accidents and therefore more likely to die.

Your book explores how we talk about accidents. What do you see as the issues with the current narrative?

By definition, an accident is an unpredictable, unpreventable event. Nothing about [these kinds of incidents] is unpredictable or unpreventable. We're focused on what individuals could have done, which ignores the systemic patterns.

> **'If we look at the data, accidents happen under dangerous conditions.'**
>
> —JESSIE SINGER

Accidents focus on this idea of human error, that someone did something wrong. If we look at the data, accidents happen under dangerous conditions. That's what we should be focused on.

What is a more constructive way to talk about accidents?

I think if people hear the word *accident,* it should make [them] ask questions: How was it an accident? Has it happened before? Why did it happen again? How are we going to prevent it from happening again?

In asking those questions, we make ourselves aware of the systemic, deeply racialized and deeply classist nature of how these horrible tragedies repeat, and move on from these simplistic narratives about the last person to interact with the accident before it became deadly.

—JOSIAH BATES

MILESTONES

DIED

Ronnie Spector

A voice for all time

BY DIANE WARREN

Ronnie Spector's voice made pop songs into symphonies. You could feel the angst and passion in every note. You can sing great, but if you don't have that passion, that heart and soul, it means nothing. Spector, who died on Jan. 12 at 78, had it all. You felt it. When she sang, you felt every word. She led the girl group the Ronettes, which had 1960s hits such as "Be My Baby" and "Walking in the Rain." She later released solo albums and collaborated with other high-profile artists like Patti Smith and Keith Richards. I hope people will remember her as the great artist she was, although I hate saying the word *was.*

Spector was strong, too, having survived an abusive marriage to Phil Spector, who had also been the Ronettes' producer. In her memoir, she wrote about fleeing their home barefoot in 1972, worried he would kill her. You could always hear that strength in her voice.

I was thrilled when she agreed in 1987 to sing a song that I co-wrote with Desmond Child: "Love on a Rooftop." When we wrote it, I knew I wanted her to do the *woooah*s that only she could do. "I invented those," she once told me. And you know what? She did. No one does those like Ronnie Spector. The fact that she sang one of my songs was the f-cking coolest thing ever.

Last year, I heard that a biopic was being made about her life and told her that I would love to do a song—to honor her. She said she wanted me to as well. I remember I told her that I had been nominated 12 times for an Oscar but never won; she told me that she wanted to break my losing streak.

She's one of the best singers ever in pop music, a voice of her time and a voice for all time. That's a fact.

Warren is an award-winning songwriter

SPECTOR: TOM SHEEHAN—SONY MUSIC ARCHIVE/GETTY IMAGES; TALLEY: SQUIRE FOX—AUGUST; POITIER: SAM FALK—THE NEW YORK TIMES/REDUX; SAGET: RON GALELLA—RON GALELLA COLLECTION/GETTY IMAGES

DIED

André Leon Talley

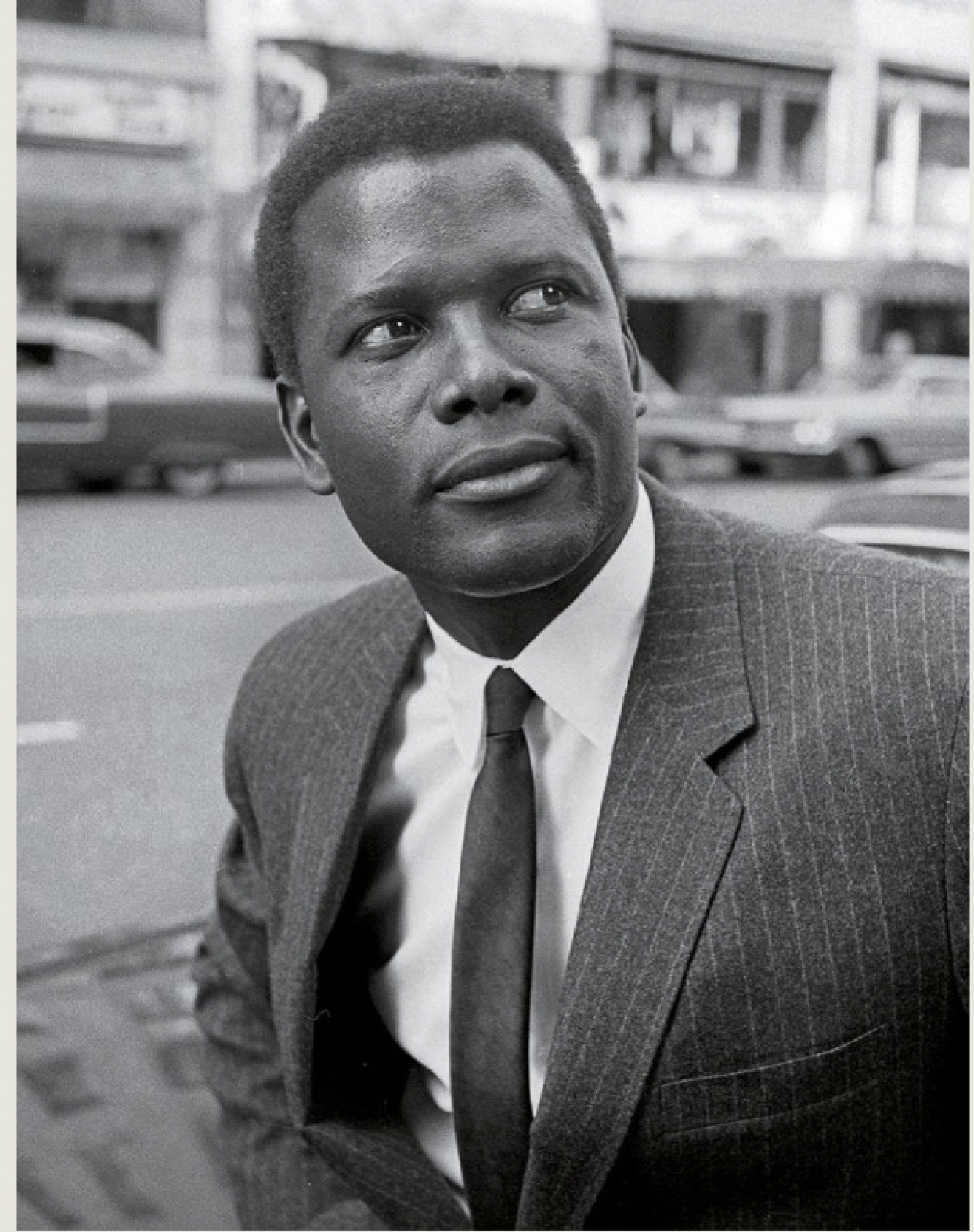
Forever in vogue

LARGER THAN LIFE IS A PHRASE often used to describe André Leon Talley, the fashion editor, author and media personality who challenged exclusionary norms and uplifted Black beauty during a six-decade-long career, rising to the top of magazine mastheads in a notoriously white and exclusive industry.

But although Talley, who died on Jan. 18 at 73, was known for cutting a bold figure—often draping his 6 ft. 6 in. frame in dramatic caftans—it was his exuberant love of fashion, his deep understanding of its history, and his unwavering faith in its power to transform and transport that made him stand out. And it made him outstanding.

Talley spent his youth in the Jim Crow South, but found his calling after assisting Diana Vreeland at the Metropolitan Museum of Art's Costume Institute. In the years following, he became a fashion-scene staple, championing young designers while working at publications like *Women's Wear Daily, Interview* and, most notably, *Vogue,* where he became a close friend and trusted colleague of Anna Wintour.

"I may have been the only Black person sitting in the front row, but Blackness was before me in great counts of beauty," he told TIME in 2020. "There was always Blackness somewhere in the fashion world, so I never felt alone." —CADY LANG



DIED

Sidney Poitier

Barrier-breaking performer

THERE WERE GREAT ACTORS BEFORE SIDNEY Poitier, who died on Jan. 6 at 94, and there have been great ones since. But the world would have been markedly different without him.

Poitier arrived on the theater and film scene in post–World War II America, as the country—not to mention the world—was scrambling to reassemble itself. His first major film role came in the 1950 release *No Way Out.* Although his early career was hampered by McCarthy-era blacklisting, the breadth and quality of his roles would improve in the 1960s, with movies like *A Raisin in the Sun; To Sir, With Love;* and *Guess Who's Coming to Dinner.* In 1964, for his performance in *Lilies of the Field,* he won the Academy Award for Best Actor. He was the first Black actor to do so.

When Poitier launched his film career, white audiences had extremely limited ideas about what it meant to be a Black man in America—and Black audiences weren't used to seeing anyone like themselves onscreen. He saw his own work as a beginning. The future he was building toward isn't yet here: bigotry and racism still thrive. But Sidney Poitier believed in a world without that hatred. We have only to look at his life's work, and we can believe too. —STEPHANIE ZACHAREK

DIED

> **Ricardo Bofill,** Catalan architect best known for his bold post-Modernist housing complexes, on Jan. 14 at 82.

> **Gaspard Ulliel,** French actor, on Jan. 19 at 37.

> **Robert Durst,** convicted murderer and subject of HBO's docuseries *The Jinx,* on Jan. 10 at 78.

> **Lusia Harris,** the "Queen of Basketball" and the only woman ever officially drafted by the NBA, on Jan. 18 at 66.

> **Bob Saget,** *Full House* actor and comedian, on Jan. 9 at 65.

NAMED

The city of **Nusantara as Indonesia's new capital,** replacing Jakarta, on Jan. 18.

TRANSPLANTED

A genetically modified pig heart into a U.S. man on Jan. 7, a medical first.

CONVICTED

Éric Zemmour, a far-right pundit running in France's presidential elections, on Jan. 17 for inciting racial hatred after labeling migrant children as "murderers" in 2020.

LIFTED

Nigeria's seven-month-long **ban on Twitter** on Jan. 13.

CONFIRMED

Microsoft's intent to buy video-game company **Activision Blizzard** for $68.7 billion, per a Jan. 18 announcement.

ENVIRONMENT

A teen eco-warrior cleans up her city

BY MELANIE SWAN

SAGARIKA SRIRAM WAS JUST 10 YEARS OLD WHEN SHE started reading newspaper stories about a planet in peril—one about a whale that washed ashore after an oil spill, another about turtles found with plastic in their stomachs. She knew right then that she wanted to do something to take action, and joined an environmental group that organized cleanup campaigns in her home city of Dubai. The experience, she says, "helped me understand what an individual can do and how I can really make a difference." But individual power is mightiest at scale, and in 2016, as a project for a coding class, Sriram created Kids for a Better World, a digital platform that has since brought together nearly 100,000 youths from around the world who want to learn how they, too, can fight climate change.

Sriram, now 16, has been called "an inspiration to all young girls in her country and West Asia" by the U.N. Environment Programme. She is at the fore of a growing cohort of youth climate activists organizing and mobilizing online in the name of a cleaner, healthier future. "We're the generation that is going to face the consequences if the climate crisis is not tackled," Sriram says, echoing the sentiment of other young global climate leaders, like Sweden's Greta Thunberg. She recalls taking note of Bali's Melati Wijsen, a teenager who successfully pressured leaders there to ban plastic bags in 2019. "Such inspirational and drastic change like that is what taught me to never give up," says Sriram, who works closely with other youth activists and organizations across the Middle East.

As well as online engagement, Sriram organizes local cleanups on beaches and deserts in the United Arab Emirates, collecting garbage such as cigarette butts and face masks. The pandemic has made it "a little more complicated to conduct these events," she says, but we've suggested that people can go on their own in their own little groups of families and make an impact."

SLOWING CLIMATE CHANGE requires drastic action on the part of governments and corporations, but Sriram believes individual actions can create a "ripple effect" and help build momentum in the right direction. "Change can be created on large levels, even with small actions," she says. Kids for a Better World reflects that thinking, with material designed to teach kids ages 8 to 16 about climate change and what they can do in their own homes and communities to reverse it (grow food or plant trees at home, for instance, or collect recyclables and avoid plastic bags). Sriram wants those lessons to be taught in schools around the world. "Education is the foundation of what we learn, and we spend so much time in school," she says, "so this is the information which can help change our future."

Growing up in a desert metropolis that faces risks from rising temperatures and dwindling water supplies made Sriram acutely aware of the need for action. She believes youth advocacy work is effective in bringing needed attention to the challenges the UAE and neighboring countries face. "When children spread a message, and you go door-to-door telling people about this, they tend to understand what's going on," she says.

Even if she's all about small actions, Sriram has big plans herself. She has an aim to expand globally and create an "international team of eco-warriors," as she puts it. Moreover, she hopes that the work she's doing will inspire others to fight for a greener planet, as others have inspired her. "We're creating our own system of inspirational changemakers," she says.

Sriram, photographed on Dec. 29, works with climate-change activists across the Middle East

NATALIE NACCACHE FOR TIME

'Change can be created on large levels, even with small actions.'

SAGARIKA SRIRAM

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Party people

A flash mob gathers outside Downing Street in London wearing Boris Johnson masks on Jan. 14 to protest the British leader's flouting of COVID-19 lockdown guidance. Details have emerged of social gatherings hosted under the Prime Minister's watch at a time when household mixing was banned for the general public. Johnson characterized the parties—including one in May 2020 where attendees were invited to "bring your own booze"—as essential work events, angering Conservative loyalists and threatening his premiership.

Photograph by Jeff Gilbert—Shutterstock

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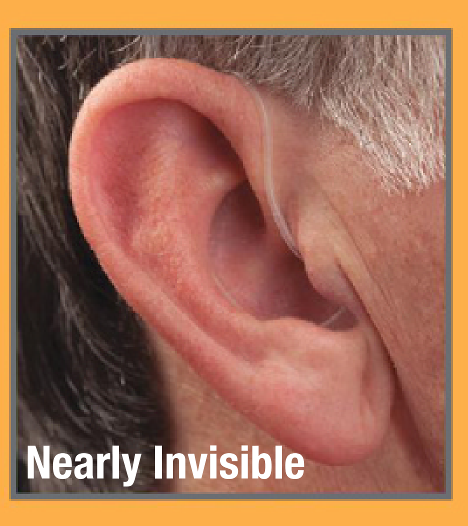

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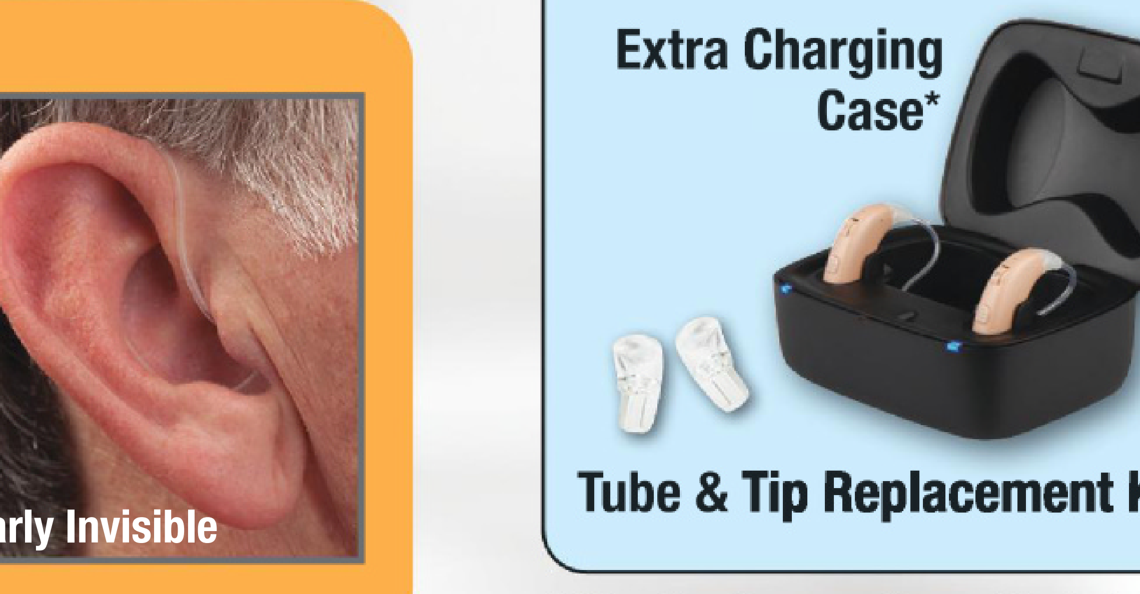

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The View

NATION

HOW TO STOP GUN VIOLENCE

BY THOMAS ABT, EDDIE BOCANEGRA AND EMADA TINGIRIDES

Just before Thanksgiving in Philadelphia, dozens of residents gathered on a basketball court to mourn the loss of Jessica Covington, who at 32 and seven months pregnant had been shot and killed while unloading gifts for her baby shower. Colwin Williams, a street outreach worker, spoke: “We can’t tolerate this.” Later, he said what many feel: “The pain is everywhere.” ▸

INSIDE

THE UNCERTAIN FUTURE OF PRESIDENTIAL DEBATES

WHY CATHIE WOOD SAYS YOU CAN TRUST HER MARKET PREDICTIONS

IT’S TIME TO RETHINK COVID-19 RESTRICTIONS

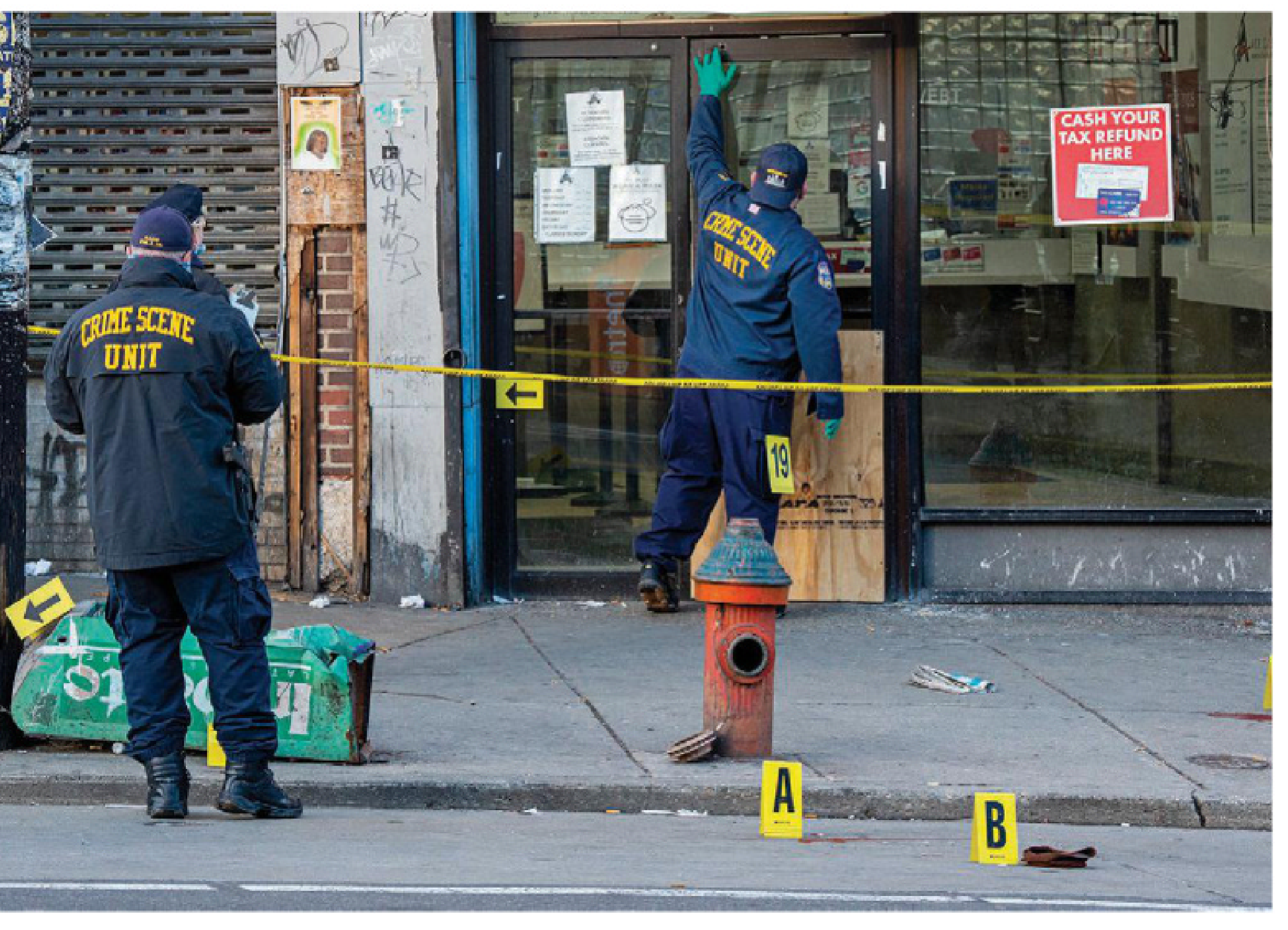
Last year in Philadelphia, the City of Brotherly Love, 562 citizens were murdered—an all-time high and a 12% increase over 2020, a year murders surged by 40%. Almost 90% of the 2021 homicides involved firearms, a sobering figure, but gun violence has been climbing in the city for almost a decade. And Philadelphia is not alone. At least 10 other major cities lost historic numbers of residents to murder last year, and police data suggests homicides rose 7% nationwide. If many Americans know that 2020 was a particularly bloody year—with homicides surging 29%, and 77% of them involving firearms—few realize that gun violence has been rising across this country since 2014.

In Philadelphia and elsewhere, gun violence isn't spread evenly. Instead, it clusters around a relatively few city blocks and among small networks of high-risk people. In Philadelphia, there are at least 57 blocks in which 10 or more people have been shot over the past five years. Research shows that during the pandemic, marginalized communities bore the brunt of the increase in such violence.

Why is gun violence rising right now? While COVID-19 has played a role, violence has not increased in most other high-income countries during the same period of time. So it's not only the pandemic, but our politics, that present a massive challenge.

American politics is hyperpolarized, and the criminal-justice arena is no exception. The public is consistently presented with a false choice between absolutes: either it's all about tough policing and prosecution, or it's the police and prosecutors who are the problem. It's #BlackLivesMatter vs. #BlueLivesMatter. A few leaders push back on this framing, but this either/or construct is the dominant criminal-justice conversation in the country. Everything we know about violence reduction tells us that we need law enforcement, but we need community and other partners as well. And most important, we know that a single approach won't work—we need everybody to work together. Unfortunately, the current conversation makes such partnerships nearly impossible.

THE FACT IS, we can have safety and justice at the same time. We can reduce violence and promote reform simultaneously. We can be tough when the circumstances call for it and be empathetic and supportive to achieve our goals as well.



Police at the Olney Transportation Center in Philadelphia on Feb. 17, 2021, after eight people were wounded by gunfire

Across the country, there are dozens of strategies with documented success in reducing gun violence. Oakland Ceasefire is a police/community partnership that confronted high-risk individuals and groups with a double message of empathy and accountability and cut firearm homicides in the California city by roughly 31%. The Advance Peace effort in Richmond, Va., used conflict mediation, intensive mentorship, case management and life-skills training to reach people at the highest risk for violence, reducing firearm crimes by 43%. The Cure Violence approach uses community-based outreach workers to mediate potentially violent conflicts, reducing gun injuries in two neighborhoods in New York City by 50% and 37%.

We've learned over time that no single strategy, whether led by police or community members, can stem violence all by itself. For large, sustained declines in violence, cities need a collaborative effort that leverages multiple strategies at once. Here's a road map:

First, preserving life by preventing lethal or near-lethal violence must be at the top of the policymaking agenda. Local leaders should commit to tangible reductions in homicides and nonfatal shootings.

Second, policymakers must remember that gun violence concentrates among small sets of key people and places, and focus engagement there. Support and services must be offered while making clear that further violence will not be tolerated. Police can increase patrols to cool crime "hot spots" while cities invest to improve the long-term trajectory of these places.

Third, leaders must make these efforts sustainable via strategic plans and infrastructure to implement them. Cities should have a permanent unit on violence reduction inside the mayor's office.

Finally, cities must hold themselves accountable using rigorous research and data. Leaders must commit to recognizing when strategies are not working and then shifting course.

We can't sit on our hands and wait for the legislative impasse in our statehouses and in Congress to break. We must push past our toxic politics and embrace solutions that work.

Abt, a senior fellow at the Council on Criminal Justice, is chair of the council's Violent Crime Working Group; Bocanegra is senior director of READI Chicago; Tingirides is a deputy chief of the Los Angeles Police Department

POLICE: TOM GRALISH—THE PHILADELPHIA INQUIRER/AP; PODIUM: JOE RAEDLE—GETTY IMAGES

The Leadership Brief
By Belinda Luscombe
EDITOR AT LARGE

Cathie Wood is CEO and founder of ARK Invest, a controversial investment fund known for its heavy spending in technology. Her flagship tech fund's bumpy ride—up 156% in 2020, down 23.5% in 2021— has not made her doubt her strategy.

Did you learn anything from your fund's not-so-good performance in 2021? In 2020 the coronavirus accelerated the pace of innovation and the uptake of innovation. Then we had the rotation into cyclical stock, meaning out of some of our technology-oriented stocks and into energy, financial services, materials and industrials. But we have a five-year investment time horizon, so we take this in stride.

What is the purpose of your fund's emphasis on transparency? After the 2008 market meltdown, the financial-services industry lost a lot of trust. We're trying to be part of bringing it back. I started ARK because I saw such opportunities in the innovation space in the public equity markets. Retail investors felt left out of the biggest opportunities, which seemed to only be in the private markets. We are bringing transparency and democratization into investing in innovation.

You're a big investor in artificial intelligence. Will AI ever put the financial services and analysis businesses out of work? I think the way our business got off track is that it only considered quantitative strategies to be scalable, because you could put a computer on them, and then charge a fee. Those days are ending. Any position that involves human relationships—like handling people's money—is going to be very difficult to displace.

One of the reasons you and your success draw attention is that there are so few women in financial services at your level. Why is this? I've been in the business for 44 years. I've seen this time and again, when we go through a bear market, a lot of women drop out. I think our industry is wonderful for women, if they can move into a situation where their performance is measured objectively.

Anything worrying you about this year? Businesses might have scrambled a little too much; I think we'll see inventory issues. Consumers are upset at inflation and are going to cut back.

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A podium at Hofstra University, the site of a 2016 presidential debate

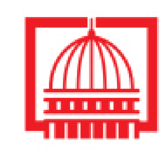
The D.C. Brief
By Philip Elliott
WASHINGTON CORRESPONDENT

REPUBLICANS ARE ABOUT to implement a Donald Trump loyalty test, the latest move inside its central party committee to gauge fealty to the de facto leader. The test could potentially kill the next presidential nominee's chance to reach voters with a direct contrast to the Democrats' pick.

The Republican National Committee (RNC) is poised to amend its rules during a February meeting to **demand that any contenders for the presidential nomination pledge to skip general-election debates** sponsored by the nonpartisan Commission on Presidential Debates. The group has organized the televised sessions dating from 1988 and has endured Trump's scorn since 2016 for its perceived biases.

The test goes well beyond just the hopefuls. Each of the 168 members of the RNC will have to navigate whether they prioritize tradition or Trump's grievances—and then face the consequences. Those little-known party insiders have tremendous power. The RNC has fairly unilateral control over who gets to debate during the primaries and what news organizations get to ask the questions. An RNC that puts its thumb on the scales can essentially shut out unfavored candidates—or effectively throw the nomination to Trump if its members decide to be shameless.

The party's cardinals are poised to make a move that is hardly strategic. It is the opposite of building the Republican brand or persuading voters. It is an emotional play aimed at a party of one. But at least for the moment, that party is the most important factor in the modern GOP.



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HEALTH

We need to rethink COVID-19 restrictions

BY MONICA GANDHI AND JEANNE NOBLE

THE RAPID SPREAD OF OMICRON, THE LATEST AND MOST transmissible COVID-19 variant to date, underscores the tremendous need for updated COVID-19 policy in the U.S. No longer should we be guided by case counts, because (owing to vaccination, the nature of the variant, or both) relatively few cases produce severe illness. The most important metric now is hospitalizations, and those are rising at a far lower rate than infections. Public-health measures should adjust accordingly. It is time to move beyond the cycle of asserting, removing and reinstating COVID-19 restrictions based on metrics that are no longer clinically relevant, and concentrate instead on protecting those at risk of severe infections.

Highly transmissible variants, such as Delta and Omicron, will lead to high numbers of asymptomatic or mild infections among the vaccinated. These breakthrough infections should not be considered "vaccine failures." Instead, they should be recognized as the hallmark of highly effective vaccines that are operating precisely as intended—to prevent serious illness or death. It is also important to note that long COVID-19 symptoms seem to be very rare in fully vaccinated individuals.

We must ensure that Americans understand this is a very different time than March 2020, especially in highly vaccinated regions, and that there is no need to resort to closing schools today. A strategy of examining who is at risk of severe breakthrough infections and to focus on protecting that population at all costs will help us make this critical transition.

This new strategy means using different metrics as the basis for COVID-19 restrictions. In a vaccinated population, the relationship between case counts and hospitalizations has been uncoupled. Because so many vaccinated individuals may test positive for COVID-19 with few or no symptoms, the number of infections in a community no longer predicts the number of hospitalizations or deaths. This uncoupling means that we should no longer focus on the number of COVID-19 infections as predictive of the need for lockdowns, physical distancing or mask use. Instead, we could follow the path of Singapore, which changed its metrics from cases to hospitalizations in September both to protect the country's population and to avoid unnecessary harm to the economy, which in turn has a direct impact on health. A similar path was recently embraced in Marin County, California.

If public-health officials tie policies to hospitalizations, not cases, the media's obsession with case counting will likely abate and help refocus attention on serious illness alone. But it is vitally important that reported hospitalization rates represent serious COVID-19 illness and exclude patients hospitalized for other reasons, but testing positive on admission, with minimal or no COVID symptoms. With this sharper focus, our time can be better spent on vaccinating the unvaccinated and boosting the most vulnerable, such as residents of nursing homes, persons over 65 and those with chronic health issues. However, this new strategy highlights the need for the CDC to increase its tracking and reporting of severe breakthrough infections by the health status of individuals so that the most vulnerable can be rapidly identified and prioritized for lifesaving treatment, such as Paxlovid and other powerful antiviral therapies.

Protecting those at risk of severe breakthroughs also means the end of blanket mask mandates. Our adult population has had access to highly effective vaccines for almost a year, and more recently, all children ages 5 and older became eligible for vaccination. Use of N95, KN95, KF94, FFP2 or even double surgical masks should be encouraged among select high-risk populations, but perpetual masking of entire populations is not sustainable

JOE RAEDLE—GETTY IMAGES

A health care worker administers a Pfizer-BioNTech COVID-19 vaccine at a drive-through site in Miami's Tropical Park on Dec. 16

or necessary. Our children, the demographic group at lowest risk of serious illness, continue to endure more hours of uninterrupted masking than higher-risk adults.

WE NEED TO END the policy of school closures and the cancellation of school sporting events based on asymptomatic testing. While testing and quarantines may have been rationalized as reasonable strategies prior to the availability of vaccines, these disruptions can no longer be justified as having any direct impact on lowering the risk of life-threatening illness among the lives of those subject to the disruptions, namely students, athletes or even spectators.

Although schools reopened in 2021, parents and students continue to suffer from educational loss and work disruption due to school testing policies and quarantines. The CDC has finally endorsed "test to stay" as a safe and reasonable policy for keeping kids in school and minimizing educational disruption. This policy should quickly become the norm until school-based testing is completely phased out. Similarly, testing protocols should be updated for all places of work, shortening the period of isolation following infection. Returning to work (or school) as soon as a rapid test is negative, reflecting when COVID-19 is no longer transmissible, is more appropriate than the outdated longer periods (with a negative test) of isolation.

Perpetual masking of entire populations is not sustainable or necessary

THIS UPDATED ROAD MAP also includes modification of vaccination policies to better reflect our nuanced understanding of vaccine efficacy and population risk. Our widespread promotion of booster vaccination for all individuals over age 16 should ensure we target those most vulnerable to serious breakthrough infections first, which would include mass booster campaigns in nursing homes and among those in care for chronic diseases. This new road map will also give recognition to natural immunity from prior infection when implementing vaccine mandates (such as recommending one dose after natural infection for those who have yet to be vaccinated, to increase immunity but minimize side effects). This policy would increase public trust, particularly among more vaccine-hesitant communities, as a more accurate reflection of current evidence.

This new approach reframes our policy toward harm reduction and away from zero-COVID policies. Policies like travel bans are ineffective in decreasing transmission and are fundamentally inequitable, punishing other countries for laudable practices such as data sharing. Getting treatments like Paxlovid authorized tells the unvaccinated we want to provide compassionate care to this group. And finally, promoting booster doses for young, healthy adults over an equitable global distribution of vaccines is counterproductive for suppressing the emergence of variants and runs contrary to the notion that all humans are of equal value.

We encourage the Biden Administration to take a rational approach to the COVID-19 pandemic in 2022. President Biden said in his speech on Dec. 21 that the Administration will renew efforts to increase access to rapid testing and expand the surge capacity of hospitals in areas of low vaccination, both important and welcome commitments. In addition to meeting these immediate practical needs of the pandemic, we hope the Administration will recognize that it is time to reframe our approach, moving beyond case counts and community-based restrictions and to revise policies specifically aimed at protecting vulnerable populations and assuring that our nation's children will stay in school. We hope this new way of thinking will allow a sensible, science-based approach to the next phase of our response.

Dr. Gandhi is professor of medicine and associate division chief of the Division of HIV, Infectious Diseases, and Global Medicine at San Francisco General Hospital and director of the Center for AIDS Research at UCSF; Noble, M.D., M.A., is associate professor of emergency medicine and director of COVID response at UCSF Parnassus Emergency Department

NATION

BIG PROMISES.

- ☐ TAME COVID-19
- ☐ FIGHT INFLATION
- ☐ BUILD BACK BETTER
- ☐ ADDRESS CLIMATE CHANGE
- ☐ REIN IN RUSSIA + CHINA
- ☐ UNITE THE COUNTRY
- ☐ FIX DEMOCRACY

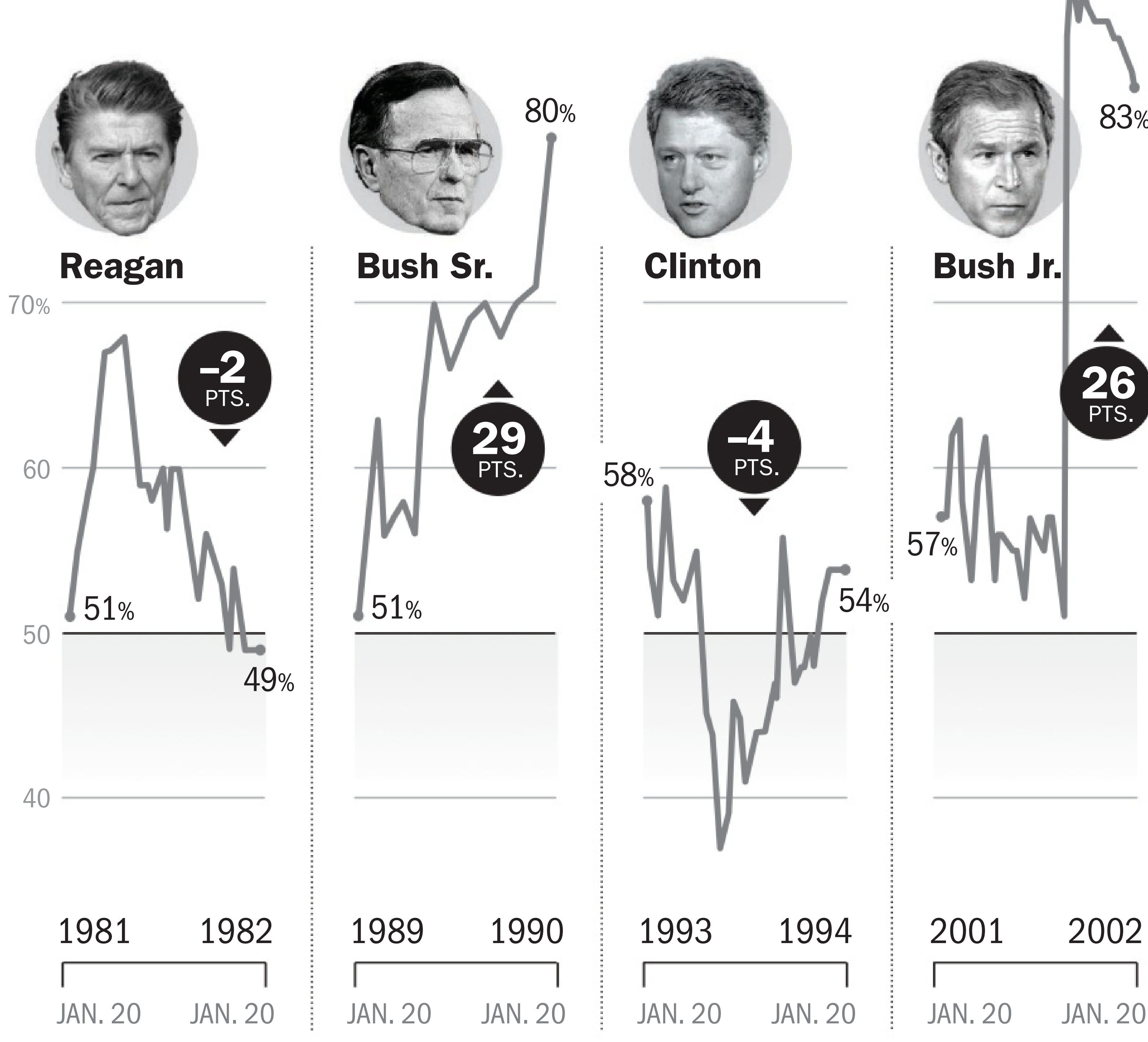
BAD OUTCOMES.

One year in, President Joe Biden faces a long list of challenges and growing doubts that he's up to the task

BY MOLLY BALL AND BRIAN BENNETT

Biden at a meeting in the White House, on Jan. 3

PHOTOGRAPH BY DOUG MILLS



LAST OCTOBER, PRESIDENT BIDEN WENT TO CAPitol Hill to meet with the Democrats in the House of Representatives. Party members had been feuding over his proposed legislation, and leaders believed only the President could rally them together. Instead Biden stunned the caucus by sending them back to the drawing board. As he was leaving, a member approached him and pleaded, "Mr. President, we need a plan." Biden didn't answer, according to a source familiar with the exchange.

Three months later, the fate of Biden's social-spending and climate package is more uncertain than ever. The pandemic he promised to bring to heel rages out of control. Inflation is at a four-decade high, canceling out rising wages. The border is a mess. Violent crime continues to climb. His approval rating has sunk to the low 40s. In the eyes of many Americans, "it's just been one disappointment after another," says Iowa-based nonpartisan pollster J. Ann Selzer. "Joe Biden was supposed to be the expert at dealing with all of these issues. What is it that he's done right? Other than getting infrastructure passed, what has he done that's come off really well?"

One year in, there's a growing sense that the Biden presidency has lost its way. An Administration that pledged to restore competence and normalcy seems overmatched and reactive. Biden has been caught flat-footed by not one but two COVID-19 variants. He has repeatedly failed to close the deal with the Senate he boasted of mastering. The former chair of the foreign relations committee has presided over escalating tensions with Russia and China as well as a chaotic pullout from Afghanistan. The consequences to America's credibility abroad could be lasting, says Ryan Crocker, former U.S. ambassador in Kabul. "What could be more damaging to internationalism in this country than an internationalist who is perceived as having just completely screwed the pooch?"

Defenders argue that Biden is managing as well as anyone could. Taking office in the shadow of Donald Trump and the Jan. 6 insurrection, he faces a country riven by pre-existing divisions and an opposition that views him as illegitimate. Biden racked up early successes rolling out vaccines and relief funds, they note, and hasn't gotten sufficient credit for his bipartisan infrastructure bill. "For all this progress, I know there's a lot of frustration and fatigue in this country," Biden said of the pandemic at a Jan. 19 press conference, the second he has conducted on U.S. soil since being inaugurated. "We've been doing everything we can."

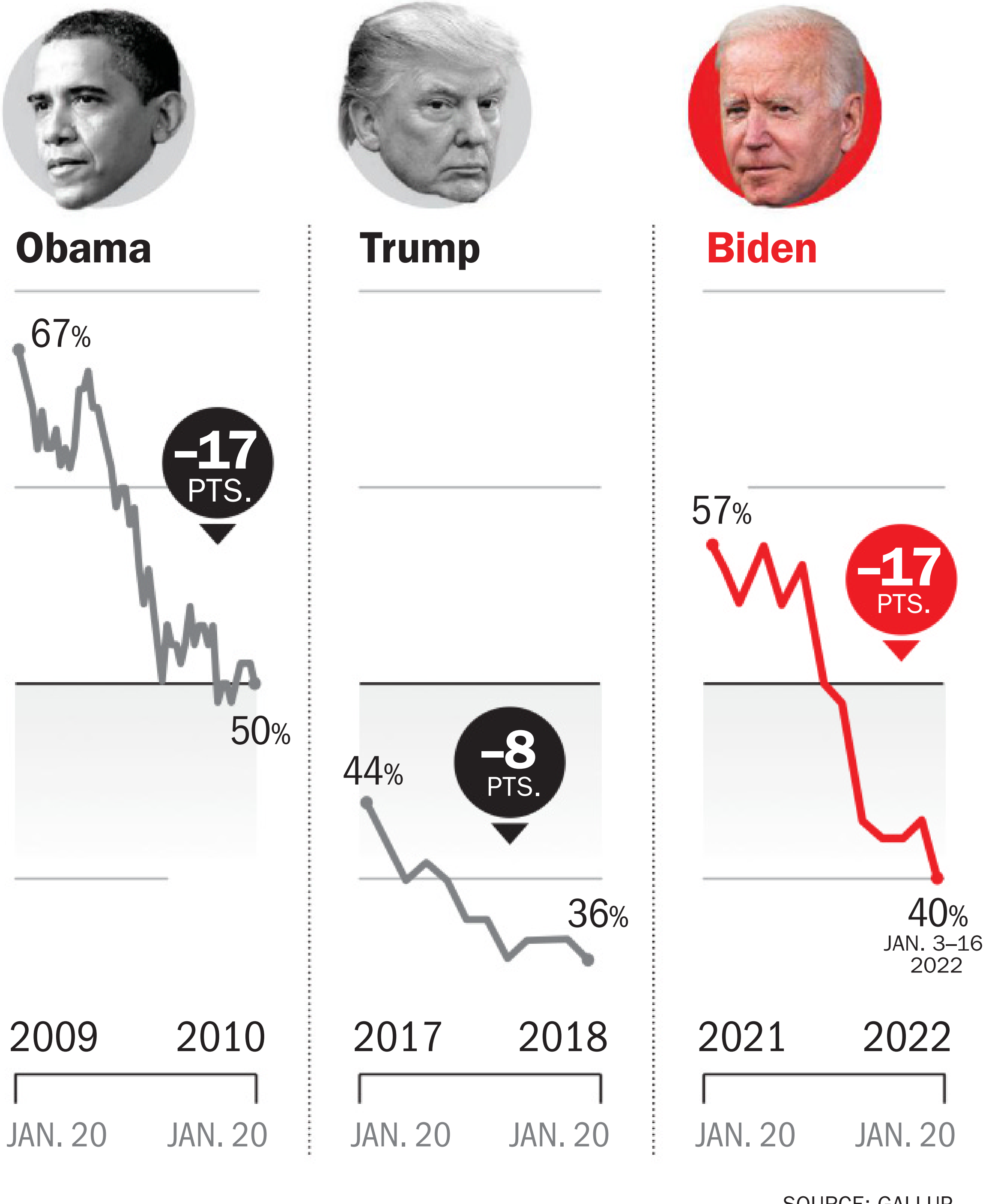
Yet in a period of historic crisis, the President has been a shrinking figure, giving fewer interviews or press conferences than his predecessors. Voters widely question his capabilities. Privately, top Democrats acknowledge the public is losing faith in his leadership. "What people don't see is an overarching plan," a senior Administration official tells TIME.

One major party donor predicts a midterm wipeout. "When they f-cked up Afghanistan, they obliterated the competency thesis, and I don't know how he comes back from that." If you want a friend in Washington, get a dog, the old saying goes, but Biden can't even get that right: Major, a rescued German shepherd featured in Biden's campaign ads, was rehomed last month after injuring the President and biting two staffers.

IF BIDEN HAD one job coming in, it was to get the pandemic under control. He campaigned on a plan to tackle the virus with sound science and serious policy rather than Trump's denial and quackery. Upon taking office, he installed an experienced team and got vaccines out to millions of Americans in a matter of months.

But the pandemic response is now in a rough place. Omicron, while milder than previous variants, has sent cases surging. Hospitals are flooded, and businesses and schools struggle to remain open. In other countries, rapid tests have long been available free or cheap, but here they remain scarce and pricey. Data collection is a patchwork, leaving policymakers reliant on foreign sources for information.

Top scientists voice frustration. "The Administration has done really well on vaccines," says Dr. Céline Gounder, an epidemiologist at New York University who advised Biden's transition, "but the



FIRST-YEAR JOB APPROVAL RATINGS

Of the six previous Presidents, only Obama dropped as many percentage points as Biden over his first year in office

other interventions were more of an afterthought."

Outside advisers presented a national testing proposal in early 2021, for example, and others regularly urged purchasing millions of rapid tests. But the White House remained fixated on the vaccination push. In May, the Centers for Disease Control and Prevention (CDC) announced that vaccinated people could stop wearing masks. In July, the President declared the U.S. had "gained the upper hand against this virus."

Within weeks, the declaration of victory looked silly, as vaccinations plateaued and the Delta variant tore through the country. The Administration scrambled to change course, and "those challenges diverted attention from other, more long-range plans," says Dr. Ezekiel Emanuel, another transition adviser, who recently helmed a public critique of the Administration's COVID-19 response by a group of prominent scientists.

The Administration vowed to let scientists lead the way, but the result has been a confounding lack of coordination. The heads of the CDC, National Institutes of Health, Food and Drug Administration and the President's COVID-19 task force have made conflicting statements on everything from boosters to quarantines, leaving the public befuddled and anxious. "I would argue that the American people have less trust in federal health officials now than a year ago," says Dr. Leana Wen, a public health professor at George Washington University. In a CBS News poll released Jan. 16, two-thirds of Americans said the U.S. COVID-19 response was going badly.

Since the start of the pandemic, experts have emphasized high-quality masks, yet it took until Jan. 19 for the White House to announce it would begin providing them free to the public. On Jan. 18, the Administration unveiled a website that allows each household to order four free rapid tests. But they won't ship until late January, after the Omicron wave has crested in many places. "It's good that the Administration has finally responded to the loud voices of frustration," Dr. Eric Topol, director and founder of the Scripps Research Translational Institute, wrote in December, "but it's an exemplar of too little, too late."

Allies are perplexed that an experienced team has failed to prepare for foreseeable obstacles. White House COVID coordinator Jeffrey Zients is a former executive renowned for turning around troubled organizations. Biden's chief of staff, Ron Klain, managed the Obama Administration's successful response to the Ebola virus. And Dr. Anthony Fauci, Biden's chief medical adviser, led the fight against HIV and AIDS. "Fauci knows the science, Zients knows management, and Klain knows pandemics," says an operative close to the Administration. "You'd think if something was doable, they could do it. That's the most vexing thing."

BIDEN'S ABILITIES to navigate Congress and bridge his party's factions were major selling points of his campaign. The early returns were positive. In March, he signed the American Rescue Plan, a $1.9 trillion sequel to the multitrillion-dollar Trump-era COVID-19 relief bills that have together made America's pandemic response one of the most generous in the world. Passed on a party-line vote, the legislation extended unemployment benefits; sent $1,400 checks to individuals; expanded food stamps, paid leave and tax credits for families; and provided billions in funding for local governments and health care. Biden also campaigned on a pledge to bring back bipartisanship, and that, too, seemed promising: in November, he signed a trillion-dollar infrastructure bill that got 19 Republican votes in the Senate, including that of GOP leader Mitch McConnell.

That legislation was supposed to be one major component of Biden's ambitious domestic agenda. The other cornerstone would be Build Back Better, a mammoth social-spending bill originally priced at $3.5 trillion, with provisions addressing climate change, expanding Medicaid, providing childcare support and raising taxes on the rich. But two moderate Democrats, Joe Manchin of West Virginia and Kyrsten Sinema of Arizona, have stood in the way of the 50 Senate votes needed to pass it, and they have proved immune to Biden's powers of persuasion.

PREVIOUS SPREAD: THE NEW YORK TIMES/REDUX; THIS SPREAD: GETTY IMAGES (7)

A source close to Manchin says the White House bungled the negotiations in December by failing to keep its commitments, leading him to announce his opposition. "They violated the deal he thought they had," the source says.

Progressive Democrats who voted for infrastructure with the assurance that social spending would follow feel equally burned. Infighting has spilled into public view. "Our progress has ground to a halt because of the sabotaging of our agenda by Senator Manchin and Senator Sinema," Senator Bernie Sanders tells TIME. The components of Build Back Better are consistently popular, but Republicans have paid no price for opposing it because the Democratic holdouts stand in the way, Sanders says. "In my view, we need a major course correction right now."

Only Biden can bring the factions together. "The President understands that he is the only one that's going to make this happen," Representative Pramila Jayapal, who chairs the Congressional Progressive Caucus, tells TIME. "Because it was to him directly that Senator Manchin committed, and it was from him directly, to us and to the country, that he committed that he could get it done."

Under pressure from civil rights activists and amid concern about Republican efforts to subvert elections, Biden decided to go to the mat on voting rights. In a fiery speech in advance of Martin Luther King Jr. Day, he dropped his longtime resistance to altering the Senate's 60-vote filibuster threshold. But far from being pleased, leading Black organizations boycotted the speech. The Senate then planned a series of votes on the issue beginning Jan. 19, which were widely expected to fall short. The only result was likely to be a showcase of the President's failure on an issue dear to his base.

Liberals and Black voters are naturally demoralized, says Maurice Mitchell, national director of the progressive Working Families Party. Biden "came in with a lot of fanfare about being this creature of the Senate who could play a unique role in cutting deals," he says. "There are really big pieces of the President's agenda that are still not settled, and it is really incumbent on him to seal the deal."

Defenders say it's unrealistic to expect too much with razor-thin congressional majorities, and complain that Biden hasn't gotten enough credit for the things he's accomplished. It may be premature to declare defeat on Build Back Better. "I think the jury's still out on whether that effort is going to be successful," says Democratic Senator Mark Warner.

But Democrats fear that a harsh political backlash looms. The President's approval rating, historically an indicator of how his party will perform in November, is the worst at this stage of any modern presidency besides Trump's. Only a quarter of Americans in the recent CBS poll thought things were going well, and majorities said Democrats were not focused enough on the economy and inflation. Republicans hold a slight lead in the generic congressional ballot for the first time in decades; Gallup found a 14-point swing in party identification toward the GOP over the course of 2021. A raft of congressional Democrats have recently announced their retirements, fearful a wave is coming. "A lot of people have been very blunt with them about what a terrible job they're doing," a congressional Democrat says of the White House. "But they're very sensitive."

'WE NEED A MAJOR COURSE CORRECTION RIGHT NOW.'

—BERNIE SANDERS, U.S. SENATOR

WHITE HOUSE INSIDERS describe a tight inner circle of longtime advisers to whom the President is loyal to a fault. "These are basically people who have been going to summer camp together since they were 5," says the head of a prominent liberal organization. "The upside is that there's not the same internal knifing you got in prior administrations, but it also means lots of blind spots." A source who has known Biden for decades says, "It's a team of competent, long-term staffers, and they're behaving like that. It's not a team of rivals with contending opinions."

Voters hoped Biden would provide a sense of calm and steady leadership. But the reason he hasn't been more visibly in charge is as much of an open secret as it is a taboo subject in Washington. The 79-year-old President has always been gaffe-prone, but in recent years his unsteadiness has become more pronounced. He tells stories that aren't true, such as claiming to have been arrested in the civil rights movement, driven a tractor-trailer and intervened in Israel's Six-Day War. In an August TV interview, he struggled to recall what branch of the military his late son Beau had served in and where he had been deployed. In a September meeting with Senators, he referred to himself as one of their colleagues before correcting himself: "Wait, wait, I've got this job now." At the infrastructure signing ceremony, he bungled Sinema's name.

Allies react angrily to the suggestion that the man with his finger on the nuclear button has lost a step, calling it a right-wing smear. (One senior official described Biden as having command of policy details in meetings.) But the perception is pervasive. A Jan. 19 Politico poll found 49% of voters doubted Biden's mental fitness. Large majorities did not consider him "energetic" or a "strong leader." In an October Harvard-Harris poll, 58% said he was too old to be President.

In one recent focus group of swing voters conducted by a liberal organization and observed by TIME, a Biden voter from Milwaukee said, "I question his competency because of his age. I don't think he's in a position to run this country." In a

separate session, a Biden voter from Kentucky said, "I had high hopes for him in the beginning, but he seems more and more not in control. You see him walk around, he kind of shuffles, like a great-grandparent. He just is not that sharp."

President Biden was caught flat-footed as two COVID-19 variants surged and prolonged the pandemic

MANY DEMOCRATS ARGUE that Biden's low ratings stem from factors beyond his control. He inherited a mess, they note, and has gotten little help from a Republican Party dangerously fixated on conspiracy theories about vaccines and the 2020 election. "The pandemic has created a sense that things are not where people want them to be, and they're sad about the continuing divisions and disruptions," says Democratic pollster Margie Omero. "That continues because of the Republicans—it's not something Biden can change." Biden, too, doesn't think the polling is a reflection of how he's done his job. "I have probably outperformed what anybody thought would happen," he said at the Jan. 19 press conference.

Inside the White House, there's a belief that the press is overly negative, though if anything Biden has benefited with voters and the media alike from the low bar set by Trump. (Given five days' notice, the Administration declined to make a senior official available to speak on the record for this article, saying the long holiday weekend made scheduling difficult.) Allies who acknowledge change is needed advise the President to be more visible, project strength and pivot away from congressional chaos, deploying the Vice President and Cabinet to sell his policies. "He needs to make the case more forcefully and get more folks out there making the case," says Rodell Mollineau, an adviser to Biden's Unite the Country super PAC. "It's now an election year, and you need to convince the American people that we have made some progress."

On Jan. 13, Biden returned to Capitol Hill, this time to make a show of strong-arming his party's Senators to pass voting legislation. But the gambit broadcast weakness instead. Just before he arrived, Sinema blindsided him with a floor speech blasting the idea. In the meeting itself, Biden spent several minutes reminiscing about the days of Robert Byrd and Strom Thurmond, Senators reported afterward. Sinema did not speak up in the meeting, and Biden did not call on her to explain herself. One Senator told TIME the President was "soft-spoken" and difficult to hear. Immediately afterward, Manchin reaffirmed his opposition as well. Biden then walked down the hall to McConnell's office, but the Republican leader could not be found.

In the Capitol, reporters clustered around Biden, seeking his perspective on the way forward—a plan. He offered only a shrug. "I hope we can get this done," the President said. "But I'm not sure." —*With reporting by* ABIGAIL ABRAMS, LESLIE DICKSTEIN, W.J. HENNIGAN, NIK POPLI, ABBY VESOULIS *and* JULIA ZORTHIAN ◻

WORLD

The Dissident

Navalny takes part in a court session from prison on Dec. 28. Russia has designated his foundation an extremist group

POISONED BY THE STATE. LABELED AN EXTREMIST. FROM HIS PRISON CELL, ALEXEI NAVALNY IS STILL FIGHTING FOR POLITICAL CHANGE IN RUSSIA

BY SIMON SHUSTER/VILNIUS, LITHUANIA

On a cold morning in November, the family of Alexei Navalny, the Russian opposition leader, made the trip out to visit him at Penal Colony No. 2. The drive from Moscow took about two hours, though parts of it felt like traveling back in time. Coming off the highway from Russia's high-tech capital, the roads became rutted. Apartment blocks gave way to wooden huts, and old ladies appeared near the roadside in heavy coats, selling vegetables from their gardens.

At the prison gates, Navalny's wife and parents carried a few bags of groceries into a waiting room, where an ancient telephone allowed them to announce their visit to the guards. Before long, the inmate was led out to meet them. He looked skinny, his head shorn, a broad smile framed by a prison-issue hat. Ten months had passed since Navalny's incarceration, and more than a year since he was nearly poisoned to death with a chemical weapon. Its effects on his nervous system no longer showed; his hands had stopped trembling. "He looked good," his wife Yulia Navalnaya later told me. "Unchanged."

It had been Navalny's decision to be there. Not in this specific prison, with its silent guards and its windows papered over to create the feeling, Navalny says, of living inside a shoebox. But he did make a choice to return to Russia, fully aware of what the state would likely do to him. From his temporary exile, he decided almost exactly a year ago to submit to the custody of the regime that stood accused of trying to murder him. The poison had failed to kill Navalny. It hadn't even really changed him.

From the confines of his barracks, he still runs a network of dissidents devoted to ousting President Vladimir Putin. Its top leaders are fugitives from Russian law, though they were not hard for me to find while reporting this story. Some met me while they were fundraising in New York City or lobbying in Washington. Others showed me the TV studio they built in Eastern Europe, just outside Russia's border, to air broadcasts for millions of followers inside.

Through them, I began to receive a series of handwritten letters from Penal Colony No. 2. "Please, not too many questions," Navalny told me in the first one last October. "There's no time for writing here, and the process of getting these pages out is exhausting." You wouldn't know it from the volume of his subsequent answers, about two dozen line-ruled pages covered in a hurried Russian script. The first one came punctuated with a smiley face, as though the dissident were still adding emojis to the blog that started his political career.

Our exchange, which lasted through the middle of January, coincided with a tense time in Europe. Not long after Navalny's family visited him, Putin began massing troops near Russia's western border, enough to launch an invasion of Ukraine. The Biden Administration tried to talk the Russians down, resulting in a standoff drenched in Cold War revivalism. Envoys of the world's two nuclear superpowers spent weeks trading threats and demands. The spectacle made Navalny cringe. "Time and again the West falls into Putin's elementary traps," he wrote me, in a letter that arrived Jan. 14. "It just takes my breath away, watching how Putin pulls this on the American establishment again and again."

In its talks with Putin, the U.S. strategy has been to offer Russia a "diplomatic off-ramp," while also making clear that an invasion of Ukraine would be met with "severe and overwhelming costs," a spokesperson for the National Security Council told me in response to Navalny's criticism, adding that the U.S. considers his imprisonment "to be politically motivated and a gross injustice."

Few people have studied Putin as long or as obsessively as Navalny. In his letters, he tries to explain what motivates the Russian President, and what Putin fears. It is not what he claims to be concerned about: the deployment of U.S. forces in Eastern Europe, or the chance that Ukraine might one day join the NATO alliance. "Instead of ignoring this nonsense," Navalny writes, "the U.S. accepts Putin's agenda and runs to organize some meetings. Just like a frightened schoolboy who's been bullied by an upperclassman."

What Putin truly fears is what Navalny's movement seeks—a change of power in Russia, followed by cashiering its corrupt clan of oligarchs and spies. It isn't NATO that keeps Putin up at night; it's the space for democratic dissent that NATO opens up along his border. This fear, Navalny argues, is what drives all the conflicts Russia wages with the West. "To consolidate the country and the elites," he writes, "Putin constantly needs all these extreme measures, all these wars—real ones, virtual ones, hybrid ones or just confrontations at the edge of war, as we're seeing now."

Rather than convening talks or offering concessions, Navalny wants the U.S. to pressure the Kremlin from without while Navalny and his supporters pressure it from within. The combination, he believes, will split the elites around Putin, ushering in what Navalny's followers like to call "the beautiful Russia of the future," one that is free, democratic, at peace with its neighbors and the West.

But that slogan elides the ugliness of how dictatorships often fall. Russians need not look far for examples. In early January, protests swept through neighboring Kazakhstan, an oil-rich autocracy to Russia's south. Government buildings were set ablaze. Scores of police and protesters were killed. Kazakhstan's President issued a shoot-to-kill order to his security forces and called for assistance from Russia and its allies. Within hours, Putin dispatched thousands of troops to help put down the uprising. The crackdown worked. The protests subsided.

In our exchange of letters, I asked Navalny about the prospect of such

Riot police clash with demonstrators on Jan. 23, 2021, during a protest against Navalny's jailing

violence in Russia, and whether he sees it as the price of change after 21 years under the rule of one man. "Our path," he wrote, "was never strewn with roses."

NAVALNY WAS BORN and raised in garrison towns, moving from one to another with his father, a Soviet officer who did not have much faith in the system he served. That system fell apart when Navalny was a teenager. After studying law, he got his first taste of politics as a member of the Yabloko party, a group of milquetoast liberals that his mother, an economist, supported. "We lived well," she once told a Russian magazine about Navalny's youth. "That is, we were poor. Like everybody else."

I first met Navalny in Moscow 12 years ago. Tall and stooped, with a slight paunch and ice blue eyes, he stood out as the only dissident organized and popular enough to pose even a distant threat to Putin's rule. His headquarters back then were a cheaply furnished office in Moscow with low ceilings and a heavy metal door. Hunched over laptops in its dim rooms sat the staff of the Anti-Corruption Foundation, Navalny's activist group. He founded it in 2011 to exploit the main weakness he saw in Putin's system: the insatiable greed of its courtiers.

On social media, the foundation became famous for exposing the garish wealth of these elites. Its reports were often based on forensic accounting and bank records. Some used drone footage of Italian villas owned by Putin's underlings. Others plucked evidence from photos that these officials or their relatives posted online, flaunting a yacht or luxury watches. One technocrat had a habit of flying his pet corgis to dog shows on a private jet. In his videos, Navalny delivered these findings in an irreverent style, like a wisecracking detective for the YouTube generation.

In late 2011, when a massive wave of street protests broke out to call for fair elections, Navalny was well-positioned to lead them. His blog had a massive following, and he had earned a reputation for incendiary speeches in the streets. "I'll chew through the throats of those animals," he told one crowd in Moscow that winter, gesturing at what he called the "crooks and thieves" in the Kremlin.

His rhetoric turned many people off. Russian liberals were alarmed by Navalny's early flirtation with the far right, including a pair of videos he released in 2007, one calling for the deportation of migrants, another comparing Islamist militants to cockroaches. The Yabloko party expelled him for such talk and other "nationalist activities." Putin's allies cast him as a right-wing radical, even a fascist.

In the early years of Navalny's career, we spent hours discussing his

PREVIOUS SPREAD: EVGENY FELDMAN—MEDUZA/AP; SERGEY PONOMAREV—THE NEW YORK TIMES/REDUX

views, issue by issue. On balance, his agenda struck me as center-right: he supported gun rights, strong borders, less government spending—nothing more radical than a typical Republican in Texas, or a Christian Democrat in Bavaria. But Navalny's politics were not driven by ideology. Above all, he wanted democratic change.

The state took notice. It first tried to put Navalny in a cell in 2012, when prosecutors charged him with embezzling timber. Navalny called the case "strange and absurd," but it gave police a pretext for searching his apartment, his office, even the workshop outside Moscow where his parents made wicker baskets. Soon after one of these raids, Navalny invited me to his office. The foundation's staff had swept the place for bugs and found a camera hidden in the wall, pointed through a pinhole at Navalny's desk. He shrugged as he showed it to me. "This is a war," he said. "I also want to take away everything these guys have. So why be surprised that they want to take everything from me?"

A few months later, prosecutors filed new charges, accusing Navalny and his brother Oleg of stealing from two companies. Both men were sentenced to three and a half years in a case that the European Court of Human Rights would later describe as "arbitrary and unfair." Oleg served much of that term in solitary confinement, becoming what his brother called a hostage of the Russian state. Alexei Navalny got off easier; the court suspended his sentence. As one Kremlin-aligned newspaper noted, putting Navalny behind bars "could turn him into Russia's version of Nelson Mandela." Yet setting him free brought risks too. When Navalny ran for mayor of Moscow in 2013, the official tally gave him nearly 30% of the vote.

A few months later, the revolution in Ukraine reminded Putin just how quickly a regime can fall. Then President Viktor Yanukovych, his ally in Kyiv, barely held out for two months before fleeing the country in a helicopter, unable to quell a wave of demonstrations against rampant corruption. Putin responded by sending troops to occupy Crimea and start a separatist war in eastern Ukraine. At home, he continued building defenses against a similar revolt. Roughly 400,000 troops were hired into a new police force, a praetorian guard trained to put down popular unrest. Its commander, a longtime Putin bodyguard, later issued a personal warning to Navalny, announcing in a video message that he would pound the dissident "into a juicy slab of meat."

Navalny was not deterred. In 2016, he announced plans to run for President. Authorities kept him off the ballot. But his campaign still set up offices nationwide. Its activists then ran in local elections, exposed corruption among the regional elites and spread the promise of a democratic Russia. Navalny spent much of his time visiting his regional offices around the country, often drawing massive crowds.

It was during one trip to the provinces that he fell violently ill. In August 2020, Navalny went to Siberia to shoot a video about corruption. On the flight home to Moscow, he turned to his press secretary, Kira Yarmysh, and said he felt strange, unable to focus. Within minutes, he was sprawled on the floor of the plane, groaning in agony and barely conscious. The pilot made an emergency landing in Omsk, where Navalny was rushed to a hospital. It took two days of public pressure before Putin allowed German doctors to evacuate Navalny to Germany. Blood tests there confirmed the cause of his illness: he had been poisoned with Novichok, a chemical weapon first synthesized by Soviet scientists and banned under international law.

Experts suspected the poison had been smeared on Navalny's clothes, passing through his skin into the bloodstream. When Putin was asked about the crime at a press conference, he made a joke of it. "Who needs him?" the President said of Navalny with a laugh. If Russia had wanted to poison him, Putin added, "we would probably have finished the job."

WHEN HE CAME OUT of a coma, Navalny had trouble recognizing his wife and children. The poison had attacked his nervous system, affecting his memory and motor functions. His wife later told me about the delirium and hallucinations that caused him to rip the IV tubes from his veins, spraying the bedsheets with blood. Weeks passed before he relearned how to use a spoon, to write, to walk and to wash himself.

Several months after the poisoning, Navalny felt well enough to resume his activism. His team gathered in Germany to investigate the attack. Using leaked phone and travel records, they worked with several news organizations and with Bellingcat, a London-based investigative outlet, to identify the assailants, mostly Russian security officers. Navalny himself called one of them, pretending to be a senior Kremlin official, and demanded to know why the attack had failed to kill its target. The would-be assassin, apparently believing he was on the phone with his superior, discussed the crime in detail, explaining that agents had sneaked into Navalny's hotel room in Siberia and smeared the toxin on his underwear.

Russian authorities had warned Navalny that he would be arrested upon his return to Russia, because he had failed to check in with his parole officer while he was in Germany. Yet on Jan. 17, 2021, he and his wife flew back to Moscow. Navalny insists the choice was easy. "There were no discussions with my friends, no emotional talks with my wife," he wrote me. "From the moment I opened my eyes, I knew I had to return."

At passport control in Moscow, several officers approached Navalny and led him away from his wife. His allies had clear instructions of what to do next. Within two days of his arrest, they released a second investigation their team had prepared while in Germany. It took aim directly at Putin, linking him to a secret palace on the Black Sea coast. Navalny's team had used a drone to film the property, which features an underground ice rink, two helipads, an arboretum, an amphitheater and a casino. The film racked up 100 million views on YouTube in a matter of days. Putin denied owning the mansion; his childhood friend from St. Petersburg, now a billionaire, claimed it belongs to him. Still, the film inspired tens of thousands of Russians to protest in the streets, chanting, "Putin is a thief!" as they marched through Moscow. Anticorruption rallies broke out in more than 100 cities and towns across Russia that weekend.

The Kremlin's response was fierce.

Kira Yarmysh, Navalny's press secretary, at his team's office in Vilnius on Jan. 13

RAFAL MILACH—MAGNUM PHOTOS FOR TIME

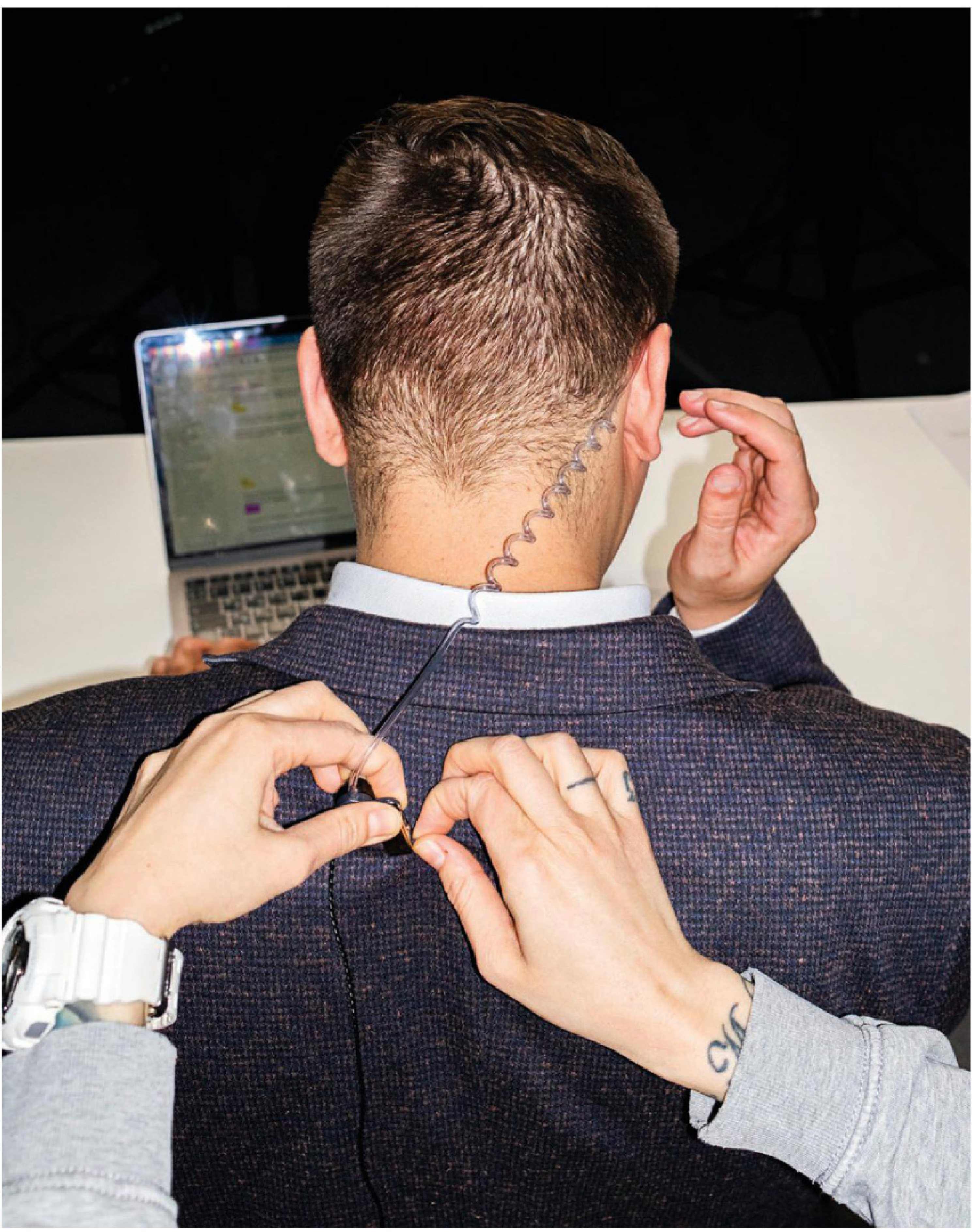
Thousands of protesters were arrested, and dozens of independent journalists and news outlets were later put on a state blacklist of "foreign agents." Anyone associated with Navalny, including his lawyers, found themselves in legal jeopardy. The elderly father of one of his allies was sent to jail above the Arctic Circle. One spring morning in 2021, a military counterintelligence unit raided the home and office of Ivan Pavlov, a member of Navalny's legal team, seizing case files and electronics. "Everything linked to Navalny is now irradiated with risk," Pavlov told me by phone from Tbilisi, Georgia, where he fled with his family. "We're talking about Putin's public enemy No. 1."

Last June, a court in Moscow designated Navalny's foundation an extremist group. Under Russian law, the ruling made it a crime to work with or support the organization, a legal status similar to that of ISIS or al-Qaeda. The foundation's regional branches shut down. Security forces pursued its staff, charging some with extremism. Many others fled Russia for fear of arrest.

Soon after, Navalny was summoned to the warden's office at Penal Colony No. 2. Inside he found a group of officials seated at a conference table. A portrait of a youthful Putin hung on the wall behind them. In a robotic patter, a guard read a proposal to change Navalny's status at the prison. He would no longer be treated as an inmate prone to attempting escape. Instead he would be deemed an extremist, aggressive and liable to indoctrinate his peers. The change was approved by unanimous vote.

Since then, a little plastic tile, resembling a cheap Christmas ornament, has been affixed to the foot of Navalny's bed with tape. It's inscribed with the words PRONE TO CRIMES OF A TERRORIST NATURE, a label that infuriates Navalny. Putin is the one "who ordered an act of terrorism—to kill a political opponent," he writes in his letters. "But it's my bed that has the label TERRORIST."

LAST AUGUST, on the first anniversary of the poisoning, the U.S. sanctioned a group of Russian security officers for trying to kill Navalny with a chemical weapon. Most of those identified in Navalny's investigation were on the list. Yet he was disappointed in the American response. "These are just the agents of Putin's will," he wrote me. "We're all tired of rolling our eyes, watching the U.S. impose sanctions on some colonels and generals, who don't even have any money abroad." It would be far more effective, he says, to go after Putin's own fortune and the bagmen who keep it for him in Western banks. "It's really simple," Navalny writes. "You want to influence Putin, then influence his personal wealth. It's right under your backside."



Navalny's foundation sent a similar message to the White House early last year, asking for sanctions against 35 of Russia's most senior officials and oligarchs close to Putin. The proposal has bipartisan support in Congress, where the blacklist was dubbed the Navalny 35. Its most vocal advocate has been U.S. Representative Tom Malinowski, a New Jersey Democrat and former diplomat in the Obama Administration. Navalny's "central insight," Malinowski told me, "is that corruption is both the Putin regime's reason for being and its greatest political vulnerability."

The Biden Administration has been vocal in condemning the Kremlin's attacks against Navalny and his movement. But it has avoided expressing support for his dream of political change in Russia, and it has not imposed the sanctions he proposes. One Kremlin insider, who is close to some of the people on Navalny's blacklist, told me that going after them would be ineffective, because none of the targets could change Putin's mind about Navalny, NATO or Ukraine. "Can you even imagine such a conversation? 'Vladimir Vladimirovich, maybe we should ease up. We've got a lot of money on the line.' Nobody would come to him with something like that," says the source. "You'd have to be an idiot." But the aim of the sanctions, Navalny told me, would not be to convince Russian billionaires to reason with Putin. It is to pressure them to turn against him.

In pursuing that goal, Navalny had long been careful to avoid foreign sponsors, not wanting to be perceived inside Russia as an agent of the West. That policy became moot once the state designated his organization a "foreign agent" last year. "It untied our hands," says Leonid Volkov, a longtime ally of Navalny who now helps run the movement from exile.

The group now openly calls for political backing from foreign governments and solicits money from private donors. When we met over dinner in November, Volkov was in Washington to speak before Congress on Navalny's behalf and drum up support. A few days later, he held the movement's first official fundraiser in New York City, inviting wealthy Russian expats to back their cause. Hundreds showed up, snapping selfies with Navalny's surrogates like they were celebrities.

The resulting windfall from such donors has helped pay for their new bases of operation in Eastern Europe. When I visited in January, their office in Vilnius, the capital of Lithuania, looked more like a media startup than a revolutionary lair, though freshly exiled activists are welcome to use its shower and rest on the beanbags that lean against the walls. Technicians were busy setting up a new TV studio, where Navalny's allies film video investigations that are broadcast into Russia, routinely finding an audience of millions. In the kitchenette, a poster shows a red *X* over two surveillance cameras, alongside a caption: THEY CAN'T SEE EVERYTHING.

The nation of Lithuania, a member of NATO and the E.U., has been happy to host the exiles, including numerous fugitives from Russia and at least two designated by Putin's regime as "terrorists." The Lithuanians have dismissed Moscow's demands to arrest members of the group. "Our history obliges us to welcome such people," Vytautas Landsbergis, the founding father of modern Lithuania, told me recently in his Vilnius apartment. "The question for us is whether they can liberate Russia from Putin the way we liberated ourselves from the KGB."

In the spring of 1990, Lithuania became the first Soviet republic to declare its independence from Moscow. Landsbergis signed that declaration, then faced down the Soviet tanks sent to crush the rebellion the following year. More than a dozen demonstrators wound up dead before the Kremlin backed off and let the country break away. Landsbergis, 89, retired long ago.

RAFAL MILACH—MAGNUM PHOTOS FOR TIME (3)

His grandson Gabrielius Landsbergis is now the nation's Foreign Minister. Between talks with NATO allies in January, he told me Lithuania is honored to offer a "safe space" for Navalny's organization to envision a Russia beyond Putin.

That Russia could be many years away. Under Russian law, Putin can stay in power at least until 2036, thanks to a constitutional amendment enacted last year. But if the West wants political change in Russia, Navalny writes, "We do not by any means have to wait for Putin's physical death." State repression could spark an uprising. Sanctions could instigate a palace coup. At times his letters seem almost impatient for Putin's Russia to degrade into an absolute dictatorship, because that would raise the risk of regime collapse, Navalny writes, "when the pendulum swings in the other direction."

There is no telling when that could happen, or how much blood would be spilled in the process. Yet here was Russia's most famous dissident, once poisoned and now imprisoned, daring the state to do its worst. The paradox helps explain why Navalny decided to return. In exile he would be just another gadfly, too easy for Putin to ignore. In prison he is a reminder of what Russia has become, and a symbol of the freedoms that it lost.

Near the end of our correspondence, I asked Navalny about his regrets. Isn't Putin better off with him in prison and his movement in exile? "He made things worse for himself," Navalny replied. "It's clear that this was a personal, emotional decision on Putin's part. First I didn't die from the poison. Then I didn't turn into a vegetable as the doctors had feared. Then I had the gall not only to return but, once in Russia, to release an investigation about Putin's own corruption."

At their TV studio in Vilnius, Navalny's allies film investigations that are broadcast into Russia

If Russia has changed, Navalny has not. His statements still crackle with the same irreverent humor. His foundation remains determined to embarrass the Kremlin and investigate its secrets. "He's the same," his wife told me after visiting him in prison last November. "What he's been through in the last year, it would be enough to break a normal person. But not him. He's not giving up. Not for a second."

—*With reporting by* LESLIE DICKSTEIN *and* SIMMONE SHAH/NEW YORK; *and* NIK POPLI/WASHINGTON ◻

BEIJING 2022
Winter Olympics
Special Report

THE REAL CHLOE KIM IS READY FOR HER MOMENT

FOUR YEARS AFTER BECOMING A BREAKOUT STAR, THE SNOWBOARDING PRODIGY IS BRINGING HER FULL SELF TO BEIJING

BY SEAN GREGORY

KIM, PHOTOGRAPHED IN LOS ANGELES IN DECEMBER, WILL DEFEND GOLD IN BEIJING

PHOTOGRAPH BY BRYAN HUYNH COLLECTIVE FOR TIME

After Chloe Kim returned home from the 2018 Olympics in South Korea, she put her gold medal in what felt at the time like the right place: a trash bin at her parents' house.

KIM WAVES THE U.S. FLAG AFTER WINNING OLYMPIC GOLD IN PYEONGCHANG

"I hated life," Kim, now 21, recalls over plates of pad thai in the airy four-bedroom home in the west side of Los Angeles she shares with her boyfriend, skateboarder Evan Berle. It's early December, and a 10-ft. Christmas tree with an ornament featuring the paw print of her beloved mini Australian shepherd, Reese, looms over the living room. Upstairs, a mishmash of snowboarding awards are piled into a box, since Kim and Berle haven't built enough shelving to display all the hardware. But it wouldn't be surprising if many of them stay there. Kim has a conflicted relationship with the plaudits she has racked up on her path from child halfpipe prodigy to the world's top female snowboarder. And none weighed heavier on her than the gold medal from the Olympics in PyeongChang.

It didn't stay in the garbage for long. But fame came fast and hard for Kim, whose gravity-defying twists and flips made her the youngest female Olympic gold medalist in snowboarding history. She was an unguarded 17-year-old, quick with a smile and a joke (her tweets about eating churros and feeling "hangry" during the competition were the stuff of a viral marketer's dream). Suddenly, she was making the rounds of late-night shows, got a Barbie doll designed in her likeness and was shouted out by Frances McDormand at the Oscars. In South Korea, where Kim's parents were born and her extended family still lives, she was celebrated as a hero. The Seoul Broadcasting System created a short documentary on her.

Beneath the adulation, Kim was still a teenager living with her parents, struggling with the constraints of sudden celebrity and the post-Olympic depression common to elite athletes who spend their lives training for a moment that comes only once every four years. She remembers it hit her shortly after PyeongChang, when she went to a Corner Bakery near her family home in Southern California. Kim was wearing mismatched pajamas and unmade hair—she was just out to grab a sandwich. But when she walked in, everyone turned around to stare. She panicked, ran out of the store and drove away. "The minute I come home, I can't even go to my goddamn favorite place," Kim says, remembering what it felt like. "It makes you angry. I just wanted a day where I was left alone. And it's impossible. And I appreciate that everyone loves and supports me, but I just wish people could understand what I was going through up to that point. Everyone was like, 'I just met her, and she's such a bitch.' I'm not a bitch. I just had the most exhausting two months of my life, and the minute I get home I'm getting hassled. I just want to get my f-cking ham and cheese sandwich and go."

Bubbly is Kim's "big brand," she says, her fingers making air quotes as she speaks the words. And it has helped make her extraordinarily successful off the mountain: her annual endorsement income is in the mid-seven figures, according to an industry source. Kim is, indeed, warm in conversation, genuinely friendly and easy to laugh. But four years of growing up in the spotlight have both hardened her exterior and made her willing to reveal what's going on behind the perma-smile. Kim now speaks openly about the racism she experienced competing in a mostly white sport, and how hate crimes against Asian Americans have left her feeling vulnerable and scared. She embraced therapy after the pandemic made her recognize the need to tend to her mental health. And she took time off from snowboarding to attend college, hoping to experience life like a normal teenager.

"I don't care anymore," Kim says, wrapping up lunch. "I guess I would tell my younger self that even though things get hard and people are mean to you or whatever, it'll get

LOÏC VENANCE—AFP/GETTY IMAGES

better and you're going to realize that you have so much good happening in your life, that the bad isn't going to hurt you. It's just annoying. It's like an annoying mosquito in the background, just flying around."

What hasn't changed for Kim is her dominance on the halfpipe. In PyeongChang, Kim became the first woman to land back-to-back 1080s—three full rotations in the air—at an Olympics, and a few months later she was the first woman to land a front-side double cork 1080—essentially flipping herself upside down twice during an aerial rotation—in a halfpipe. "She's pushing the boundaries of what's possible for women's snowboarding," says Arielle Gold, the recently retired U.S. snowboarder who won bronze in 2018. "She's doing tricks that some of the men don't even want to. It's pretty crazy. She is the greatest women's snowboarder of all time, by far."

At the Beijing Olympics, which start Feb. 4, Kim is the overwhelming favorite to win gold. NBC will feature her in prime-time coverage, and blue-chip companies—Nike, Toyota and Procter & Gamble are among the sponsors that make Kim the highest-paid female snowboarder in history—have built ad campaigns around her. Few roles carry more pressure than being an Olympic front runner—fall short, and you have to wait four years for a shot at redemption. But if Kim thrived in PyeongChang in part because she hadn't experienced the full wattage of global superstardom, she's ready for Beijing because she's now faced it head-on. By freeing herself of the happy-go-lucky facade, embracing the scars and struggles of the past four years and living her authentic self off the halfpipe, the real Chloe Kim is ready for her moment.

KIM IS AN UNLIKELY ADDITION to snowboarding's Mount Rushmore. Her family didn't grow up riding; her dad Jong Jin took up snowboarding as a hobby and took Chloe along. As she improved, Jong Jin would wake her up around 1 a.m. on Saturdays for the more than five-hour drive north from Orange County to Mammoth Mountain so Chloe could practice. Jong Jin, who years later quit his job as a manufacturing engineer to support Chloe's career, scooped her up out of bed, carried her to the car and buckled three seat belts on her in the back seat of his Honda Pilot. "I was just like a mummy, strapped down," says Chloe. "Then I would wake up and I'd be in Mammoth."

Those long drives paid off. She started working with the U.S. national team at 13. Kim was usually the only Asian American on the mountain, which at times felt isolating. When she was a national-team rookie, she attended a team dinner at another athlete's house. Everyone put their dishes in the dishwasher; but Kim had never used a dishwasher before, so she stood nervous and frozen, not knowing what to do. "We did everything by hand in my Korean household," Kim says. "I waited for everyone to go somewhere else. And then I just scrubbed my dishes by hand and frantically searched for where to put them back. It was embarrassing. Those moments are kind of like, 'Oh, I come from a very different place.'"

The alienation she felt was deepened by vitriol on social media. After Kim won her first major medal, a halfpipe silver at the 2014 X Games, she posted a picture of the prize on Instagram. In her direct messages, Kim says, people told her to go back to China and chastised her for taking medals away from white Americans on the team. She was 13. "I ended up crying myself to sleep on the best night of my life," Kim says, recalling the memory while slinking into her cushy white living-room couch. "At that point, you're like, 'O.K., who can I turn to? Who has probably dealt with this before?' I would constantly look for anyone. But there was no one."

Kim would have competed for the U.S. team at the 2014 Winter Olympics were it not for the minimum age requirement of 15. Four years later in PyeongChang, she more than made up for lost time. Kim landed her back-to-back 1080s in her final run, even though she had already clinched gold. The win cemented Kim's celebrity in two countries, and the crowds in South Korea mobbed her whenever she left the Olympic Village. When the family went out, Kim's parents and two sisters huddled around her to protect her from prying eyes. The crush of sponsor and media obligations left just one night to actually celebrate her win with her South Korean relatives. "The night before leaving Korea, we all gathered at our home, and Chloe's grandmother got to try on the medal," says Kim's mother Boran. "We each got to try it on. So we celebrated in that way. But at that moment, I think Chloe was going through a very hard time."

Kim did enjoy some of the surreal trappings of fame. Michael Keaton texted her congratulations. "Thanks, Batman," she says now. McDormand said that winning an Oscar "is what Chloe Kim must have felt like after doing back-to-back 1080s in the Olympic halfpipe." At a packed afterparty for the 2018 ESPY Awards, where Kim won Female Athlete of the Year, the rapper G-Eazy handed her the mic and asked her to rap Cardi B's vocal section of his song "No Limit." She nailed it.

But as Kim returned to competition, she started to lose her love of the sport. She says teammates (Kim won't say who) who resented her success began to bully her on social media. She broke her ankle at the U.S. Open in March 2019. "I was so burnt out, I just couldn't do it anymore," says Kim. "I felt a little lost. I was in a pretty low, dark place."

IT WAS TIME for something new. Kim, who had been homeschooled while traveling the world for competitions, decided to take a break from snowboarding and go to college instead. She enrolled at Princeton University in the fall of 2019. She went, in part, to escape her celebrity. But fame was hard to shake, even on an Ivy League campus that counts princes and Presidents among its alumni. During her first night on campus, Kim attended an ice cream social. "As I was leaving, the girls came up to me, they're like, 'Chloe, can we get a picture, can we get a picture, can we get a picture?'" she says. "And I was like, 'I don't want to be here as the snowboarder. I want to be here as a student. I want to be like everyone else. I want to be normal.' That's why I came here. And I was like, 'No, you can't get a photo with me. I don't want this to be a thing, because it's going to make me uncomfortable.' And immediately after that, everyone was like, 'Oh, she's such a bitch. Blah blah blah.'"

Kim immediately had regrets. "She'd call us and say, 'Mom, people are staring at me and I feel so uncomfortable,'" says Boran. "She'd call crying." Kim began to avoid the dining halls and other common areas—the very places where friendships are formed. "We were eating off campus a lot," says Christian Pollard, a junior premed student who didn't know who Kim was when they met as first-year students. "She didn't want to put herself in that space."

Kim says she asked that her dorm and room number be taken off Tigerbook, a directory that listed students' addresses on campus. "I've had my fair share of stalker issues," Kim says. Tigerbook removed addresses for all students, citing university privacy restrictions. Kim says she heard classmates blaming her for the policy change. "Every time I did something for myself," Kim says, "it ended up being a whole issue."

Things improved as the semester wore on and

'I felt a little lost. I was in a pretty low, dark place.'

COUNTERCLOCKWISE FROM TOP LEFT: KIM, AT AGE 6, IN CALIFORNIA; WITH HER MOTHER BORAN AT 11; AT 13, SNAGGING SILVER AT THE 2014 WINTER X GAMES

FROM LEFT: COURTESY CHLOE KIM (2); RJ SANGOSTI—THE DENVER POST/GETTY IMAGES

the novelty of having a gold medalist on campus wore off. Kim shifted her interest from chemistry, which she found too difficult, to anthropology. And she sought out friends who didn't know much about her. Pollard, who grew up on an Alabama cattle farm, texted Kim during Princeton's first snowfall, wondering if her friend from Southern California had ever seen the powdery white stuff before.

Perhaps most important, college let Kim be around other talented, driven people who didn't always succeed. After years of chasing perfection, it was a revelation. "Everyone around me was falling apart when it came time to do an exam," Kim says. "It's a sh-t show. People are hiding away in the darkest part of the library until 3 in the morning, and then coming out like zombies at 7 and doing it all over again. That was great. It was just like, 'I need this. I need to see other amazing people fall apart.'"

After the pandemic shut down campus in March 2020, Kim chose to return to competitive snowboarding. She hasn't ruled out going back—which would make her mother happy. "I'd like Chloe to go to Princeton," says Boran. "But Chloe's happiness comes first. Chloe is now 21 years old and she can make decisions on her own, so I support her decisions."

But Kim's short time at school has had a lasting effect. She credits it with helping her be open to seeing a therapist and processing some of the fear and anger she has as a result of racist messages like the one from April: "You dumb Asian bitch," it read. "Kiss my ass." Similar slurs regularly fill her social feeds. That hate, combined with the rise in anti-Asian violence, has been scarring. "I'm scared to do anything by myself, and it sucks," Kim says. "I feel trapped." When she's out to dinner with family, they often call her a fake name so as not to draw attention. They've tried Jenny. And Cindy. "It works," Tracy, Kim's older sister, says, "most of the time."

Kim says therapy has been key to helping her unlock feelings she has long kept inside. "Just being able to let those things out that you just tuck in your little secret part of your heart helps a lot," she says. "I feel much more at peace now."

AS THE BEIJING GAMES have drawn nearer, Kim's focus has intensified. Always committed to training in the snow, she started hitting the gym with purpose too. Kim's trainer, Roy Chan, has Kim doing single-leg squats and other core exercises to make sure she can sustain the force of her landings. "She pretty much doesn't take any days off," Chan says. "In a lot of cases, athletes sometimes just fall out of love with the extracurricular work that they need to sustain their season. But with Chloe that's not the case."

Kim feels the weight of expectation. And she knows her situation is not that different from Simone Biles' before the Tokyo Olympics in July. Their acrobatic sports have frightening similarities too: if Kim's mind isn't right during a routine, she risks life-threatening damage. Pretending that the parallels with Biles don't exist "is the worst thing you can do," says Kim's coach, Rick Bower, who also led the U.S. national halfpipe team from 2010 through last season. "To talk about it as it comes up, and not push it away or anything, that's our plan."

Kim says Biles' decision to withdraw from competition in Tokyo rather than risk injury is a source of strength for her and other athletes. "Having that comfort knowing that, 'Hey, I'm doing something really dangerous, or I'm doing something that is hard on my body, if I mentally can't do it, then I shouldn't,'" says Kim. "It's in my best interest. Showing the world that you have to put yourself first and give up something like an Olympic gold medal, that was very touching and inspirational."

For now, her plans for Beijing include unveiling three new tricks. "I'm so excited," she says. "They're an upgrade from everything I've done." She won't say more, which makes sense, but also demurs when asked more generally about the Winter Games. "Don't have too many expectations," she says softly. "Just let me vibe. I'm just trying to chill." She gives it a beat. Then, in a more forceful voice, Chloe Kim gets real. "No, I'm just kidding. You just expect a lot out of me. I'm going to go off." *—With reporting by* SANGSUK SYLVIA KANG, NIK POPLI *and* SIMMONE SHAH ◻

18+

WHAT IS
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AVAXHOME -

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ATHLETES TO WATCH

FROM TEEN SKATING PHENOMS TO THE "USAIN BOLT OF CROSS-COUNTRY," THESE OLYMPIANS ARE POISED TO SOAR ON THE ICE AND SNOW IN BEIJING

Kamila Valieva

FIGURE SKATING, RUSSIAN OLYMPIC COMMITTEE

Each time Kamila Valieva steps on the ice, she shatters records. The 15-year-old Russian figure-skating champion combines a balletic style with technical mastery of the most challenging jumps—which she performs with her arms high above her head, making the rotations more difficult to control upon landing, thus earning her extra points in a sport in which every degree of difficulty matters. Valieva holds the record for the highest scores recorded in women's skating under the current judging system, which she could break yet again in Beijing.

There, Valieva's stiffest competition is likely to come from teammates Alexandra Trusova and Anna Shcherbakova, both 17; the Russian squad could sweep the medals. All three train with Eteri Tutberidze in Moscow, and Valieva has said the atmosphere at the rink drives her to push herself harder as one skater after the other flies off the ice with quad jumps. "You can't just stay on the sidelines," she recently told the Olympic Channel. "Rivalry is always good, in all sports." *—Alice Park*

David Wise

FREESTYLE SKIING, U.S.

An avid hunter and father of two young kids (ages 9 and 6), David Wise is the only half-pipe skiing gold medalist the Olympics have ever known: he stood atop the podium in the event's 2014 debut in Sochi and four years later in PyeongChang. "How cool it would be to have a career where I won three Olympic gold medals in a row," Wise said in October. "I don't feel any pressure to do that. But man, that would be cool."

Wise raises animals on his farm in Reno, Nev., and relishes pushing his limits beyond the typical training regimen. He recently told NBC-Olympics.com that the most grueling workout he's ever done was a "seven-day solo moose hunt in grizzly-bear country in Alaska," a quest that seems to have helped him: Wise and U.S. teammate Alex Ferreira finished first and second in PyeongChang, and should duel for gold yet again in Beijing. "I'm still in a state in my career where I'm trying to find what the limits are for what I can do on a pair of skis," Wise says. His relentless quest to find out could lead to yet another Olympic gold. *—S.G.*

Erin Jackson

SPEEDSKATING, U.S.

After Erin Jackson, the top-ranked women's 500-m speedskater in the world, slipped on the ice at the U.S. Olympic trials in Milwaukee on Jan. 7, her Olympic hopes seemed shattered. Earlier in the season, Jackson became the first Black American woman to win a long-track World Cup race; she's won four World Cup gold medals this season. Jackson's absence would have robbed the U.S. of a medal favorite—and the Beijing Games of a potential breakout star.

"World No. 1 speed skater Erin Jackson to miss Olympics after slip at U.S. trials," read one headline. Which, it turns out, was wrong. Luckily for Jackson, a longtime friend sympathized—and did something extraordinary. Three-time Olympian Brittany Bowe, who like Jackson grew up as an inline skater in Ocala, Fla., had qualified at her strongest distances—1,000 m and 1,500 m—as well as 500 m. So Bowe relinquished her 500-m spot. "First and foremost, Erin has earned her right to be on this 500-m team," Bowe said. "No one's more deserving than her to get an opportunity to bring home a medal." While this wasn't the way she expected to qualify, a thankful Jackson has promised to be the loudest voice in the oval cheering Bowe during her races. "I've looked up to Brittany ever since I was a kid," Jackson has said. And with that, the Beijing Olympics had its first feel-good tale.

Jackson has called inline skating her "first love," and she's also competed in roller derby; she was the U.S. Olympic Committee's female Athlete of the Year for roller sports in 2012, 2013 and 2015. But those pursuits have no Olympics. So she turned to the ice. Just four months after committing herself to training, when she was 25, Jackson qualified

for the 2018 Olympics in PyeongChang, where she finished 24th in the 500 m. She's a safe bet to do far better in Beijing.

No matter how she fares, though, Jackson has set herself up for a future off the ice. Jackson graduated cum laude from the University of Florida, with a B.S. in materials science and engineering. She also has an associate's degree in computer science and is pursuing another associate's degree, in exercise science and kinesiology.

Jackson hopes to inspire more people of color to take up speed-skating ranks. "It's just helpful to see someone like you doing something because then it's like, Oh, maybe I can do this too," Jackson said at the U.S. Olympic and Paralympic Committee media summit in October. "Because if you look at the sport, there aren't too many of us." In the spotlight of Beijing, Jackson could go a long way toward helping to change that.

—*Sean Gregory*

GETTY IMAGES (5)

Johannes Hosflot Klaebo

CROSS-COUNTRY SKIING, NORWAY

Johannes Hosflot Klaebo, the Norwegian cross-country skiing superstar, has been called the Usain Bolt of his sport. Indeed, he has said the Jamaican sprinting legend inspires him, and once jokingly challenged him to a race. Like Bolt, Klaebo, 25, intimidates rivals and competes with swagger, celebrating dominant wins before he crosses the finish line.

Klaebo's success is crucial for Norway, his home country of 5 million, which has won more winter medals than any other nation, taking home 39 in 2018, including 14 golds. Klaebo won three of them: in the individual sprint, the 4 × 10-km relay and the team sprint.

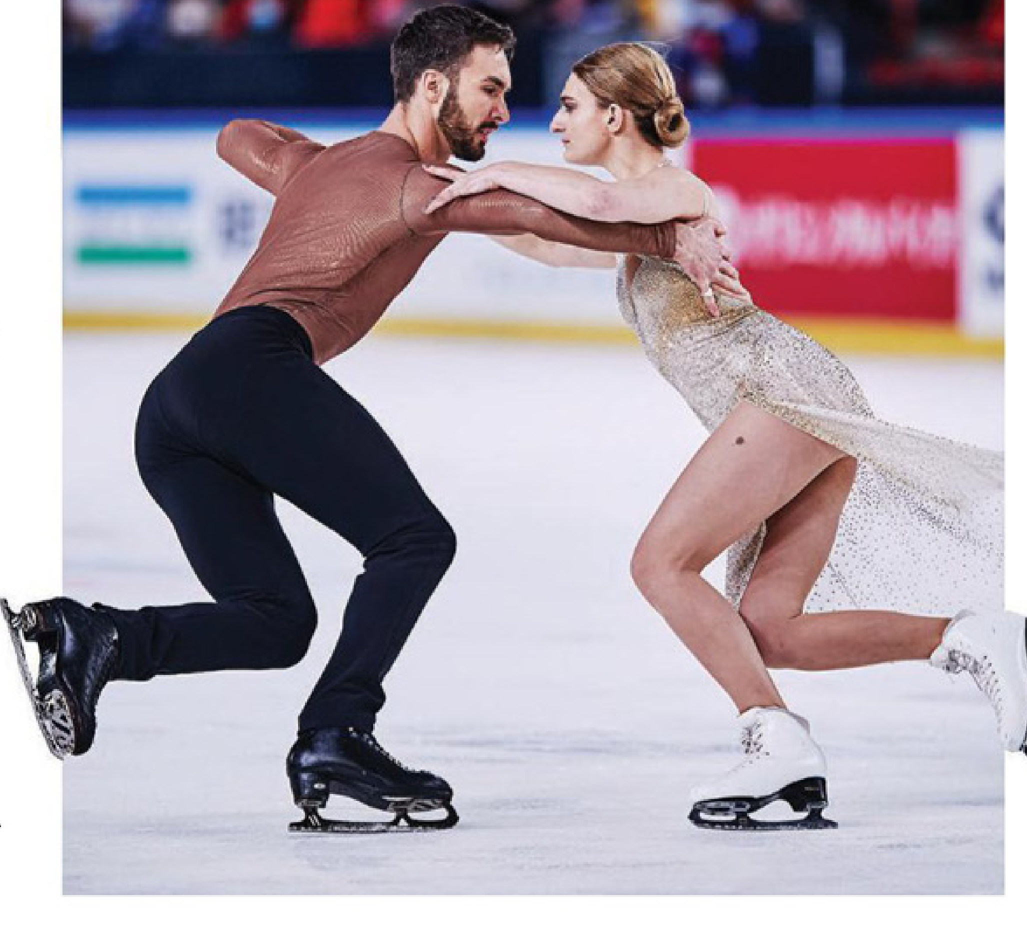
Norway could bring home some 45 medals this time around, according to the predictive data company Gracenote. If so, Klaebo will be leading the way. Since PyeongChang, he has won six more world-championship medals.

His boyish looks and outgoing personality have earned him a bit of a cult following; headlines have compared him to Justin Bieber. "Ho ho ho, Santa is excited for Christmas tomorrow," he wrote on Instagram on Dec. 23, from a bathtub in a Swiss hotel; he sported a beard made out of suds. If anyone can make cross-country skiing must-see TV in Beijing, it's Klaebo.

—*S.G.*

Gabriella Papadakis and Guillaume Cizeron

ICE DANCING, FRANCE



Ice dancing has long toiled in the Olympic shadow of figure skating, its more acrobatic cousin. But the sport is poised to be a headliner in Beijing, thanks to a slate of incredibly talented and highly competitive teams that fuse the elegance of ballroom dance with the athleticism of pairs skating. The favorites among them are Gabriella Papadakis and Guillaume Cizeron, who won silver at the 2018 Olympics. Their free dance to *Moonlight Sonata* in PyeongChang was a master class in deep edges, rich emotion and perfect synchrony.

It wasn't quite enough to earn gold. But Tessa Virtue and Scott Moir, the Canadian team that beat them, have since retired, and Moir is now one of their coaches. Like most of their closest competitors in Beijing, Papadakis and Cizeron train at the Ice Academy of Montreal, which has become a mecca for the world's most talented ice dancers. Each counts on the magic touch of the academy's co-founders, the husband-wife coaching team of Marie-France Dubreuil and Patrice Lauzon.

For Papadakis and Cizeron, their signature program includes understated yet powerful precision and a subtle remastering of familiar classics, epitomized by both their *Moonlight Sonata* free dance and their dance for this season—a haunting, modern version of a tango to a cello and piano composition. The fusion of traditional and contemporary isn't jarring in their hands, owing to an effortless harmony of their skills that began when they started skating together a few years after Papadakis invited Cizeron to her 7th-birthday party in Clermont-Ferrand, France. At the time they were coached by Papadakis' mother, but as they moved up the skating ranks and gained international success, the pair moved to Montreal in 2014.

As COVID-19 swept the globe, the team opted not to compete last season, deciding that traveling to events and potentially being quarantined would be too disruptive to their training schedule. Then, each contracted COVID-19 last summer. But since their return to the ice last fall, the duo is undefeated leading up to the Games, a streak they're hoping to keep against the world champions, Russia's Victoria Sinitsina and Nikita Katsalapov.

—*A.P.*

John Shuster

CURLING, U.S.

Every icy quadrennial, America rekindles its obsession with curling, a beloved Canadian pastime that now counts even Mr. T as a vocal fan.

In 2018, John Shuster, a former bar manager and Dick's Sporting Goods salesman, was the toast of his sport after leading the U.S. to its first ever Olympic gold. It was a stunning turnaround after Shuster was effectively cut from the U.S. national team following rough showings in the previous two Olympics; after PyeongChang, his self-described team of rejects came home as celebrities, ringing the bell at the New York Stock Exchange and dropping the ceremonial first puck before an outdoor NHL game at the Naval Academy.

Three of the four "rejects"—Shuster, Matt Hamilton and John Landsteiner—are back for Beijing, where they will be tested by strong teams from Canada and Sweden. While the 39-year-old Shuster is considered old in most sports, "in our sport, I'm still kind of right in the middle," he says. "I'm kind of in my prime." —*S.G.*

Alysa Liu

FIGURE SKATING, U.S.

One month before the 2018 Olympics four years ago, Alysa Liu introduced herself to the skating world by winning the U.S. junior championship with an impressive suite of seven triple jumps in her free-skating program. Her skills were good enough for the senior level, but she was too young to compete in that group until she turned 16, which happens to be how old Liu is this Olympic season. She's now three inches taller, a two-time national champion and a bit more world-wise, but her jumps still set her apart. Like most elite skaters, Liu started early. She learned the double axel when she was 9, and by 2017, she had a full array of triple jumps. In 2019, Liu became the first U.S. woman to land a quadruple jump, in her case a quadruple lutz, in a competition, and she is the first woman from any country to land a quadruple lutz and a triple axel in the same program.

For all of her talent, the California native's road to Beijing has had its challenges. Liu's growth spurt has made her triple axels less consistent this season. And at January's U.S. nationals—a key event in determining the Olympic figure-skating team—Liu withdrew after testing positive for COVID-19. But based on her strong performances this season, she petitioned successfully to earn a spot on the team for Beijing.

Liu's Olympic journey has also meandered through Delaware, California, Colorado and Italy, as she searched for training ice during pandemic lockdowns and cycled through coaches. In June 2020, Liu and her father Arthur, an attorney, decided it was time for a change, and split with her longtime coach to work with Massimo Scali and Jeremy Abbott in Oakland, Calif., near her home in Richmond, as well as in Italy. A year and a half later and just two months before the Olympics, Liu made another switch, moving to Colorado Springs to train with Christy Krall, Drew Meekins and Viktor Pfeifer. The peripatetic existence doesn't seem to bother her; with teenage nonchalance, she shrugs off the change so close to the Games, saying it helps to get "new opportunities and experiences."

Liu represents Team USA's best hope for a women's medal in Beijing. She'll face tough competition from the Russian team, but insists she's up for the challenge. "I have basically been training forever for this moment," she said after being named to the Olympic team. "And I'm really happy with the decisions I made, because apparently they were all pretty good ones because I'm here right now." —*A.P.*

Sara Takanashi

SKI JUMPING, JAPAN

Few athletes have soared like Sara Takanashi. The 25-year-old became the youngest ski jumper to win a World Cup event—she did it at 15—and she owns the all-gender record for the most World Cup victories (61) and podium finishes (110), as well as four World Cup overall titles. Born in Hokkaido, the northern Japanese island that is home to 1972 Olympic host Sapporo, Takanashi started out in ballet. But after trying ski jumping at the age of 8, she was hooked.

Despite her dominance in the sport, Takanashi will be chasing her first Olympic victory in Beijing. Women's ski jumping was only added to the Olympic program for the 2014 Sochi Games after a protracted gender-equity fight. Takanashi finished off the podium in Russia; she called it "dreadfully disappointing," and the result left her in tears. She won bronze at the 2018 Games—another letdown. "I felt like a piece of my heart was missing," Takanashi told Olympics.com. Don't bet against her in Beijing. —*S.G.*

GETTY IMAGES (6)

Sarah Nurse

HOCKEY, CANADA

Growing up in hockey-mad Ontario, Sarah Nurse made gold medals out of construction paper. In 2018, Nurse fell just short of the real kind when Canada—the reigning five-time Olympic champ—lost the gold-medal game to the U.S. in a 3-2 shoot-out. A championship rematch in Beijing wouldn't be surprising.

Nurse, a biracial woman competing in a majority-white sport, will be playing for something more than her first Olympic gold. "Black Lives are more important than sports. PERIOD," Nurse, 27, wrote on Twitter in August 2020, as North America reckoned with its history of racial injustice. "I'm going to need hockey, especially, to understand that." A week later, Nurse was appointed to the board of the Professional Women's Hockey Players Association; she counts increasing diversity in the sport as one of her goals.

—S.G.

Nathan Chen

FIGURE SKATING, U.S.

A world champion and gold-medal favorite heading into the 2018 PyeongChang Games, Nathan Chen made uncharacteristic mistakes in two programs and finished just off the Olympic podium. He has had four years to ready himself for redemption.

For Beijing, the 22-year-old Yale University student is reviving two programs that earned him the highest scores of his career. He will need to nail them. The competition in Beijing is fierce: U.S. teammate Vincent Zhou, who beat Chen earlier this season, and a squad of Japanese skaters, including reigning Olympic gold medalist Yuzuru Hanyu, are all strong contenders for the podium.

But Chen has proved that he can rise above the competition; after those disastrous skates in 2018, he pulled off the highest-scoring free program of PyeongChang, complete with six quadruple jumps, that propelled him from 17th to fifth in the final standings. Don't ever count Chen out.

—A.P.

Mikaela Shiffrin

ALPINE SKIING, U.S.

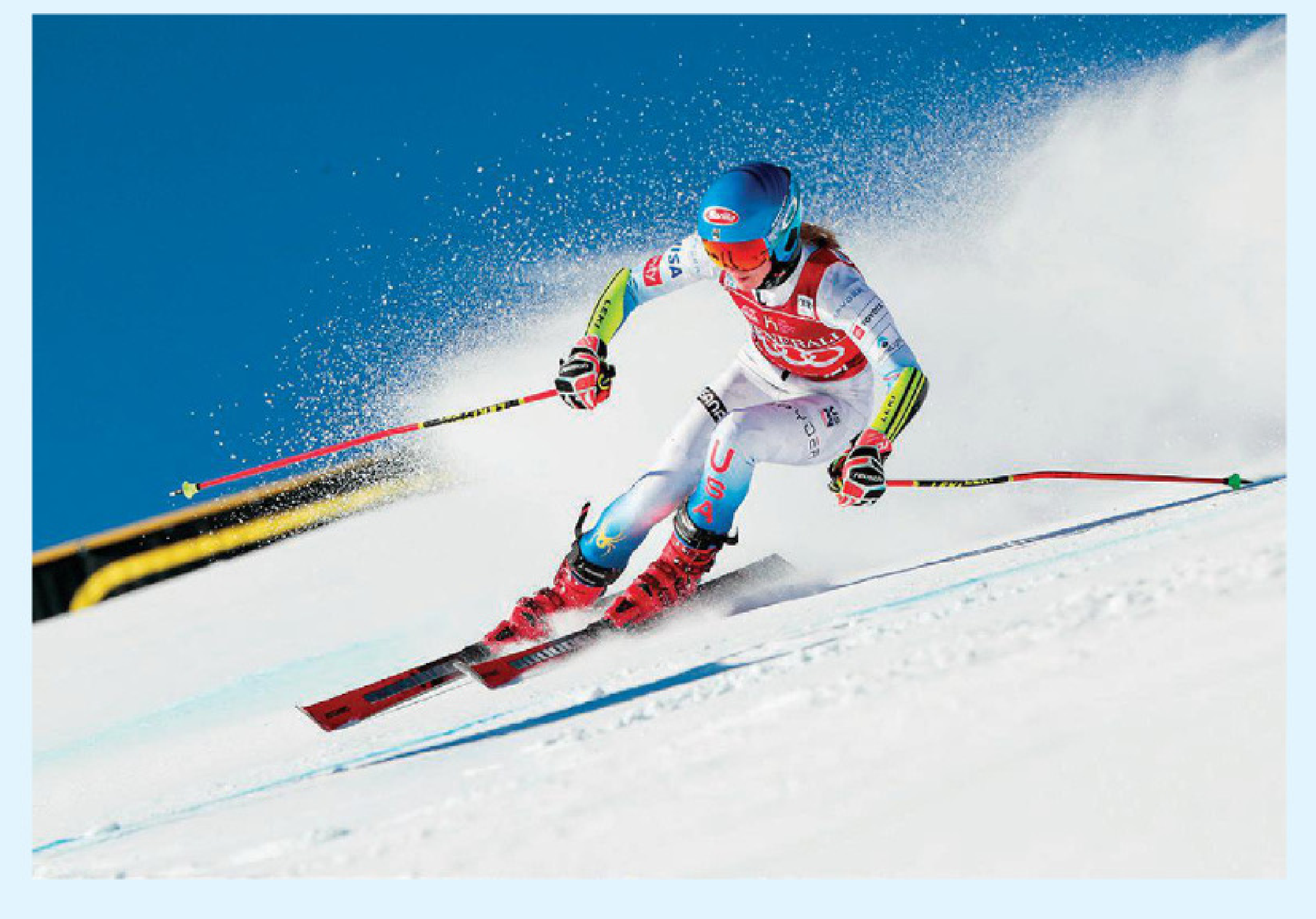
On Jan. 11, after U.S. skier Mikaela Shiffrin won her 47th career World Cup slalom race at a night event in Austria—breaking the record for most wins in a single ski discipline—she let her emotions go. "I'm just crying a lot lately," Shiffrin said.

According to Shiffrin's head coach, Mike Day, those were "tears of everything." There was joy: Shiffrin, a three-time Olympic medalist who will make her third Olympic appearance in Beijing, came back from fifth place to best rival Petra Vlhova and leave little doubt that she's the greatest slalom skier of all time. There was relief: Shiffrin tested positive for COVID-19 in late December, grounding her in Europe for around 10 days. And there was sadness because Jeff Shiffrin—her father, mentor and biggest champion—wasn't there to witness the historic win. In February 2020, Jeff died unexpectedly of a head injury after an accident in his Colorado home. "Dad would have been really, really proud," says Shiffrin's older brother, Taylor, of his sister's record-breaking win.

Shiffrin considered retiring after her father's death. "There were a lot of moments where I wondered if she was going to be able to get back to a point where she could enjoy what she was doing and be successful at it," says Day.

Shiffrin seems to have found her groove again, and she'll aim to keep it going in Beijing, where she could race in all five alpine events: her technical specialties (slalom and giant slalom), the speed races (downhill and super-G) plus the combined (one run of slalom, one downhill). Janica Kostelic of Croatia holds the record for Olympic alpine golds, with four; Shiffrin has two, and no U.S. alpine skier—male or female—has won more.

Records are great, of course. But through the tragedy, the Shiffrins have gained perspective about the important things beyond the podium. "Having the outcome that you want from an Olympic race, or not having the outcome, really does pale in comparison to some of the pains and experiences that we've had," says Taylor. His message for his sister? "Ski fast, have fun, stay grounded," he says. "We're still gonna have many years of fun and enjoyment after these Olympics, and that's something to look forward to, no matter what." *—S.G.*



AN OLYMPIAN TASK

CHINESE OFFICIALS ARE BETTING ON A ZERO-COVID POLICY TO SAVE THE GAMES. BUT EXPERTS HAVE DOUBTS

BY ALICE PARK

HOSTING THE OLYMPIC GAMES IS A DAUNTING CHALLENGE during any year. Add a global pandemic, and the logistics of welcoming the world's athletes in while keeping the virus out become complicated fast. But China believes its aggressive stance against COVID-19 is up to the task. While the rest of the world is struggling to keep up with the virus, China's strategy is to stay ahead of it. With its so-called "dynamic zero-COVID-19" policy, health officials try to contain any new cases by quickly testing, contact tracing, isolating and instituting lockdowns that block the spread of the virus.

China's plan for crushing COVID-19 during the Beijing Olympics is just as draconian. If it works, the country's approach could become a leading example of one way to learn to live with SARS-CoV-2: detecting new cases and extinguishing them as quickly as possible. If it doesn't, this year's Olympics could be a sobering lesson in the hubris of trying to keep up with a virus as adaptable as this one has proven to be.

China has used a "zero COVID" approach over the past two years with impressive results—even at the expense of greatly inconveniencing residents. A month before the Games were scheduled to start, government officials issued restrictions for the 14 million people living in the port city of Tianjin after a cluster of 20 cases erupted. In the immediate area where the infections occurred, people were confined to their homes, while in outlying areas, residents had to comply with restrictions like staying indoors (except for one person per household, who was allowed a food-shopping trip every other day) or having to remain in their neighborhoods. On Jan. 17, after an office worker in Beijing tested positive with the new Omicron variant, the entire building was abruptly locked down with employees still inside. Government officials lugged in bedding and food for the stranded workers, who will likely only be allowed to leave once they test negative after a designated period of time. The home of the office worker who tested positive was sealed off as well, and neighbors were tested.

While the measures seem extreme, they appear to work, at least according to the latest government COVID-19 tallies, which political and public health leaders have criticized for downplaying the actual impact of the pandemic. If accurate,

China's reported case numbers are "way, way, way lower than what we have in the U.S.," says Jeremy Luban, a professor at the University of Massachusetts Medical School. Currently, China has reported just over 5,000 cases in the past month, compared with more than 15 million in the U.S. "The idea that we have taken in the U.S. is to flatten the curve so fewer people die. China's concept is even before that: don't get a curve."

China's graph of new infections over the past year is the complete opposite of that of the U.S. While average cases in China peaked in February 2020 at just under 70,000 per month and then steadily declined—with only a small blip due to Omicron—the U.S. case count was stable at a relatively low rate over the summer as more people became vaccinated, but has climbed steadily over the past few months because of Omicron, hitting a pandemic high in January 2022.

Much of China's success in quashing SARS-CoV-2 can be traced to strict travel restrictions into the country and rigid quarantine rules that

> 'The bigger the bubble, the more opportunity you have for something to go wrong.'
>
> —**TARA KIRK SELL, JOHNS HOPKINS CENTER FOR HEALTH SECURITY**

RESIDENTS LINE UP FOR COVID-19 TESTING IN CHINA'S TIANJIN MUNICIPALITY, JUST WEEKS BEFORE THE BEIJING WINTER OLYMPICS

require any visitors from overseas—who are already required to test negative before boarding their flights—to remain in an isolation hotel for 14 days to ensure they aren't harboring an infection. This even applies to Chinese citizens returning home from abroad. Athletes, coaches, support staff and media arriving for the Olympics must be vaccinated to avoid such quarantines, but Chinese officials are hedging against any risk with an intensive testing and semi-isolation policy that will separate Olympics visitors from local residents. All Games travelers will be required to test negative 72 hours before they board their Beijing-bound flights and will be tested using deep nasal and throat swabs when they arrive at the airport. They will then be shuttled directly to their hotels, where they are supposed to remain until they receive word that their test was negative and that they may leave.

If they are negative, then athletes, coaches, media and other staff will remain in a pseudo bubble for their entire stay. They may only use dedicated transportation and dine in designated restaurants. Everyone will be tested daily and expected to isolate immediately if they test positive; no one can leave isolation until they test negative twice with 24 hours in between. These measures aren't foolproof, however. It's not clear, for instance, whether local volunteers and support staff for the Olympics—bus drivers, food service personnel, health care workers performing the testing—will also be required to remain within the bubble or whether they will be allowed to return to their homes each evening. "The bigger the bubble, the more opportunity you have for something to go wrong," says Tara Kirk Sell, senior scholar at the Johns Hopkins Center for Health Security. "And it's more difficult when you have something so transmissible like Omicron."

There's a lot at stake for Chinese officials, both politically and from a public-health perspective. Their management of the pandemic will inevitably be compared with the way the Japanese government handled the Summer Olympics just six months ago, during which 865 reported cases were associated with the Games. If major outbreaks occur during the Olympics, it will be very public proof that a zero-tolerance approach, even a dynamic one, is not the most effective way to control transmission.

Even if China's zero-COVID policy succeeds at keeping Olympics visitors safe, this approach has potentially dire downsides for the overall population in the long term, including a lower level of immunity to the virus. Once lockdowns are eventually lifted, people could still be vulnerable to infection and—more concerning—serious disease. While 87% of the Chinese population is vaccinated, this high rate may not confer as much protection as it suggests; recent studies show that one of the most commonly used Chinese-developed vaccines did not produce enough antibodies to neutralize the Omicron variant in lab studies.

As a result, some experts predict that reaching herd immunity—in which most of the population is protected, either by vaccination or by having been infected with COVID-19—will be much more elusive for China than for many other countries. Because Omicron tends to cause less severe disease in vaccinated people, some experts say it could help some populations in which it circulates widely to reach herd immunity more quickly, and—hopefully—with less disease and death than could be expected from previous variants. From that perspective, stamping out the virus wherever it flares up might provide a temporary (though costly and labor-intensive) solution, but not necessarily a long-term or durable one. In a recent report, the risk-assessment firm Eurasia Group, whose president writes a column for TIME, warned that "China's policy will fail to contain infections, leading to larger outbreaks, requiring, in turn, more severe lockdowns."

OMICRON'S STUNNING ABILITY to spread so quickly and efficiently will pose obstacles to China that no other Olympics host country has faced. With such a high level of transmission, even rigorous testing could miss cases that spark outbreaks. "Omicron is the ultimate challenge to any program based on zero cases," says Michael Osterholm, director of the center for infectious-disease research and policy at the Uni-

CHINATOPIX/AP

versity of Minnesota. Studies show that Delta, which was circulating during the Tokyo Olympics last summer, is twice as contagious as previous variants—and Omicron is up to four times more infectious than Delta. While vaccines can protect against severe disease, they can't fully prevent people from getting infected, as the growing number of breakthrough infections reveals. "I'm not sure we will ever get to the point of zero COVID-19," says Jeremy Farrar, director of the Wellcome Trust, a global health research foundation. "I would suspect that SARS-CoV-2 is not going away; when it's been in this number of people and beautifully adapted to humanity, why would it leave? The best hope is that it shifts over time, as more people develop immunity, to become the 21st century flu."

Other countries that have adopted zero-COVID strategies, including Australia and New Zealand, were forced to abandon them over the summer and fall. The Delta variant crushed these nations' efforts to stay on top of cases, and lockdowns became socially unbearable and detrimental to people's mental health. In accepting that it may not be possible to eliminate SARS-CoV-2, Australian Prime Minister Scott Morrison said it was time to "come out of the cave." His admission acknowledged that while vaccines provide protection, they can't prevent people from getting infected, so cases are inevitable. The goal is to prevent people who become infected from getting seriously ill or needing hospitalization.

The U.S., whether by intention or inaction, never adopted the fortress mentality, instead relying on vaccinating as much of the population as quickly as possible and, more recently, encouraging more widespread testing so people who are positive can take the proper safety precautions and avoid public interactions. While cases have skyrocketed in the U.S. since Omicron emerged, some models predict that the combination of immunity from the shots and from natural infections will ultimately throw up a formidable enough wall to relegate significant damage from COVID-19 to outbreaks among the more vulnerable people, who are either unvaccinated or have weakened immune systems—at least that's the hope.

"Countries are going to have to accept a period of high transmission in communities," says Farrar. "And I think that is the path that China will ultimately have to go through."

For now, China's aggressive approach to COVID-19 may put it in a strong position to host the Olympics as safely as can be expected. But how the virus will ultimately perform there throughout the Games—and after them—will be the contest everyone watches most closely. ◻

XIE HUANCHI—XINHUA/GETTY IMAGES

VIEWPOINT

A PRECARIOUS SPOTLIGHT

THE OLYMPIC HOST IS FACING STRONG ECONOMIC AND POLITICAL HEADWINDS

BY IAN BREMMER

IN SUMMER 2008, THE BEIJING OLYMPICS MARKED A BIG moment in China's progress toward global power. With that spotlight came controversy; activists used the event to highlight the government's human-rights abuses, but the event's triumphalist pageantry illustrated the story of China's rise toward prosperity and prestige for a world audience.

Since then, China's ambitions have taken another leap forward. Under President Xi Jinping's leadership over the past decade, China has gone from pushing for reform of the international system to helping guide that reform to making plans for leading it. In recent years, Xi has heralded a "new era" that will move China "closer to center stage" in global politics. He has presented China as "a new option for other countries," an alternative to Western democracy, and he has outlined what he calls the "Chinese solution" for the world's problems. Closer to home, China's leaders mean for their country to tighten control of Hong Kong, to pressure Taiwan to stop resisting Beijing's push for unifi-

PRESIDENT XI JINPING INSPECTS THE NATIONAL SPEEDSKATING OVAL IN BEIJING ON JAN. 4

cation with the mainland, and to build military strength in the South China Sea.

YET THE REALITY is that China's rise was losing trajectory even before a more aggressive U.S. foreign and trade policy and the COVID-19 global pandemic. While Xi's "China Dream" of prosperity has become reality for hundreds of millions of people, extending these gains to a population with rising expectations for a bright future won't be easy. China is still a middle-income country. To reach Western levels of prosperity, it needs 6% to 7% growth for another generation. That goal now looks nearly impossible to achieve, because the growth engines that have powered China forward in recent decades are running out of steam.

First, a reshoring of manufacturing away from China and advances in robotics have cut into China's lower-wage advantage. Second, its demographics are discouraging. China announced that birth rates have fallen for the fifth consecutive year. In coming years, a shrinking workforce will weigh on growth, and that smaller number of workers will have to support a fast-growing population of elderly people. The state's shift from a "one-child policy" to a "two-child policy" and now a "three-child policy" hasn't helped. Xi has promised that China will achieve a "common prosperity" that reduces income inequality by redistributing wealth across regions, income groups and economic sectors. But for now, the country looks to be getting old before it can grow broadly rich.

> The growth engines that have powered China forward in recent decades are running out of steam

China also has a debt problem. In particular, it has relied heavily for economic growth on easy credit for property and other speculative investments. Too often the institutional borrowers who have accepted much of this money expect government help and protection if they struggle to repay. Xi knows China's domestic tranquility, and its national security, depend on financial stability. To avoid a banking crisis and an economic crash, China's government has tried to clean up the business of borrowing and lending. But the various fights in recent months over the fate of possibly "too-big-too-fail" companies, like the deeply indebted property developer Evergrande, make reform much easier to promise than to deliver.

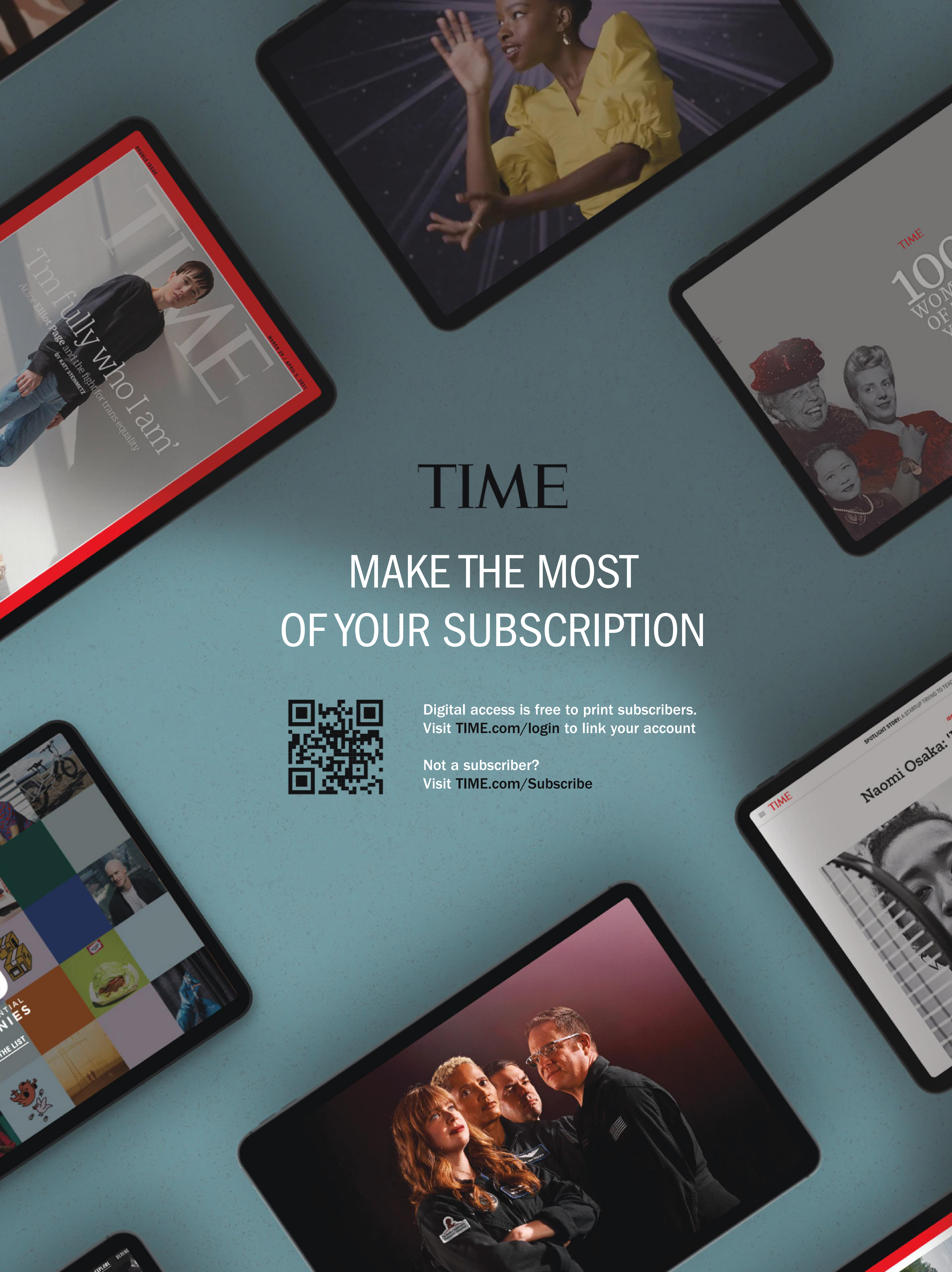
For the 2022 Winter Games, China's leaders have a more immediate problem. Throughout the pandemic, the state has sharply limited the number of COVID-19 infections within the country's borders with a "zero-COVID policy." It has used digital devices to track and trace infections, and its tight, highly centralized political control to enforce lockdowns of a large number of people. In 2020, this policy was among the world's most effective, and helped China to be the only major economy to experience growth that year.

Not so much now. It's much harder to build a fence around the Omicron variant, which is far more infectious if less dangerous for those who've been fully vaccinated. China has yet to roll out its own versions of the mRNA vaccines that have proven so effective.

As China prepares for its new moment in the Olympic spotlight, it faces the most highly transmissible form of COVID-19 yet. Compared with America and Europe, it has a much smaller percentage of people protected by previous infections or access to the most effective vaccines. That's why foreigners can't attend the Games as spectators, and why domestic audiences will enter by invitation only. More than 20 million people across China are currently locked down. All of this comes at a time of economic slowdown.

Fourteen years after China's debut as Olympic host, the spotlight is getting much hotter.

Bremmer, a TIME columnist, is the president of the Eurasia Group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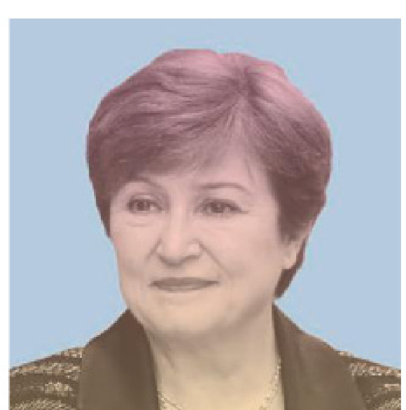
THE COLLABORATION I'M MOST PROUD OF

Leaders from the worlds of policy, business, the arts and advocacy share their most powerful partnerships



Kristalina Georgieva
MANAGING DIRECTOR, IMF

In August 2021, the 190 member countries of the International Monetary Fund—working together to tackle the pandemic, a crisis like no other—delivered an achievement like no other: a historic $650 billion injection of Special Drawing Rights (SDRs) to help the global economy, and especially nations that are suffocating amid COVID-19 lockdowns.

SDRs are an economic asset created by the IMF to strengthen countries' foreign-exchange reserves. A new allocation of them is rare; the last one, in 2009, was aimed at recovery from the global financial crisis. Most people don't know what SDRs are, but millions benefit from their existence. Put simply, the IMF distributes additional reserves to its members because it relies on their collective strength. Reflecting the unprecedented crisis, 2021's was the largest allocation of SDRs ever. Countries are using the funds to help meet vital needs in this pandemic, from Senegal increasing vaccine production capacity to Haiti financing critical imports.

So how did we make it happen? First, we worked with all our members. With so many countries, agreement requires intensive dialogue and diplomacy. It is a tribute to the spirit of cooperation that we all concluded this was the right thing to do at the right time to help the entire world.

Second, we worked with other international institutions. This includes development banks like the African Development Bank with the regional expertise and capacity to help ensure the SDRs "hit the ground most effectively," as its president, Akinwumi Adesina, has said.

Third, we worked with wealthier members to amplify the benefits of the SDRs, which are allocated by countries' shares in the IMF. While about $275 billion went to emerging and developing nations—with new SDRs amounting to as much as 6% of GDP for some—the most vulnerable need more. That's why we urge members with strong reserves to voluntarily channel SDRs to poorer countries. IMF members also established a trust through which SDRs can help vulnerable countries not only recover but also build forward better, addressing crucial challenges like climate change.

This SDR allocation is a historic example of global collaboration at its best: countries coming together to help each other—and to help people—in a time of need.

This SDR allocation is a historic example of global collaboration at its best: countries coming together to help each other

Tedros Adhanom Ghebreyesus
DIRECTOR-GENERAL, WORLD HEALTH ORGANIZATION

At its heart, the pandemic is a crisis of solidarity and sharing of data and information, biological samples, and resources and tools. COVID-19 has shown the importance of rapid and broad sharing of information about pathogens for effective surveillance and the timely development of medical-response products such as diagnostics, therapeutics and vaccines.

A great deal of pathogen sharing is done on an ad hoc basis and bilaterally, which risks leaving out some countries and may mean that dangerous emerging pathogens are missed. That's why we set up two new hubs: one to allow our 194 member states to voluntarily share novel biological materials, and another to detect new events with pandemic potential and monitor disease-control measures in real time. Both hubs will be key to preparing for and responding to future epidemics and pandemics.

Once a signal is detected, as well as responding to curtail spread, it's important to develop critical health tools and share them effectively.

In April 2020, WHO, the European Commission, France, and the Bill and Melinda Gates Foundation formed the Access to COVID-19 Tools (ACT) Accelerator to speed up the development and production of COVID-19 tests, treatments and vaccines, and ensure equitable access to them. Raising billions of dollars, it has helped improve access to new health tools globally.

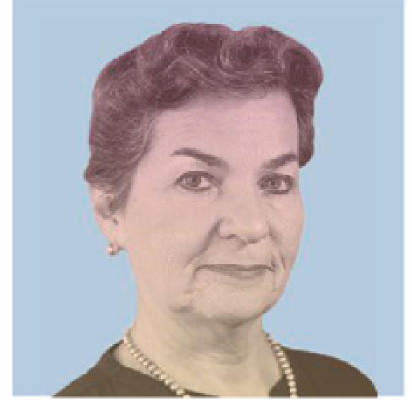
But narrow nationalism and hoarding by some countries have undermined equity and created the ideal conditions for the

Omicron variant to emerge.

In 2022, it's critical that nations work together even more closely to vaccinate the world and equitably share all health tools. One way to increase production of lifesaving tools is to pool technology.

WHO's mRNA technology-transfer hub in South Africa will enable the development of a more affordable mRNA vaccine. Recently, the COVID-19 Technology Access Pool and the Medicines Patent Pool finalized their first licensing deal with the Spanish National Research Council, a transparent, global and nonexclusive license for a serological antibody test. I hope it's the first of many.

With talks about to begin for a binding accord among nations on pandemic prevention, preparedness and response, it's important that world leaders seize this once-in-a-generation opportunity to strengthen the global health architecture to protect and promote the well-being of all people.



Christiana Figueres

FOUNDING PARTNER, GLOBAL OPTIMISM, AND FORMER EXECUTIVE SECRETARY OF THE U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE

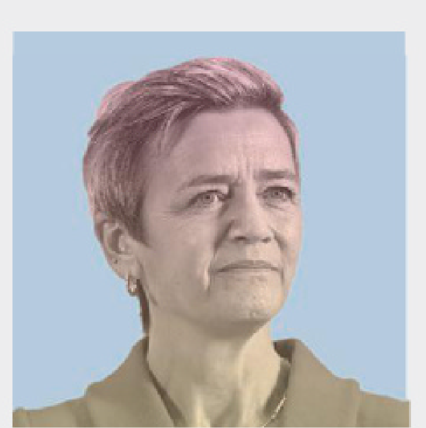
Way back in 2015, the 196 national governments that adopted the historic Paris Agreement on climate change did so in part because they realized that their enlightened self-interest coincided in a decarbonized global economy that staved off the worst climate impacts. But the agreement was also made possible because of the vast network of stakeholders that coalesced around those governments to encourage them in the right direction.

Known to only a few insiders, the covert effort, code-named Groundswell, was organized by the secretariat of the U.N. climate-change convention. Its goal was to create a "surround sound" effect around national governments so that no matter where they looked, they would find enthusiastic support for an ambitious, legally binding agreement that would guide the evolution of the global economy toward carbon neutrality.

Climate scientists were of course central to the effort. But Groundswell also included sub-national governments, corporate leaders, captains of finance, women's groups, youth, Indigenous authorities, farmers, spiritual leaders, academics and NGOs of all stripes and sizes. The stakeholder groups had their own particular expectations, but rather than being asked to relinquish those interests, they were invited to bring their viewpoints into a shared initiative to prod national governments toward and support them in achieving the overarching legal framework.

Six years later, the community has grown immensely and no longer needs to operate covertly, as national governments have realized they cannot address climate change on their own. At the recent COP26 climate-change meeting in Glasgow, the Race to Zero campaign brought together hundreds of cities, regions, businesses and investors, all of whom are committed to achieving net-zero emissions by 2050 at the latest. Collectively, these actors cover nearly 25% of global CO_2 emissions and over 50% of GDP, and they manage financial portfolios worth $130 trillion. The objective of the Race to Zero campaign was to build further momentum around the shift to a decarbonized economy so that national governments could strengthen their formal contributions to the Paris Agreement goals, creating a more inclusive and resilient global economy.

The collaborative architecture that has been built around climate-change efforts will continue to grow, and the "walls" that used to separate it from the work of national governments will continue to soften. Ultimately, the effective and timely reduction of greenhouse-gas emissions depends precisely on an all-in approach, in which public and private sectors in every country align efforts in order to maximize their capacities and increase their response speed. Climate change is the definitive test of collaboration.



Margrethe Vestager

EXECUTIVE VICE PRESIDENT FOR A EUROPE FIT FOR THE DIGITAL AGE AND COMPETITION, EUROPEAN COMMISSION

Europe and the U.S. have come together before to protect democracy. Today, our liberal institutions are imperiled not by the blazing sound of bombs, but by the harmful silence of technology.

Everywhere, we see democracy fragmented into bubbles, driven by profit-making algorithms. To different extents, the rioters of the U.S. Capitol and the terrorists of the Paris and Brussels attacks were indoctrinated on social media before they took their plans offline. And if these events were wake-up calls, the revelations of Frances Haugen are a call to action.

That's how the E.U.-U.S. Trade and Technology Council was born a few months ago. Don't get me wrong: the road remains long before we come up with tangible solutions. But we have already agreed on a common approach to limit the risks of artificial intelligence, combat unlawful surveillance and ensure tech markets remain fair.

It has been said that "the U.S. innovates and Europe regulates." This conversation is changing: now we are joining forces. And when two such determined partners shift the rudder together, it's likely the ship will eventually turn.

GEORGIEVA: KYODO/AP; TEDROS: FABRICE COFFRINI—AFP/GETTY IMAGES; FIGUERES: BUSINESS WIRE/AP; VESTAGER: ABDULHAMID HOSBAS—ANADOLU AGENCY/GETTY IMAGES

Rose Marcario

VENTURE PARTNER, REGEN VENTURES, AND FORMER CEO, PATAGONIA

These days, some of my richest collaborations are with fungal networks—and with human organizations with the curiosity and vision to leverage fungi's power. Suffice to say we have plenty to learn from fungi: the interconnectedness of their systems; the resilience, the diversity, the distributed power, the infinitely adaptable networks. Under our feet is a vast fungal network 450 quadrillion km long, and it sequesters 5 billion tons of CO_2 per year, while also providing nutrient pathways to soils and plants. These networks are for the most part invisible, and are just beginning to be explored with the help of a new NGO called the Society for the Protection of Underground Networks, which is taking up the task of mapping these crucial networks across the globe to help fight the climate and nature crisis.

Mycelium, an important part of fungus, has plenty of other interesting applications too. Properly fermented, it can create a nutrient-dense protein, capable of feeding the world; a brilliant young founder in Colorado named Tyler Huggins started Meati Foods to do just that. Because it can be used to make packaging material, mycelium might just solve our plastic problem. Psilocybin botanicals also show much promise as treatments for mental-health and neurological disorders; AJNA BioSciences, a new pharmaceutical company, is working toward using earth-regenerating agriculture techniques to produce psilocybin-based medications. The possibilities are as endless as fungi's weblike networks.

Whether we want to accept it or not, our world has been irrevocably changed by our human ignorance and inaction; we've fouled our own nest so inexorably that we face a troubled and uncertain future. We have hastened the destruction of our own life-support systems. To get out of this mess will require all of us to do our part, and these days I put my trust and optimism in collaborations with natural systems, and their ability to restore and regenerate our planet. But to do so, they'll need stewardship from brilliant entrepreneurs, scientists who put their research into action, citizens and activists, and anyone who gives a damn about our future.

There is a whole new cohort of brilliant entrepreneurs who understand the need for new economies that respect, consider and revitalize our planet

Though I spent much of the past decade as a retail CEO, I don't believe in just selling stuff anymore. We have enough stuff in the world. Buy used. Unless the stuff makes the world better and eradicates some old, bad polluting system, what's the point? The next-generation customer is too world-weary and smart to be won over by fake, overprocessed food that is laden with pesticides and has no nutritional value; or by mea culpa commercials or rebrands à la Facebook, or Monsanto after its merger with Bayer.

The good news is there is a whole new cohort of brilliant entrepreneurs who understand the need for new economies that respect, consider and revitalize our planet. Those are the entrepreneurs I'm betting on.

Masatsugu Asakawa

PRESIDENT, ASIAN DEVELOPMENT BANK

At COP26 in Glasgow, I had a brief exchange with a young university student. She described how climate change is affecting her country and our planet, and shared her ideas about fighting it. Just a few hours later, I spoke at an event alongside Indonesian Finance Minister Sri Mulyani Indrawati. What struck me was the similarity of their views: a feeling of real concern but also of optimism that we can solve this crisis.

Climate change is the critical issue of our lifetimes. Many millions of people in Asia and the Pacific are living with its impacts right now. It is threatening the viability of agriculture in Tajikistan. It is upending critical ecosystems in the Philippines and Vietnam. In the low-lying atoll countries of

Claudia López Hernández

MAYOR OF BOGOTÁ

Colombia is a vibrant and diverse country and our capital city, Bogotá, has become home to thousands of Colombians who have moved to the city from regions across the nation. They bring with them diversity of ethnicity, culture, social and political beliefs as well as labor skills.

With 15% of the national population, Bogotá is responsible for 26% of the country's gross domestic product. But it is sometimes said to be everyone's city, and also nobody's.

Most of Bogotá's residents are perceived to have a greater affinity for their home regions than to the metropolis that has become their new home. But this perception can be seen as both a myth and reality. It's a myth because, when asked, most residents love the city that changed their lives. Anyone who lives in Bogotá is considered to be Bogotano. It's also a reality because living in a big city like ours has its challenges.

Kiribati and Tuvalu, it is a threat to their very existence.

COP26 may go down as the moment a diverse group of actors—from farmer to fund manager to finance minister—all converged on the realization that this challenge requires a global response, a consensus that opens up space for groundbreaking collaborations. Recognizing this, we are leveraging the reservoir of trust that the Asian Development Bank (ADB) enjoys to create high-impact collaborative platforms for climate action.

For example, we have joined with Goldman Sachs and Bloomberg Philanthropies with the goal of using grant capital to unlock low-carbon investment for South and Southeast Asia. We are partnering with HSBC, Temasek and Clifford Capital Holdings to invest in sustainable infrastructure in Southeast Asia. And we are spearheading a new Energy Transition Mechanism (ETM), an innovative funding vehicle that leverages public, private and philanthropic financing to accelerate the retirement of coal-fired power stations and their replacement with clean, renewable energy.

ETM has the potential to be one of the world's biggest carbon-reduction programs, but it would not be possible without the political will of countries, the capital of the private sector, the concern of philanthropies and the knowledge of organizations such as ADB.

My hope is that one day, if we build on these concrete collaborations, students like the young woman I met in Glasgow will be able to focus on their studies rather than worrying about the future of our planet.

When an emergency strikes, rivalry becomes insignificant

Reaching citywide agreements on strategic and long-term issues can be difficult. But that reality is changing. And the people of Bogotá play an important role.

It is only with the support of citizens that current and former mayors have been able to set aside differences to plan the construction of a multimodal transport network, based on a metro network and regional trains.

The COVID-19 pandemic has provided another opportunity for collaboration. It has brought a sense of urgency to our efforts to focus on what unites us. Bogotá tripled its capacity for hospital care during the pandemic, and our vaccination efforts have brought protection to 80% of the population, in a joint effort between the national government and my office. Together, we have achieved this despite being at opposite ends of the ideological spectrum, and even partisan competitors.

The lessons learned in 2020 and 2021 have encouraged us. When an emergency strikes, rivalry becomes insignificant.

These lessons are also applicable at the national level. Colombia will elect a new President and a new Congress this year. Elections often exacerbate differences.

Governing in the midst of humanity's greatest multisystem crisis forces citizens, leaders and governments to weigh the temptation of polarization against the need to promote collective action to survive. To lead in this century is to have the wisdom and courage not to succumb to the former in order to guarantee the latter.

Neglecting this duty would be not only a failure of government, but also a disaster for our species.

Don Cheadle

ACTOR AND U.N. ENVIRONMENT PROGRAMME GOODWILL AMBASSADOR

I believe in using fame for good. From serving as a global goodwill ambassador for the U.N. Environment Programme to campaigning against genocide in Darfur, I support people organizing for freedom and justice. But over the years, I've learned that systemic change takes more than one person acting alone.

One of my most powerful collaborations started on the sets of the *Avengers* movies—but it didn't take place onscreen. After speaking with fellow cast member Mark Ruffalo about activism, I joined him on the Solutions Project's board to spotlight communities at the front lines of the climate crisis.

I've seen how communities of color—often hit first and worst by the climate crisis—are joining forces with neighbors of all races to innovate solutions

Working with Mark and others at the Solutions Project, I've seen firsthand how communities of color—often hit first and worst by the climate crisis—are joining forces with neighbors of all races to innovate solutions. I've seen Black and Latinx communities fight oil drilling, Indigenous people and white farmers defend their land and water from pipelines, and Asian and Pacific Islanders power affordable housing with solar. These multiracial coalitions coming together around such diverse leadership give me hope—and clarity about what it takes to win.

Take the Solutions Project's CEO, Gloria Walton. Gloria was a community organizer in South Central Los Angeles, and she brought the values of solidarity—of showing up for others in common purpose—to bear on the Solutions Project's mission to fund and amplify climate-justice solutions. She leads with relationships and collaboration, and now we've got 139 grassroots grantees in communities across the country who can count on dozens of artists, industry leaders and philanthropists to show up for climate justice.

Climate change is the world's most pressing issue, and it's happening right now. We need all hands on deck—creatives, entrepreneurs and activists alike—to use our collective power to protect all people and the planet.

MARCARIO: MANDEL NGAN—AFP/GETTY IMAGES; ASAKAWA: THE YOMIURI SHIMBUN/AP; LÓPEZ: DANIEL GARZON HERAZO—NURPHOTO/GETTY IMAGES; CHEADLE: STEPHEN LOVEKIN—SHUTTERSTOCK

WE STILL NEED TO COME TOGETHER

TIME editor-in-chief Edward Felsenthal talks to Klaus Schwab, the founder of the World Economic Forum, about collaboration, hopes for the climate, and the power of youth

I recently heard an interview you did with [Alphabet CEO] Sundar Pichai, and you asked him about remote work. He said that we're living on borrowed time. How do you think about that sentence, "We're living on borrowed time," and the necessity of being together in person?
I think it actually can be very effective, to create an exchange of information to learn from one another, but it cannot really establish trust in interhuman relationships; you need the in-person encounter. You need to have some moments on the side of the video screen. So during the last two years, [the World Economic Forum] made considerable progress, because we always felt we should not be just event-oriented. As a matter of fact, today, most of our partners are engaged in at least one of our initiatives. We have over 50 initiatives, platforms for public-private cooperation. I'm very proud to say, since the beginning of the crisis, we have won over 200 additional partners who joined us without knowing when they could go to Davos or not. But I think the time has come to bring people together, because we see a degradation of trust in the world, and trust only builds through personal relations. And the World Economic Forum, in a broader sense, is a community of multistakeholders, businesses, governments, civil societies, young generation, to work together.

What was your takeaway from COP26?
Three comments. The first one is, I think the whole discussion around COP26 created a global awareness of how serious the climate-change issue is, and that focus on this issue is already quite a success.

Second, COP26 didn't fulfill all the expectations, but I think the significant importance of Glasgow was to show how businesses are taking the lead. So there are numerous initiatives, and some had been created or catalyzed by the World Economic Forum. I'm mentioning the Mission Possible Partnership, which brings together over 400 companies in aluminum, steel and so on. That's something we pushed very much since Biden announced the First Movers Coalition to make commitments to buy ships or planes which are run by green fuel, and by making a commitment to buy such innovative products, advancing the innovation, because there's also people who would say 50% of the innovation, which we need in order to become carbon neutral, does not yet exist.

And the third one I would say is in the area of nature-based solutions. It's the One

Trillion Trees Initiative to plant 1 trillion trees over the next 10 years. [Marc and Lynne Benioff, TIME's owners and co-chairs, are among the supporters of the One Trillion Trees Initiative.] Or in a broader sense, it is the whole regeneration of agricultural biodiversity, which we need, in addition to just decarbonizing different industries.

What is the theme of Davos this year? How are you thinking about the role of climate at Davos?
I had numerous meetings here, just to get a feeling of what our political and business constituents expect, but we need a slogan. The slogan is "Working Together, Restoring Trust" because we feel that the accent should be on working together, generating an impact. And only the credibility of your working together comes from achieving results.

We were obviously in something of a global trust crisis before the pandemic. Do you think the pandemic may deepen that crisis?
Yes, definitely. I mean, look, even on a national basis, I would say, global cooperation has slowed down substantially. I see two reasons for it. First one is that the pandemic has polarized societies. And in a polarized society, it's much more difficult to take decisions because decisions usually, particularly political decisions, are based on a compromise. The second factor is that governments are very much absorbed by crisis management. Maneuvering from day to day, you don't see any more long-term perspectives, except in some more Australian type of countries.

The critique of Davos over the years has been its elite nature. How do you think about and address the lack of trust among stakeholders who may not be at Davos?
We have opened doors to the media. It is even more important than ever. Second is that practically all sessions are streamed so the public can participate and our own media capabilities. We try to push out to engage the public. And the last element is that the forum has established a very powerful youth organization. I'm a big believer in the necessity to integrate the young voice because more than 50% of the global population are below 30 years old, and they are not integrated. So when we talk about those who are left behind, I'm thinking particularly of the young generation.

How do you see the impact of the pandemic on the fourth industrial revolution?
I think the pandemic has very much accelerated some technologies of the fourth industrial revolution. We see it in the area of artificial intelligence, of course; we see it in the medical area, genetic area. I think one of the areas I'm particularly interested in is quantum computing; we see quite some progress. The first concern is, since these technologies develop so fast and usually you need to create our own technologies, you need also policies to make sure that a technology is serving people and society. And the whole discussion we have now about social media and so on shows us that we need to regulate this technological progress. The danger of this pandemic is that governments are so absorbed by fighting the pandemic, so very little energy is left to really muster to create the necessary boundaries, to make sure the new technologies are really human-centered.

We didn't talk about inflation.
My concern is very short term. We do not know some major factors. The first one is how much new variants may lead to, let's say, shutdowns. Second is, we do not know what the consequences will be if the Fed puts some brakes on. So we have some uncertainties related to next year. Now longer term: How do we maintain our intergenerational responsibility?

This interview has been edited and condensed

'We see a degradation of trust in the world, and trust only builds through personal relations'

HENRIK SPOHLER—LAIF/REDUX

THE VACCINE PRINCE BETS ON A SECOND CHANCE

After stumbling in 2021, the CEO of the world's largest vaccine maker says he's ready to deliver

By Abhishyant Kidangoor

ADAR POONAWALLA IS NO STRANGER TO GAMbles. He owes his multibillion-dollar empire to a series of big bets that paid off handsomely. Cyrus Poonawalla, his father, made his own fortune on horses—and then multiplied it by making another bet in 1966: that he could make more money producing vaccines than he could on horse breeding and racing. He formed the Serum Institute of India (SII), which grew slowly for three decades, selling antivenoms and lifesaving vaccines for India.

When Adar, then just 21, joined the company in 2001, he persuaded his father to dramatically ramp up production—wagering that they could fill a gap in global supply by making low-cost vaccines in very large quantities. By 2017, SII was the world's largest vaccine manufacturer.

In early 2020, as COVID-19 was spreading rapidly around the world, Adar Poonawalla gambled yet again, this time on a vaccine for the novel coronavirus, developed by the University of Oxford and AstraZeneca. In September 2020, his company, based in the western Indian city of Pune, started manufacturing millions of doses months before the Oxford-AstraZeneca shot was authorized for use. When it proved safe and effective later that year, Poonawalla felt vindicated. Reminiscing about his decision to go big on the vaccine, he characterized the Serum Institute as the only company capable of such a big swing. "If we don't do it, who will?" he told TIME in March. "The other chaps don't have the capabilities that we do in terms of scale."

The world soon came to rely on the 41-year-old executive, better known before the pandemic for his slick suits, glamorous horse-racing parties and flashy cars than for his company's work in producing vaccines. COVAX—a program mounted by the World Health Organization (WHO) and GAVI, the Vaccine Alliance, to ensure equitable vaccine distribution—made the Serum Institute the backbone of its efforts based on its CEO's guarantee that it would produce 1.1 billion doses for export in 2021.

But the company failed to deliver after encountering problems that included a fire at its manufacturing facility, a ban on vaccine exports and global supply-chain disruptions. Critics say Poonawalla could have taken some of these issues into account earlier. "The hype clearly didn't match the reality on the ground," says Neeta Sanghi, a consultant in pharmaceutical supply chains. "They thought that they could be the savior of the world."

And even as Poonawalla tries to redeem his company by making good on his promises one year late, he is encountering new problems that could diminish his attempts to put the Serum Institute at the forefront of the global COVID-19 vaccine supply.

SII'S STUMBLE IN 2021 is one reason for the woefully unequal global distribution of vaccines. But it's also the case that wealthy parts of the world, like the U.S. and the E.U., have prioritized their own populations—administering booster shots widely while fewer than 3.5% of people in low-income countries have received their first vaccine dose. That's a problem for the entire world; after all, it's likely that new variants of SARS-CoV-2—the virus that causes COVID-19—will continue to emerge in places where it's able to spread unchecked. The Omicron variant may have resulted from the relatively low vaccination rate—26%—in South Africa, where it was first detected.

In recent months, wealthy countries have pledged to donate more doses to poorer nations.

Poonawalla at the Serum Institute of India's headquarters in Pune in March 2021

PHOTOGRAPH BY PRARTHNA SINGH FOR TIME

U.S. President Joe Biden committed in September to buy 500 million doses on behalf of other countries. But actual deliveries still lag far behind. That gives Poonawalla another chance to make good on his bets. "The gap has only widened and become more entrenched," says Andrea Taylor of the Duke Global Health Institute. "And so Serum is still a pivotal part of the world's story in the months to come."

For Poonawalla, the mission is twofold. In 2020, he sought to make history by manufacturing the vaccines that could protect large parts of the world and potentially hasten the end of the pandemic. He still thinks that's possible. But he's also working to restore the reputation and reach of his company. After the COVID-19 vaccine debacle, "we were so severely criticized, and everyone thought it was all over," Poonawalla told TIME in October. "We need this comeback to regain the lost confidence and market share."

Before the pandemic, SII was little known, even in India, though it was praised for its steady work making cheap vaccines to fight childhood diseases. Its meningococcal and meningitis shot sells for less than $1, compared with more than $100 for a meningococcal vaccine in the U.S.

When Poonawalla took over as CEO of SII from his father in 2011, he had big shoes to fill. Cyrus Poonawalla had been nicknamed the Vaccine King of India for his work supplying vaccines to poor communities. Adar had a reputation for an extravagant lifestyle, but in the background he was expanding his company's reach. Two decades ago, the Serum Institute supplied vaccines to 35 countries. Today it has deals with 140.

His business model was to buck the trend in the global pharmaceutical industry, which had stopped producing routine vaccines for many infectious diseases that had been quelled in the West. Producing such vaccines was still necessary, but not particularly lucrative. The low-cost, high-volume business model—combined with SII's longstanding partnership with GAVI, the Vaccine Alliance—made the company vital to childhood immunization campaigns around the world, especially in poorer countries. By early 2020, SII was producing 1.5 billion doses per year, boasting that 65% of the world's children had received at least one of its vaccines.

So when the COVID-19 pandemic hit, Poonawalla knew his company had a central role to play. While we all waited to find out which vaccines, if any, would be effective, Poonawalla placed his two big bets, pushing his company into the global spotlight. One worked. The other didn't—and the world is still paying for it.

The first gamble, in March 2020, was to leverage his relationships to strike a deal to manufacture the Oxford-AstraZeneca vaccine for low- and middle-income countries. His family sank $250 million into the venture. The Bill and Melinda Gates Foundation invested an additional $300 million. By selling advance orders to countries including Bangladesh and Morocco, SII secured $250 million more. By the time the vaccine was authorized for use by the U.K. in late December 2020 and by India in early January 2021, SII had some 50 million doses in cold storage. In February 2021, Ghana received the first COVAX shipment of 600,000 doses of vaccines produced by SII, followed by other countries including Liberia and Ivory Coast. Vaccines produced by SII also became integral to India's immunization campaign, which kickstarted in mid-January.

'The hype clearly didn't match the reality on the ground. They thought that they could be the savior of the world.'

NEETA SANGHI, SUPPLY-CHAIN CONSULTANT

POONAWALLA'S SECOND BET was that he could rapidly scale up production to more than 100 million doses a month and ship most of them overseas. But almost straight out of the gate, SII stumbled. First, there was the fire: on Jan. 21, 2021, a blaze broke out during construction at one of the company's plants in Pune. Officials said the fire, which killed five workers, was caused by an electrical short circuit. SII initially claimed this wouldn't affect COVID-19 vaccine production, but afterward, it struggled to produce more than 60 million doses a month. Poonawalla later admitted the fire set back production two to three months.

Meanwhile, triggered by U.S. export restrictions earlier in 2021, SII had trouble procuring raw materials like vials, syringes and bioreactor bags, which further slowed production. Then cases started rising sharply in India, leading to a devastating second wave in April and May. Prime Minister Narendra Modi's government had been vague to that point about how many vaccine doses it would purchase from SII, and had not given any financial assistance to the company to help it scale up production. But when Indian states began to pressure the Modi government about vaccine supplies, it responded by banning the export of vaccines beginning in April.

Poonawalla's fall from grace was swift, in India and abroad. Vaccination drives in many countries were stalled, owing to their inability to get doses they'd expected from SII. AstraZeneca warned the company of possible legal action over the delays. In April, with COVID-19 deaths soaring in India,

A shipment of COVID-19 vaccines manufactured by the Serum Institute of India arrives in Liberia on March 5, 2021

AHMED JALLANZO—EPA-EFE/SHUTTERSTOCK

Poonawalla flew to London, citing threats to his safety—inviting further anger. Previously a regular fixture on Indian TV news, he went silent.

By early May, the Serum Institute had delivered about 30 million doses to the COVAX facility—less than 3% of the promised number. But it wasn't long before Poonawalla got his second chance. By mid-June, he returned to India and re-established day-to-day oversight of SII. Thanks in part to a cash injection of nearly $400 million from the Indian government to help boost production capacity, he was able to acquire a 50% stake in SCHOTT Kaisha, a Mumbai-based company that produces vials and syringes. He also invested in SII's public image: in December, the company donated $66 million to establish the Poonawalla Vaccines Research Building at Oxford, focusing on global pandemic preparedness.

Practical results are finally showing. SII says it produced 250 million doses of the Oxford-AstraZeneca vaccine in October, more than any other single company in the world. That same month—with the Indian government's blessing after 60% of Indians received at least one vaccine dose—the company resumed some vaccine exports, sending 1 million shots to neighboring countries.

Despite his mixed success over the past two years, Poonawalla is already forging ahead with new ventures. The Serum Institute is now producing another COVID-19 vaccine, developed by U.S. firm Novavax, which was authorized for use by the WHO in December. Also in the works: an intranasal vaccine and a one-dose version of the Russian Sputnik V shot.

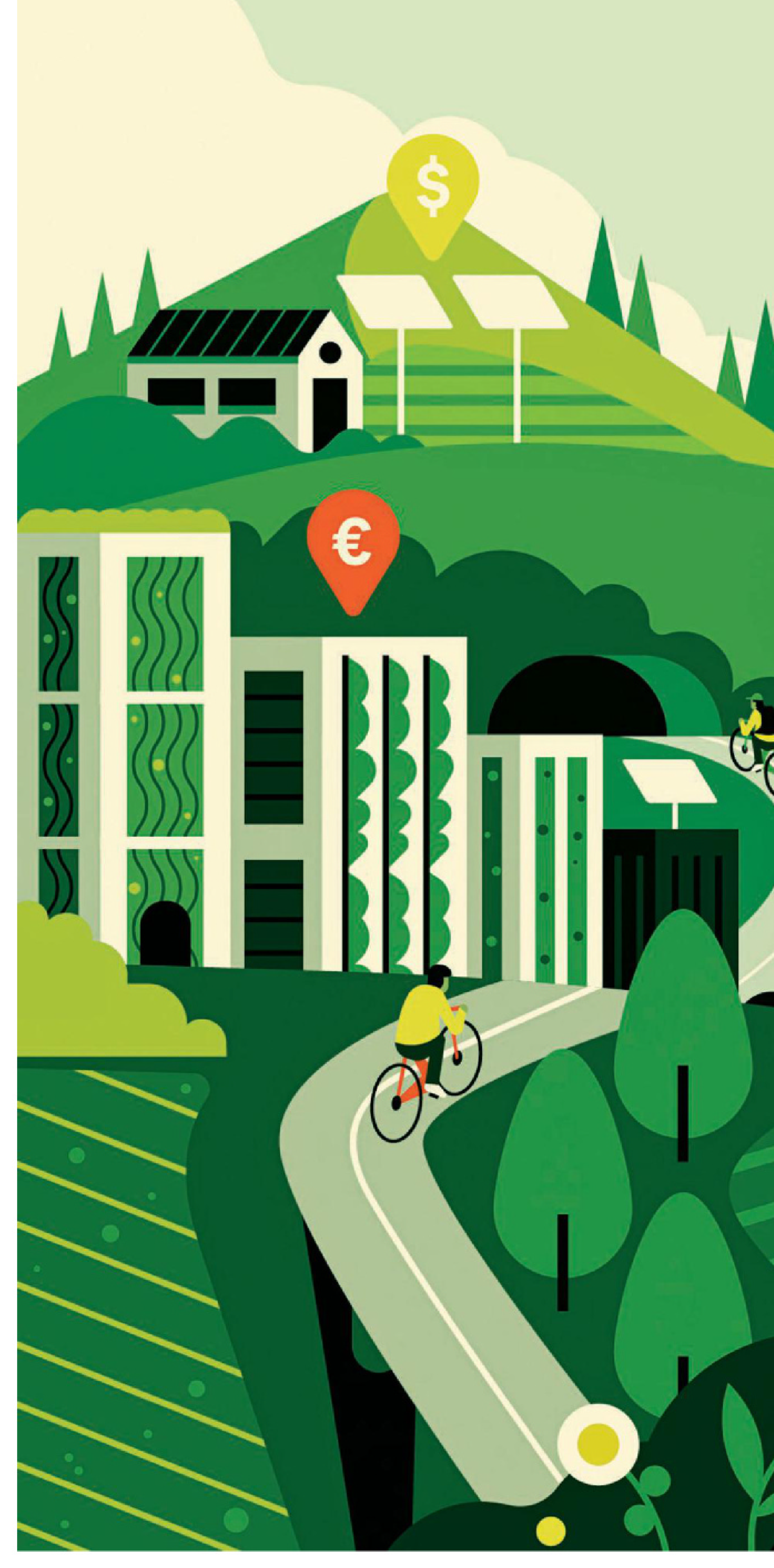
All this as Poonawalla works through a new, unexpected challenge. In December he revealed that the company now has too many doses. India's demand for vaccines has slowed, while new orders from COVAX and other countries have yet to pick up. Poonawalla announced on Dec. 7 that the Serum Institute had 500 million excess doses of the AstraZeneca vaccine, and would temporarily slash production in half. COVAX has reiterated that its goal to distribute 2 billion doses by the first quarter of 2022 will rely on SII's playing a key role, but says it will take time to figure out logistical issues before ordering from the company again.

In March 2021, before it was clear that the world's bet on Poonawalla was going bust, he told TIME that he didn't want to have any regrets "when history judges my actions." Seven months later, in October, he was back to his old confident self. "It takes time to rebuild trust," he said, but expressed certainty that orders would increase in the coming months. He said the Serum Institute is capable of both supplying COVAX and meeting India's domestic vaccine demands. "We have scaled up more than we promised," he said, and SII is champing at the bit to begin shipping millions of doses around the world. ◻

THE 2% SOLUTION TO CLIMATE CHANGE

Meaningful progress takes only a small slice of global GDP

By Yuval Noah Harari



AS THE CLIMATE CRISIS WORSENS, TOO MANY people are swinging from denial straight to despair. A few years ago, it was common to hear people deny climate change, downplay the enormousness of the threat, or argue that it is far too soon to worry about it. Now many people say it's too late. The apocalypse is coming, and there is nothing we can do to prevent it.

Despair is as dangerous as denial. And it is equally false. Humanity has enormous resources under its command, and by applying them wisely, we can still prevent ecological cataclysm. But exactly how much would it cost to stop the apocalypse? If humankind wanted to prevent catastrophic climate change, how big a check would we have to write?

Naturally enough, no one knows for sure. My team and I have spent weeks poring over various reports and academic papers, living in a cloud of numbers. But while the models behind the numbers are dizzyingly complex, the bottom line should cheer us up. According to the International Energy Agency, achieving a net-zero carbon economy would require us to spend just 2% of annual global GDP over what we already do on our energy system. In a recent poll of climate economists conducted by Reuters, most agreed that getting to net zero would cost only 2% to 3% of annual global GDP. Other estimates put the cost of decarbonizing the economy a bit lower or a bit higher, but they are all in the low single digits of annual global GDP.

These numbers echo the assessment of the Intergovernmental Panel on Climate Change, which in its landmark 2018 report stated that in order to limit climate change to 1.5°C, annual investments in clean energy needed to increase to around 3% of global GDP. Since humankind already spends about 1% of annual global GDP on clean energy, we just need an extra 2% slice of the pie!

The above calculations focus on the cost of transforming the energy and transportation sectors, which are by far the most important. However, there are other sources of emissions as well, like land use, forestry and agriculture. You know, those infamous cow farts. The good news is that a lot of these emissions can be cut on the cheap through behavioral changes such as reducing meat and dairy consumption and relying more on a plant-based diet. It doesn't cost anything to eat more veggies, and it can help you (and the rain forests) live longer.

ILLUSTRATION BY ALDO CRUSHER FOR TIME

We can quibble endlessly about the numbers, tweaking the models this way and that. But we should look at the big picture beyond the math. The crucial news is that the price tag of preventing the apocalypse is in the low single digits of annual global GDP. It is certainly not 50% of annual global GDP, nor is it 15%. Rather, it is somewhere below 5%, perhaps as low as investing an additional 2% of global GDP in the right places.

And note the word *investing*. We aren't talking about burning piles of banknotes in some huge sacrifice to the spirits of the earth. We are talking about making investments in new technologies and infrastructure, such as advanced batteries to store solar energy and updated power grids to distribute it. These investments will create numerous new jobs and economic opportunities, and are likely to be economically profitable in the long run in part by reducing health care expenditures and saving millions of people from sickness caused by air pollution. We can protect the most vulnerable populations from climate disasters, become better ancestors to future generations, and create a more prosperous economy in the process.

This wonderful piece of news has somehow been sidelined in the heated debate about climate change. We should bring it into focus, not merely in order to give people hope, but even more so because it can be translated into a concrete political plan of action. We have learned in recent years to define our goal in terms of one number: 1.5°C. We can define the means to do this with another

number: 2%. Increase investment in eco-friendly technologies and infrastructure by 2 percentage points above 2020 levels.

Of course, unlike the 1.5°C figure, which is a scientifically robust threshold, the 2% figure represents only a rough guesstimate. It should be understood as a ballpark figure, helpful to frame the kind of political project humanity requires. It tells us that preventing catastrophic climate change is a totally feasible project, even though it would obviously cost a lot of money. Since global GDP is now about $85 trillion USD, 2% currently totals about $1.7 trillion. It means that to save the environment, we don't need to completely derail the economy or abandon the achievements of modern civilization. We just need to get our priorities right.

SIGNING A CHECK for 2% of annual global GDP is far from the whole story. It won't solve all our ecological problems, such as oceans brimming with plastic or the continued loss of biodiversity. And even to prevent catastrophic climate change, we'll need to make sure that the funds are invested in the right places and that the new investments don't cause their own negative ecological or social fallout. If we destroy ecosystems to mine for rare metals that are needed for the renewables industry, we might arguably lose as much as we gain. We will also need to change some of our behaviors and ways of thinking, from what we eat to how we travel. None of that will be easy. But that's exactly why we have politicians—their job is to deal with the hard stuff.

In 1945, the U.S. spent about 36% of its GDP on winning the Second World War

Politicians are actually very skilled at shifting 2% of resources from here to there. It is what they do all the time. The difference between the policies of right-wing and left-wing parties often amount to a few percentage points of GDP. When faced by a major crisis, politicians swiftly shift far more resources to fight it. For example, in 1945, the U.S. spent about 36% of its GDP on winning the Second World War.

During the 2008–09 financial crisis, the U.S. government spent about 3.5% of GDP to save financial institutions deemed "too big to fail." Maybe humankind should also treat the Amazon rain forest as "too big to fail"? Given the current price of rain-forest land in South America and the size of the Amazon rain forest, buying the whole of it in order to protect local forests, biodiversity and human communities from destructive business interests would cost about $800 billion, or a one-off payment of less than 1% of global GDP.

In just the first nine months of 2020, governments around the world announced stimulus measures worth nearly 14% of global GDP to deal with the COVID-19 pandemic. If citizens press them hard enough, politicians can do the same to deal with the ecological crisis. So can investment banks and pension funds. Pension funds hold about $56 trillion USD. What's the point of having a pension if you don't have a future?

AT PRESENT, NEITHER BUSINESSES nor governments are willing to make the additional 2% investment necessary to prevent catastrophic climate change. Where does the money go instead?

In 2020, governments expended $2 trillion USD on their militaries—that's 2.4% of global GDP. Every two years, another 2.4% of global GDP is spent on food that goes to waste. Governments also spend about $500 billion annually on—wait for it—direct subsidies for fossil fuels! Which means that every 3½ years, governments write a nice fat check for an amount equivalent to 2% of annual global GDP, and gift it to the fossil-fuel industry. It gets worse. When you factor in the social and environmental costs that the fossil-fuel industry causes but isn't asked to pay for, then the value of these subsidies actually reaches a staggering 7% of annual global GDP each year.

Now consider tax evasion. The E.U. estimates that money hidden by the wealthy in tax havens is worth more than 10% of global GDP. Every year, another $1.4 trillion in profits is stashed offshore by corporations, which is equal to 1.6% of global GDP. To prevent the apocalypse, we'll probably need to impose some new taxes. But why not start with collecting the old ones?

The money is there. Of course, collecting taxes, cutting military budgets, stopping food wastage and slashing subsidies is easier said than done, especially when faced by some of the most powerful lobbies in the world. But it doesn't require a miracle. It just requires determined organization.

So we shouldn't succumb to defeatism. Whenever someone says, "It's too late! The apocalypse is upon us!," reply, "Nah, we can stop it with just 2%." And when COP27 convenes in November 2022 in Egypt, we should tell the assembled leaders that it is not enough to make vague future pledges about 1.5°C. We want them to take out their pens and sign a check for 2% of annual global GDP.

Harari is the author of Sapiens, Homo Deus *and* Sapiens: A Graphic History. *Data sources for this article can be found on bit.ly/2-percent-more*

THE INFINITE

THE
ULTIMATE VR
EXPERIENCE
227 MILES
ABOVE THE
EARTH

« In all of human history, just over 600 people have been to space. This experience will take you as close as you can get—without actually going there. »
– Jonathan Woods, **TIME**

LOCATION

AMERICAN TOUR
DEBUT IN SPACE
CITY, HOUSTON, TX

GET TICKETS

THEINFINITE
EXPERIENCE
.WORLD

CREATED BY

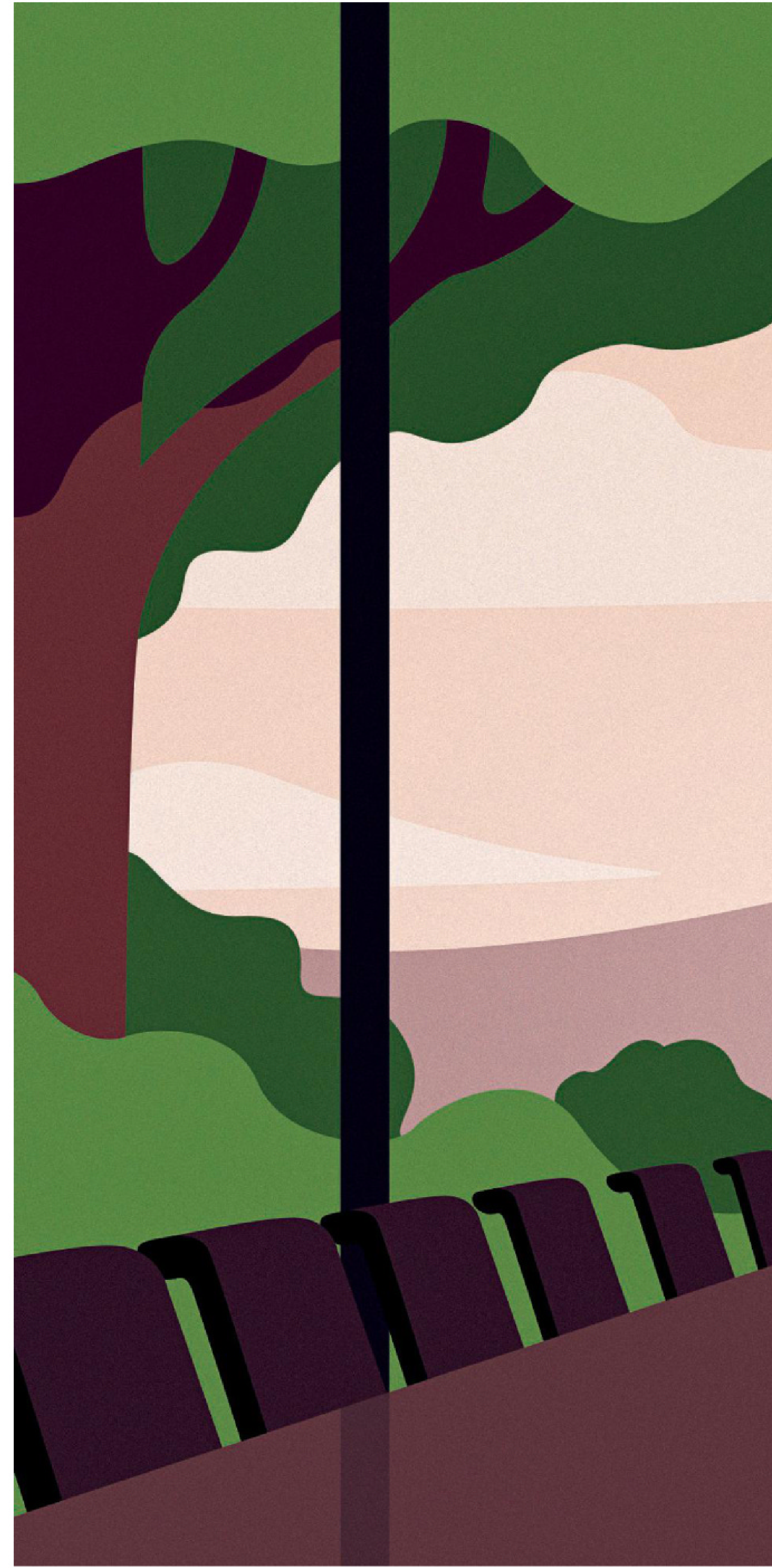
IN ASSOCIATION WITH

TIME
STUDIOS

IN THE BALANCE

Executives see a new dynamic in the contest between doing well and doing good

By Vivienne Walt



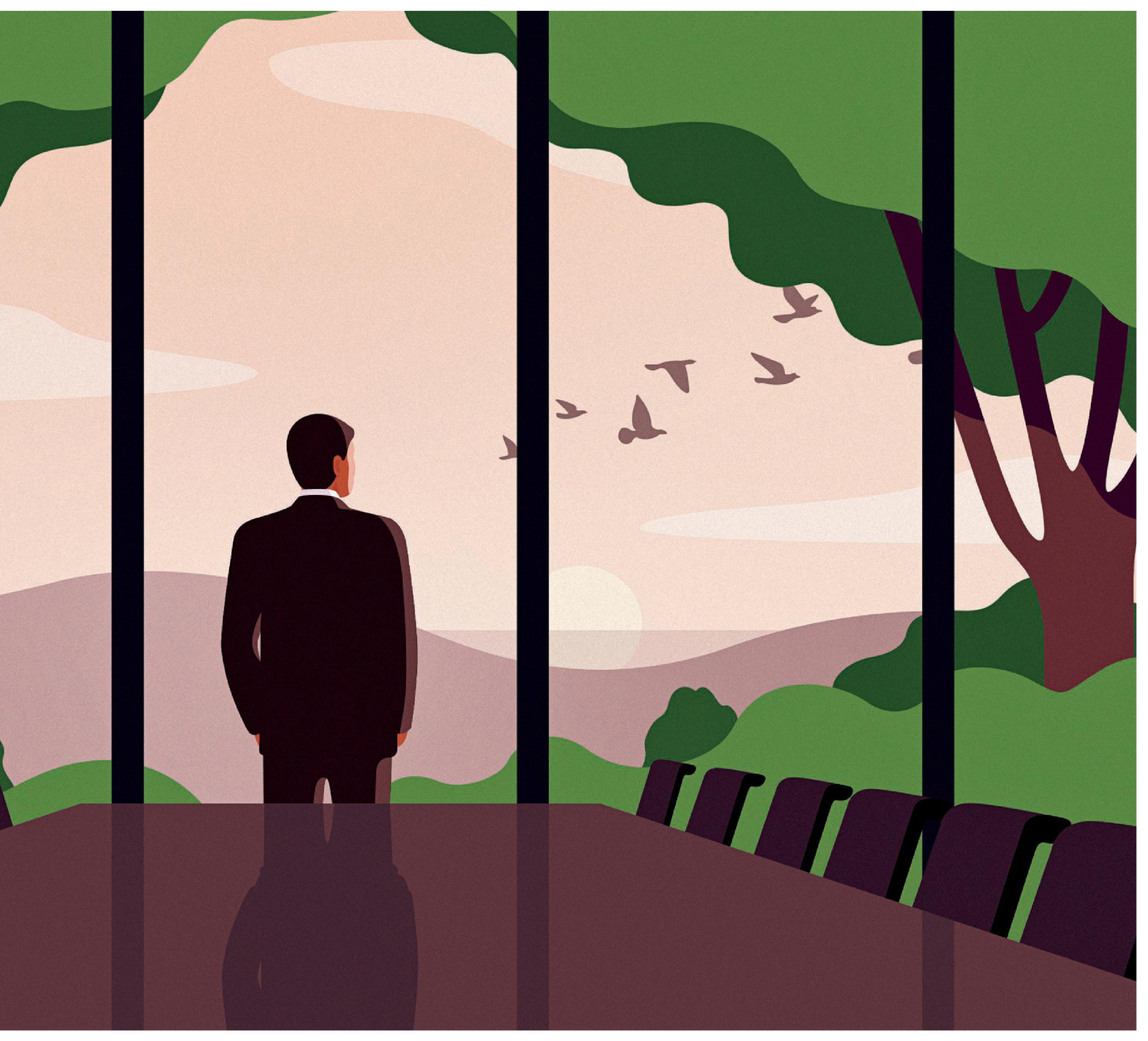
EVEN BY THE PANDEMIC'S STANDARDS OF ZOOM fatigue, the hours-long virtual meeting one Sunday in March 2021 was draining. Around 2 a.m., the board members of the global food giant Danone finally wound down their fractious arguments, and announced they had fired the company's CEO and chairman Emmanuel Faber—a stunningly swift end to his 24 years at the company.

The ouster of an executive at a Paris-based multinational might have been a passing, internal disruption, but for one fact: Faber had become a champion among environmentalists and climate activists for having turned Danone into a company that focused not only on making money and increasing its share price, but also on trying to remake the agricultural business, an industry with a far-reaching impact on the environment. Faber had in 2020 declared Danone—maker of products like Activia and Actimel yogurts, and Evian water—France's first *enterprise à mission,* a public company whose goals included targets aimed at bettering the world, akin to an American B Corp. Inserting climate change into Danone's core strategy, Faber introduced a so-called carbon-adjusted earnings-per-share indicator, measuring the company's value not only by its profits and revenues—as virtually every business in the world does—but by its environmental footprint too. The slogan he devised: "One planet, one health."

His firing was also one sucker punch, which Faber says felt like being cast adrift, or "leaving your family," as he put it to TIME. The reasons were complex, including the fact that the company's share price on the stock markets—the financial world's key measure of success—had risen a minuscule 2.7% in Faber's six years in charge, compared with the rocketing growth of Danone's competitors Unilever and Nestlé. Its revenues plummeted during work-from-home lockdowns, too, when items like bottled water were suddenly less relevant. Even so, Faber's departure provoked a deeper question, one that lingers nearly a year later: Do CEOs risk a backlash from their investors if they make a point of putting the planet's health above purely financial returns?

ILLUSTRATION BY ANNA PARINI FOR TIME

ANSWERING THAT QUESTION could hardly be more urgent. An ever growing share of the global economy is in the hands of private business. By 2021, businesses accounted for 72% of the economic output in major industrial countries—triple what they did 60 years before—and, of that, more than one-third of the gross value comes from just 5,000 companies, like Danone, with revenues topping $1 billion, according to a study by the intergovernmental Organisation for Economic Co-operation and Development (OECD) and the consultancy McKinsey. How those companies



succeed in cutting their carbon emissions—or in tackling problems like human-rights abuses, inequality or racial justice—will have a significant impact on the state of the world, for better or worse.

Of the 2,000 companies analyzed by the organization Net Zero Tracker, 682 have declared target dates by which they aim to zero out their carbon emissions. Brands like Coca-Cola and McDonald's have vowed to cut plastic waste, and automakers like GM and Volkswagen say they aim to end the production of fossil-fuel cars within the near future.

There are holes in all these promises, but one thing is now clear: for companies, it has become a risk not to make them. The actual debate now is whether tackling those issues—"purpose-driven capitalism," as it is known—is in sync or in conflict with what businesses have always thought was their main job: making money.

"People ask me, 'Is there a dissonance between profits and purpose?'" says Dan Schulman, PayPal's president and CEO, who has said he aims to bring his social views to the financial tech giant, where he has hiked pay and cut employees' health care costs. "My view is that profits and purpose are fully linked together," he tells TIME from his home in Palo Alto, Calif. "We cannot be about just maximizing our profit next quarter. We need to be part of our societies," he says. "We need to think about the medium term and the long term, and we need to act accordingly."

More and more business leaders have begun to echo that opinion. Those voices were especially loud during the months leading up to the COP26

climate talks last fall, when corporate executives and government officials converged in Glasgow for the biggest such negotiations ever. In advance of the gathering, hundreds of companies raced to declare commitments to environmental and social issues, and to set net-zero targets.

Net zero is a mammoth job. Take, for example, the oil major BP, whose CEO Bernard Looney became one of the first fossil-fuel executives, in February 2020, to declare a net-zero goal for the company (its target date is 2050); BP alone adds a huge 415 million metric tons of carbon to the atmosphere each year, all of which, according to Looney, the company intends to zero out with oil-production cuts, ramped-up renewable energy and the use of carbon capture—technology, with still uncertain results, that removes carbon from the air. "We're reallocating capital, we're restructuring the company," Looney told TIME during a November interview in his London office. "We are all in on the transition."

It is easy to dismiss the proclamations of corporate executives like Looney—and many surely do. After all, their hugely profitable business operations have clashed with environmentalists for decades; in the run-up to COP26, organizers told oil and gas executives, including Looney, that they could play no formal role in the talks because it was "unclear whether their commitments stack up yet."

Plus, despite all the talk of purpose-driven business, the world has yet to invent any sure way to measure whether companies in fact make good on their environmental commitments. "There is no universally agreed system," says Ian Goldin, professor of globalization at Oxford University. "The counting relies on self-reporting." That system is deeply faulty at a time when companies are making promises about limited solutions like carbon capture or committing to planting billions of trees in order to "offset" their emissions. "You say you're planting a forest, or the airline is offsetting your air miles," Goldin says. "Is anyone tracking if that forest is there? Has someone also claimed that forest? There is no system in place that has accountability to it."

And yet the fact that so many corporate executives feel compelled to make such statements signals just how drastically the climate crisis and social upheavals have impacted business decisions within a very brief period of time.

The onrush seemed to begin in earnest in January 2020, when Larry Fink, head of BlackRock, the world's biggest asset-management company, announced in a letter to CEOs that "climate change has become a defining factor in companies' long-term prospects." Though that fact seemed obvious to climate activists, the statement was widely regarded in the financial world as a game changer. Fink—whose firm manages close to $10 trillion in assets—was telling companies, and their potential investors, that those without a climate strategy faced a shaky future. "We are on the edge of a fundamental reshaping of finance," he wrote.

It is no surprise that companies have since rushed to put climate policies in place. "We have seen quite significant commitments made," says Paul Polman, co-author of the book *Net Positive* and co-founder of IMAGINE, a sustainability-focused business consultancy based in London. Until three years ago, Polman was CEO of Unilever, the $135 billion consumer-goods behemoth, where he drove a dramatic overhaul of the company, implementing environmental commitments and lobbying officials on issues of poverty and climate.

'Profits and purpose are fully linked together. We cannot be about just maximizing our profit next quarter. We need to be part of our societies.'

DAN SCHULMAN, PRESIDENT AND CEO OF PAYPAL

In a move that was hugely controversial at the time, Polman scrapped Unilever's quarterly earnings reports—standard for publicly traded companies—on his first day in office in 2009, saying the practice forced CEOs into short-term decisions in order to push up share prices, at the expense of longer-term social issues. Although that angered some investors, Polman told *Harvard Business Review,* "I figured I couldn't be fired on the first day."

Now, principles for which Polman fought a relatively solitary battle for years have been adopted by countless other business leaders. "There has been more progress in the last year and a half than the previous five years," he tells TIME.

EVEN EMMANUEL FABER still thinks purpose-driven capitalism brings with it more reward than risk. By his telling, his firing had little to do with his environmental commitments. In his mind, it resulted from the intense financial pressure the pandemic brought, which prompted him to impose layoffs and cuts; Danone's shares sank 27% on the French stock exchange in 2020. Activist shareholders from two funds in London, who together owned less than 4% of Danone, blamed the company's difficulties on Faber's management, and they pressed board members to fire him. "The mess in the Danone boardroom is a reminder that

distractions from the core goal of making a profit can be dangerous," the *Financial Times* opined days after he was fired. Within hours of the meeting, Danone released a statement saying that the board "believes in the necessity of combining high economic performance and the respect of Danone's unique model of a purpose-driven economy"—perhaps hinting that the high returns were lacking. "A few people saw a window of opportunity at the moment when it was easy to destabilize the governance of the company," Faber tells TIME, over tea in Paris. "In no way should that discourage progressive CEOs," he says. "They have, ultimately, the backing of large shareholders."

To Polman, the saga at Danone brought back memories of the battle he fought five years ago, while he was CEO of Unilever. In February 2017, the U.S. conglomerate Kraft Heinz launched a hostile takeover bid worth about $143 billion against his company. Back then, Polman was spending considerable time traveling the world, meeting government officials and NGOs about issues like mass poverty and clean water. "There is no better way than using companies like this to drive development," Polman told me then, just weeks before Kraft Heinz made its hostile bid. When I asked Polman whether he was prepared to be fired as CEO, if shareholders finally grew tired of his busy social campaigning, he said, "I never wanted to be a CEO, and I don't really care about that."

Kraft Heinz's 2017 bid collapsed within days, after most shareholders backed Polman. But five years on, Polman is still deeply marked by the episode, which he says crystallized a fraught conflict within the world's biggest companies. "These were two opposing economic models," he says. "One focused on a few billionaires; the other focused on serving billions of people." He believes Kraft Heinz "would have milked the company."

Both Polman and Faber saw their companies as a means to improve the world, rather than simply profitmaking machines. Yet there were crucial differences between their situations. For one thing, Unilever was able to try save the world while making boatloads of profit; shareholder return was about 290% over Polman's decade running the company. Danone, by comparison, struggled. That left Faber vulnerable to doubts and hostile challenges, even while he gained fans outside the financial world, and many inside too. Still, not even Polman's profitable returns at Unilever sheltered him from shareholders growing irked as he focused on campaigning for a better world. British shareholders shot down his plan in 2018 to close Unilever's London headquarters and consolidate at the company's other base, the Dutch port of Rotterdam; Polman resigned within months.

Despite the trend toward purpose-driven capitalism, one fundamental truth remains: companies need to be profitable. "If you go bankrupt, or get taken over, you certainly cannot be investing in the long term," says Goldin, the Oxford professor, whose 2021 book *Rescue* examined how businesses have weathered the pandemic. "You need to be successful in the short term to think about the long term," he says.

The optimistic view is that those two needs—short-term profits and long-term vision—might finally be inching closer together, after decades in which the first has dominated the second.

One hint is the steep rise in ESG (environmental, social and governance) investment funds that focus on those issues. Even though the vast majority of regular people have little idea of what harm the companies in their pension funds might wreak on the planet or in communities—and it's still unclear how quickly that might change—the new money plowed into those funds, which claim to be attracting trillions of dollars, more than doubled from 2019 to 2020.

And increasingly, CEOs realize they can hire top talent and keep customer loyalty if their companies are seen as championing environmental and social issues. "I am beginning to see more and more shareholders embrace that concept," says PayPal CEO Schulman. He says that major shareholders had told him in a meeting the previous day that they appreciated the company's diversity and equity program. "We do it regardless, because it is the right thing to do," he says. "But it is nice it is being noticed." —*With reporting by* ELOISE BARRY ◻

Faber presents sales results as CEO of Danone in 2019

MARIO FOURMY—SIPA/AP

HOW TO BRIDGE THE WORK-FAMILY DISCONNECT

By Indra Nooyi

FEW TOUGH REALITIES DURING THE COVID-19 crisis have been as universal—or as analyzed—as the huge strain on families as they manage their home and work lives in an unstable world. These pressures aren't new. They were simmering under the surface for decades, as our economy evolved to rely on more women working in paid jobs, but our support systems did not evolve with it.

What's new, to me, is that we've arrived at a moment where real collaboration to smooth the path for the next generation of family builders is possible. The answer lies in how we think about the "future of work." I believe the tumult of the pandemic may finally be enough to make families central in the conversation. That could bridge a divide that I long observed as CEO of PepsiCo.

I was a high-profile female CEO for more than a decade and was asked over and over to discuss work and family conflicts in front of large audiences. I met thousands of people worried about how to be true to their families, their jobs and their ambitions to be good citizens. This engagement had a great impact on me; I learned and absorbed the details at a visceral level. I thought about how family is such a powerful source of human strength, but realized that creating and nurturing families is a source of stress for so many.

At the same time, I was among a vaunted group of global CEOs regularly invited into rooms with the most influential leaders on the planet. I came to notice that the painful stories about how people—especially women—struggle to blend their lives and livelihoods were entirely absent in those rooms. The titans of industry, politics and economics talked about advancing the world through finance, technology and flying to Mars. Family—the actual messy, delightful, difficult and treasured core of how most of us live—was fringe.

This disconnect has profound consequences. Our failure to address work and family pressures in the senior reaches of global decisionmaking restrains hundreds of millions of women every day, not only from rising and leading, but also from blending a satisfying career with a healthy partnership and motherhood. In a prosperous marketplace, all women should have the choice of paid work outside the home, and our social and economic infrastructure must support that choice.

Innovation and profit suffer when so many employees feel they can't bring their whole selves to work

Women's financial independence and security—so central to their equality—are at stake. And ignoring the fact that the work world is still largely skewed toward the "ideal worker" of yore—an unencumbered male breadwinner—depletes us all.

Men too. Companies lose out because productivity, innovation and profit suffer when so many employees feel they can't bring their whole selves to work. Families lose out because they spend so much energy coping with old systems, from short school hours to a lack of parental leave or elder care, that don't mesh with their reality.

The entire global community suffers too. Many young people, worried about how they will manage it all, are choosing not to have children. This could not only have dire economic consequences in the decades to come, but, on a personal note, I find this sad. With everything I have accomplished, my greatest joy was having children, and I wouldn't want anyone to miss the experience if they want it.

I believe that we must address the work and family conundrum by focusing on our infrastructure around "care" with an energy and ingenuity like never before. We should consider this a moon shot, first ensuring every worker has access to paid leave, flexibility and predictability to help them handle the ebb and flow of work and family life, then moving fast to develop the most innovative and comprehensive childcare and elder-care solutions our greatest minds can devise.

This mission will require leadership that we don't often see. The fundamental role of a leader is to look for ways to shape the decades ahead, not just react to the present—and to help others accept the discomfort of disruptions to the status quo. We need the wisdom of business leaders, policymakers, and all women and men passionate about easing the work and family burden to come together here. We need a can-do sense of optimism and a must-do sense of responsibility. We can transform our society.

Adapted from My Life in Full: Work, Family and Our Future, *available now*

DAVE PUENTE/COURTESY INDRA NOOYI

Real Data is the Key to Real Solutions

Building on its Real Data Platform, Japan's SOMPO is evolving into an architect of security health and wellbeing.

In the information age, data is gold. A precious commodity, in responsible hands data can be a force for the common good. As one of Japan's largest providers of insurance and nursing care, SOMPO has amassed a treasure trove of data on human health, safety, and security. Ensuring wellbeing, however, requires more than statistics. On its own, data is just a jumping-off point. Interpreting and making the most of that information requires new and advanced technologies.

SOMPO is embracing those technologies. With its digital labs in Tokyo, Silicon Valley and Tel Aviv, and through partnerships with cutting-edge global tech firms, SOMPO is evolving into a new kind of company. "This moment is the beginning of our transformation, " says Kengo Sakurada, Group CEO of SOMPO Holdings. "Going forward, we will be defined not as an insurer, but as a firm that offers security, health and wellbeing."

Going forward, we will be defined not as an insurer, but as a firm that offers security, health and wellbeing

To transform that definition into reality, SOMPO and its partners are building a Real Data Platform. Its foundation is the wealth of detailed, proprietary information SOMPO has collected on accidents, weather and natural disasters, human health and various other fields. With its Real Data Platform, the company is collaborating with top-echelon tech firms such as leading software provider Palantir Technologies, the startup One Concern, and Tier IV. Together they apply artificial intelligence, state-of-the art modeling, and knowledge management to synthesize the raw information in creative and innovative ways.

The result is that SOMPO's Real Data Platform is predictive, not reactive. It can be used to forecast in detail what type of damage a disaster would cause in a certain location at a certain time, or what illness a patient is bound to experience soon. That creates opportunity, allowing time for preparation or prevention. "We can see what will happen in the future, and we can use that knowledge to solve social problems," Sakurada says. While data is a prized asset, privacy and security are also central to the Real Data Platform technology and philosophy.

Societies face some of their most critical tests during natural disasters. When calamities strike, people ask what, if anything, could have been done beforehand? In this era of climate change, the question has a new urgency: natural disasters are occurring with greater frequency and deadlier force. How can societies cope? Preparation is crucial. To improve regional disaster preparedness, SOMPO has formed a strategic partnership with One Concern, a Silicon Valley startup engaged in AI-enabled resilience solutions and disaster-risk mitigation technologies.

Together, they have developed a new AI-driven system combining One Concern's seismic and flood technology with SOMPO's Knowledge. The system enables emergency management officials to identify the businesses and communities exposed to extreme flooding and powerful earthquakes. The advanced modeling it produces can reveal the potential impacts on a local community and support the creation of contingency plans and disaster response. It has been tested in Kumamoto City since 2019, and the partnership is aiming to expand the project to more cities in Japan and will offer it as a resilience solution to Japan's private sector.

"Better incorporating climate analytics will create a more accurate picture of how the world will look in the future, ensuring we can respond more quickly and recover more effectively if something terrible does happen," said Ahmad Wani, CEO and co-founder of One Concern. "One Concern and SOMPO are paving the way for Japan and the entire world to see that resilience is an urgent 'must have' — now more than ever."

The market for this groundbreaking technology extends well beyond Japan. Nations in Asia and the Pacific Rim, bounded by the "Ring of Fire," experience more natural disasters than any other region. However, with the climate becoming increasingly unstable, every region is now at greater risk. AI-enabled software with the ability to forecast the impact of a disaster would be an invaluable tool.

SOMPO and One Concern are working together to develop and apply new methods of probabilistic modeling to prevent catastrophic failures before they occur, not just compensating for damage afterwards. The fruits of their collaboration are expected to provide new value for clients while also contributing to the broader social need for disaster mitigation solutions.

The partners believe their work is advancing to a point where they will be able to detect unknown risks from climate change and natural disasters, allowing customers a chance to mitigate or avoid those risks. That would be a transformational technological development.

Japan is already in the midst of a transformation: it is an aging society. SOMPO's Real Data Platform is proving to be an essential component in addressing the challenges posed by a population with growing numbers of the elderly. In late 2015, SOMPO entered the nursing and preventive healthcare sector, founding SOMPO Care, acquiring nursing homes and delivering at-home service for the diverse needs of seniors and their families.

> SOMPO can deliver societal transformation through real data analysis and insights.
>
> *Kengo Sakurada, Group CEO of SOMPO Holdings*

Since its establishment, SOMPO Care has collected real data on the health of over 80,000 residents in its centers and facilities. This data is secure within the Real Data Platform. However, medical information is voluminous, complex and disparate. It is often stored in different locations or systems: silos that can obscure a comprehensive picture of patient health and levels and quality of care. This leads to inefficiencies that can negatively affect patients and drive up costs.

But in 2018, Sakurada found a firm that could help SOMPO to solve those problems. He discovered Palantir, a leading

> We can create 'visible and predictive nursing care' in Japan. And we can export this solution to the world.
>
> *Kengo Sakurada, Group CEO of SOMPO Holdings*

U.S. software provider founded by Peter Thiel. "When I ran across Palantir, I thought: this is it!" Sakurada says. "SOMPO could deliver societal transformation through real data analysis and insights." SOMPO had the data. Palantir could provide the insights. Together, they founded Palantir Technologies Japan.

"We started with SOMPO Care, our nursing care business and used Palantir Foundry to organize and analyze real data to increase business efficiency and quality of care," Sakurada says. Foundry is Palantir's advanced enterprise data management platform. It connects SOMPO's real data and then provides structure and analysis. That creates tremendous value.

"By consuming big data and analyzing it, we will be able to see the patterns so that we can prevent illness. We can create 'visible and predictive nursing care' in Japan. And we can export this solution for the world," Sakurada says. "We expect that in 2022, our Real Data Platform initiatives with Palantir will deliver major milestones."

The elderly will also benefit from SOMPO's partnership in another field: mobility. Since 2017, the company has been working with Tier IV, a deep-tech startup in Japan that specializes in developing safe, intelligent, selfdriving vehicles. SOMPO is using its proprietary data on accidents to accelerate the autonomous driving industry and make it safer. "SOMPO will transform itself from being acompany that insures against accidents, to a company that prevents accidents," Sakurada says.

By combining its Real Data Platform with Tier IV's autonomous driving operating system, automobiles using the Tier IV system will be able to make sharper and safer driving decisions because they are working from a base of deeper and more detailed information.

And an additional benefit of safe and reliable autonomous vehicles is that they can extend the driving years of the elderly. Despite slower reflexes, declining vision or more frequent "senior moments," senior citizens will still be able to take to the open road without posing an undue risk to other drivers or themselves.

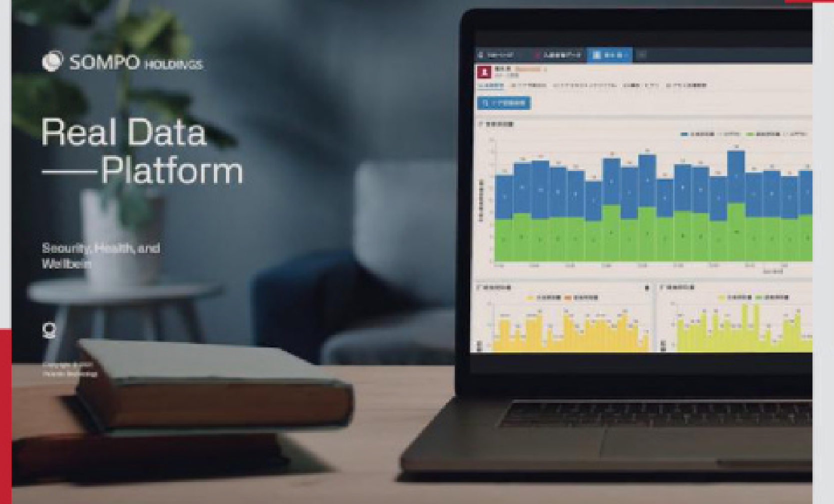
Maintaining that level of independence will be a boon to the elderly. Instead of being dependent on others to get around, they will have the freedom of mobility. And that will help maintain their optimism and zest for life, which contribute to good health and a longer life.

Part of life is celebrating the changing seasons. During this recent holiday season, Alex Karp, CEO of Palantir Technologies and Kengo Sakurada, Group CEO of SOMPO Holdings each spoke about the Real Data Platform – its values and ambitions – in a video message they produced together. Please take a look. It provides proof of their strong corporate partnership and the bonds they are building with our changing societies.

Please enjoy the message by Kengo Sakurada and Alex Karp

Dr. Alex Karp, CEO of Palantir Technologies

Kengo Sakurada, Group CEO of SOMPO Holdings



Please enjoy the video of Palantir and SOMPO— Driving Social Change

BIGGER THAN BIAS

Timnit Gebru helped expose how artificial intelligence replicates prejudice. She's not waiting for Big Tech to fix it

By Billy Perrigo

THREE HUNDRED AND SIXTY-FOUR DAYS AFTER she lost her job as a co-lead of Google's ethical artificial intelligence (AI) team, Timnit Gebru is nestled into a couch at an Airbnb rental in Boston, about to embark on a new phase in her career.

Google hired Gebru in 2018 to help ensure that its AI products did not perpetuate racism or other societal inequalities. In her role, Gebru hired prominent researchers of color, published several papers that highlighted biases and ethical risks, and spoke at conferences. She also began raising her voice internally about her experiences of racism and sexism at work. But it was one of her research papers that led to her departure. "I had so many issues at Google," Gebru tells TIME over a Zoom call. "But the censorship of my paper was the worst instance."

In that fateful paper, Gebru and her co-authors questioned the ethics of large language AI models, which seek to understand and reproduce human language. Google is a world leader in AI research, an industry forecast to contribute $15.7 trillion to the global economy by 2030, according to accounting firm PwC. But Gebru's paper suggested that, in their rush to build bigger, more powerful language models, companies including Google weren't stopping to think about the kinds of biases being built into them—biases that could entrench existing inequalities, rather than help solve them. It also raised concerns about the environmental impact of the AIs, which use huge amounts of energy. In the battle for AI dominance, Big Tech companies were seemingly prioritizing profits over safety, the authors suggested, calling for the industry to slow down. "It was like, You built this thing, but mine is even bigger," Gebru recalls of the atmosphere at the time. "When you have that attitude, you're obviously not thinking about ethics."

Gebru's departure from Google set off a firestorm in the AI world. The company appeared to have forced out one of the world's most respected ethical AI researchers after she criticized some of its most lucrative work. The backlash was fierce.

The dispute didn't just raise concerns about whether corporate behemoths like Google's parent Alphabet could be trusted to ensure this technology benefited humanity and not just their bottom lines. It also brought attention to important questions: If artificial intelligence is trained on data from the real world, who loses out when that data reflects systemic injustices? Were the companies at the forefront of AI really listening to the people they had hired to mitigate those harms? And, in the quest for AI dominance, who gets to decide what kind of collateral damage is acceptable?

FOR THE PAST DECADE, AI has been quietly seeping into daily life, from facial recognition to digital assistants like Siri or Alexa. These largely unregulated uses of AI are highly lucrative for those who control them, but are already causing real-world harms to those who are subjected to them: false arrests; health care discrimination; and a rise in pervasive surveillance that, in the case of policing, can disproportionately affect Black people and disadvantaged socioeconomic groups.

Gebru is a leading figure in a constellation of scholars, activists, regulators and technologists collaborating to reshape ideas about what AI is and what it should be. Some of her fellow travelers remain in Big Tech, mobilizing those insights to push companies toward AI that is more ethical. Others, making policy on both sides of the Atlantic, are preparing new rules to set clearer limits on the

Gebru in Boston, on Dec. 1, 2021

PHOTOGRAPH BY PHILIP KEITH FOR TIME

companies benefiting most from automated abuses of power. Gebru herself is seeking to push the AI world beyond the binary of asking whether systems are biased and to instead focus on power: who's building AI, who benefits from it, and who gets to decide what its future looks like.

The day after our Zoom call, on the anniversary of her departure from Google, Gebru launched the Distributed AI Research (DAIR) Institute, an independent research group she hopes will grapple with how to make AI work for everyone. "We need to let people who are harmed by technology imagine the future that they want," she says.

WHEN GEBRU WAS A TEENAGER, war broke out between Ethiopia, where she had lived all her life, and Eritrea, where both her parents were born. It became unsafe for her to remain in Addis Ababa, the Ethiopian capital. After a "miserable" experience with the U.S. asylum system, Gebru finally made it to Massachusetts as a refugee. Immediately, she began experiencing racism in the American school system, where even as a high-achieving teenager she says some teachers discriminated against her, trying to prevent her taking certain AP classes. Years later, it was a pivotal experience with the police that put her on the path toward ethical technology. She recalls calling the cops after her friend, a Black woman, was assaulted in a bar. When they arrived, the police handcuffed Gebru's friend and later put her in a cell. The assault was never filed, she says. "It was a blatant example of systemic racism."

While Gebru was a Ph.D. student at Stanford in the early 2010s, tech companies in Silicon Valley were pouring colossal amounts of money into a previously obscure field of AI called machine learning. The idea was that with enough data and processing power, they could teach computers to perform a wide array of tasks, like speech recognition, identifying a face in a photo or targeting people with ads based on their past behavior. For decades, most AI research had relied on hard-coded rules written by humans, an approach that could never cope with such complex tasks at scale. But by feeding computers enormous amounts of data—now available thanks to the Internet and smartphone revolutions—and by using high-powered machines to spot patterns in those data, tech companies became enamored with the belief that this method could unlock new frontiers in human progress, not to mention billions of dollars in profits.

In many ways, they were right. Machine learning became the basis for many of the most lucrative businesses of the 21st century. It powers Amazon's recommendation engines and warehouse logistics and underpins Google's search and assistant functions, as well as its targeted advertising business. It also promises to transform the terrain of the future, offering tantalizing prospects like AI lawyers who could give affordable legal advice or AI doctors who could diagnose patients' ailments within seconds, or even AI scientists.

By the time she left Stanford, Gebru knew she wanted to use her new expertise to bring ethics into this field, which was dominated by white men. She says she was influenced by a 2016 ProPublica investigation into predictive policing, which detailed how courtrooms across the U.S. were adopting software that offered to predict the likelihood of defendants reoffending in the future, to advise judges during sentencing. By looking at actual reoffending rates and comparing them with the software's predictions, ProPublica found that

From left: A discussion of predictive policing in L.A. in 2016; a 2020 demonstration of a Google AI that can recognize hands

PATRICK T. FALLON—THE WASHINGTON POST/GETTY IMAGES; DAVID PAUL MORRIS—BLOOMBERG/GETTY IMAGES

the AI was not only often wrong, but also dangerously biased: it was more likely to rate Black defendants who did not reoffend as "high risk," and to rate white defendants who went on to reoffend as "low risk." The results showed that when an AI system is trained on historical data that reflects inequalities—as most data from the real world does—the system will project those inequalities into the future.

When she read the story, Gebru thought about not only her own experience with police, but also the overwhelming lack of diversity in the AI world she had experienced so far. Shortly after attending a conference in 2015, where she was one of only a few Black attendees, she put her thoughts into words in an article that she never published. "I am very concerned about the future of AI," she wrote. "Not because of the risk of rogue machines taking over. But because of the homogeneous, one-dimensional group of men who are currently involved in advancing the technology."

By 2017, Gebru was an AI researcher at Microsoft, where she co-authored a paper called *Gender Shades.* It demonstrated how facial-recognition systems developed by IBM and Microsoft were almost perfect at detecting images of white people, but not people with darker skin, particularly Black women. The data set that had been used to train the algorithm contained lots of images of white men, but very few of Black women. The research, which Gebru had worked on alongside Joy Buolamwini of MIT Media Lab, forced IBM and Microsoft to update their data sets.

Google hired Gebru shortly after *Gender Shades* was published, at a time when Big Tech companies were coming under increasing scrutiny over the ethical credentials of their AI research. While Gebru was interviewing, a group of Google employees were protesting the company's agreement with the Pentagon to build AI systems for weaponized drones. Google eventually canceled the contract, but several employees who were involved in worker activism in the wake of the protests say they were later fired or forced out. Gebru had reservations about joining Google, but believed she could have a positive impact. "I went into Google with my eyes wide open in terms of what I was getting into," she says. "What I thought was, This company is a huge ship, and I won't be able to change its course. But maybe I'll be able to carve out a small space for people in various groups who should be involved in AI, because their voices are super important."

After a couple of years on the job, Gebru had realized that publishing research papers was more effective at bringing about change than trying to convince her superiors at Google, whom she often found to be intransigent. So when co-workers began asking her questions about the ethics of large language models, she decided to collaborate on a paper about them. In the year leading up to that decision, the hype around large language models had led to a palpable sense of enthusiasm across Silicon Valley. In a stunt a couple of months earlier, the *Guardian* published an op-ed written by a large language model called GPT-3 from a Microsoft-backed company, OpenAI. A ROBOT WROTE THIS ENTIRE ARTICLE. ARE YOU SCARED YET, HUMAN? asked the headline. Investment was flooding into tech firms' AI research teams, all of which were competing to build models based on ever bigger data sets.

To Gebru and her colleagues, the enthusiasm around language models was leading the industry in a worrying direction. For starters, they knew

that despite appearances, these AIs were nowhere near sentient. The paper compared the systems to "parrots" that were simply very good at repeating combinations of words from their training data. This meant they were especially susceptible to bias. Part of the problem was that in the race to build ever bigger data sets, companies had begun to build programs that could scrape text from the Internet to use as training data. "This means that white supremacist and misogynistic, ageist, etc., views are overrepresented," Gebru and her colleagues wrote in the paper. At its core was the same maxim that had underpinned Gebru and Buolamwini's facial-recognition research: if you train an AI on biased data, it will give you biased results.

The paper that Gebru and her colleagues wrote is now "essentially canon" in the field of responsible AI, according to Rumman Chowdhury, the director of Twitter's machine-learning ethics, transparency and accountability team. She says it cuts to the core of the questions that ethical AI researchers are attempting to get Big Tech companies to reckon with: "What are we building? Why are we building it? And who is it impacting?"

But Google's management was not happy. After the paper was submitted for an internal review, Gebru was contacted by a vice president, who told her the company had issues with it. Gebru says Google initially gave vague objections, including that the paper painted too negative a picture of the technology. (Google would later say the research did not account for safeguards that its teams had built to protect against biases, or its advancements in energy efficiency. The company did not comment further for this story.)

'Feeding AI systems on the world's beauty, ugliness and cruelty, but expecting it to reflect only the beauty is a fantasy.'

ABEBA BIRHANE AND VINAY PRABHU, QUOTED IN GEBRU'S PAPER

Google asked Gebru to either retract the paper or remove from it her name and those of her Google colleagues. Gebru says she replied in an email saying that she would not retract the paper, and would remove the names only if the company came clean about its objections and who exactly had raised them—otherwise she would resign after tying up loose ends with her team. She then emailed a group of women colleagues in Google's AI division separately, accusing the company of "silencing marginalized voices." On Dec. 2, 2020, Google's response came: it could not agree to her conditions, and would accept her resignation. In fact, the email said, Gebru would be leaving Google immediately because her message to colleagues showed "behavior that is inconsistent with the expectations of a Google manager." Gebru says she was fired; Google says she resigned.

In an email to staff after Gebru's departure, Jeff Dean, the head of Google AI, attempted to reassure concerned colleagues that the company was not turning its back on ethical AI. "We are deeply committed to continuing our research on topics that are of particular importance to individual and intellectual diversity," he wrote. "That work is critical and I want our research programs to deliver more work on these topics—not less."

TODAY, THE IDEA that AI can encode the biases of human society is not controversial. It is taught in computer science classes and accepted as fact by most AI practitioners, even at Big Tech companies. But to some who are of the same mind as Gebru, it is only the first epiphany in a much broader—and more critical—worldview. The central point of this burgeoning school of thought is that the problem with AI is not only the ingrained biases in individual programs, but also the power dynamics that underpin the entire tech sector. In the context of an economy where founders of platforms like Amazon, Google and Facebook have amassed more wealth than near anybody else in human history, proponents of this belief see AI as just the latest and most powerful in a sequence of tools wielded by capitalist elites to consolidate their wealth, cannibalize new markets, and penetrate ever more deeply into the private human experience in pursuit of data and profit.

To others in this emerging nexus of resistance, Gebru's ouster from Google was a sign. "Timnit's work has pretty unflinchingly pulled back the veil on some of these claims, that are fundamental to these companies' projections, promises to their boards and also to the way they present themselves in the world," says Meredith Whittaker, a former researcher at Google who resigned in 2019 after helping lead worker resistance to its cooperation with the Pentagon. "You saw how threatening that work was, in the way that Google treated her."

Whittaker was recently appointed as a senior adviser on AI to the Federal Trade Commission (FTC). "What I am concerned about is the capacity for social control that [AI] gives to a few profit-driven corporations," says Whittaker, who was not speaking in the capacity of her FTC role. "Their interests are always aligned with the elite, and their harms will almost necessarily be felt most by the people who are subjected to those decisions."

It's a viewpoint that Big Tech could not disagree with more, but to which European regulators

A facial-recognition AI that can identify individuals in a crowd, on show at the 2019 CES convention in Las Vegas

are also paying attention. The E.U. is currently scrutinizing a wide-ranging draft AI act. If passed, it could restrict forms of AI that lawmakers deem harmful, including real-time facial recognition, although activists say it doesn't go far enough. Several U.S. cities, including San Francisco, have already implemented facial-recognition bans. Gebru has spoken in favor of regulation that defines what kind of uses of AI are unacceptable, and sets better guardrails for those that remain. She recently told European lawmakers scrutinizing the new bill: "The No. 1 thing that would safeguard us from unsafe uses of AI is curbing the power of the companies who develop it."

She added that increasing legal protections for tech workers was an essential part of making sure companies did not create harmful AI, because workers are often the first line of defense, as in her case. Progress is being made on this front too. In October 2021, the Silenced No More Act came into force in California, preventing big companies from using NDAs to silence employees who complain about harassment or discrimination. In January 2021, hundreds of Google workers unionized for the first time. In the fall, Facebook whistle-blower Frances Haugen disclosed thousands of pages of internal documents to authorities, seeking whistle-blower protection under federal law.

Gebru sees her research institute DAIR as another organ within this wider push toward tech that is socially responsible, putting the needs of communities ahead of the profit incentive and everything that comes with it. At DAIR, Gebru will work with researchers around the world across multiple disciplines to examine the outcomes of AI technology, with a particular focus on the African continent and the African diaspora in the U.S. One of DAIR's first projects will use AI to analyze satellite imagery of townships in South Africa, to better understand legacies of apartheid. DAIR is also working on building an industry-wide standard that could help mitigate bias in data sets, by making it common practice for researchers to write accompanying documentation about how they gathered their data, what its limitations are and how it should (or should not) be used. Gebru says DAIR's funding model gives it freedom too. DAIR has received $3.7 million from a group of big philanthropists including the Ford, MacArthur and Open Society foundations. It's a novel way of funding AI research, with few ties to the system of Silicon Valley money and patronage that often decides which areas of research are worthy of pursuit, not only within Big Tech companies, but also within the academic institutions to which they give grants.

Even though DAIR will be able to conduct only a small handful of studies, and its funding pales in comparison with the money Big Tech is prepared to spend on AI development, Gebru is optimistic. She has already demonstrated the power of being part of a collective of engaged collaborators working together to create a future in which AI benefits not just the rich and powerful. They're still the underdogs, but the impact of their work is increasing. "When you're constantly trying to convince people of AI harms, you don't have the space or time to implement your version of the future," Gebru says. "So we need alternatives." *—With reporting by* NIK POPLI ◻

DAVID MCNEW—AFP/GETTY IMAGES

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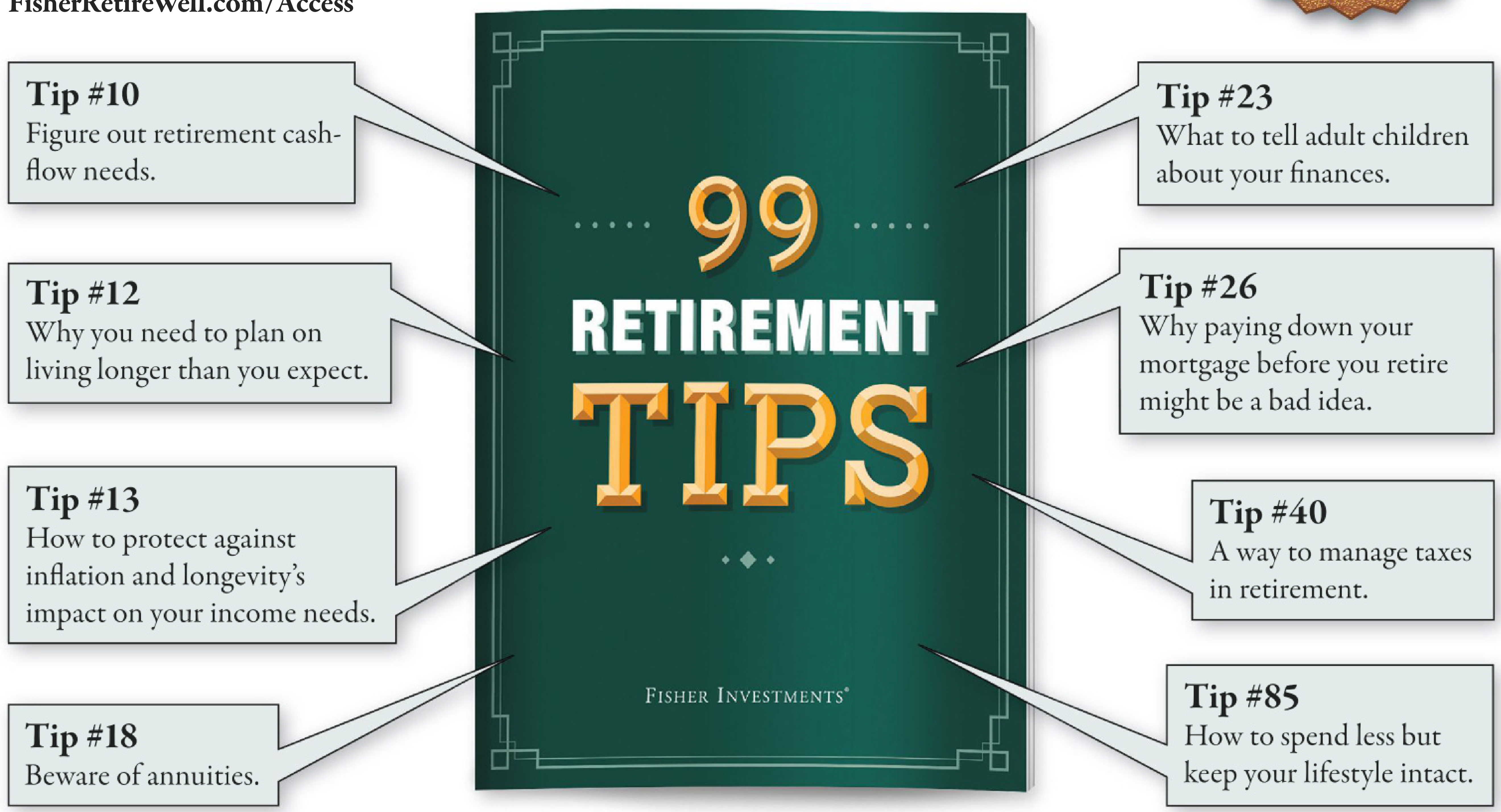

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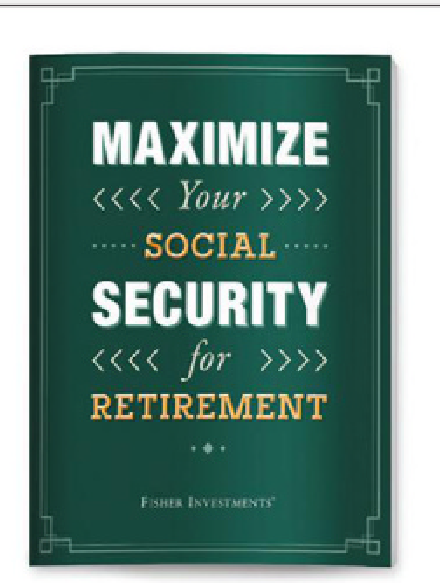

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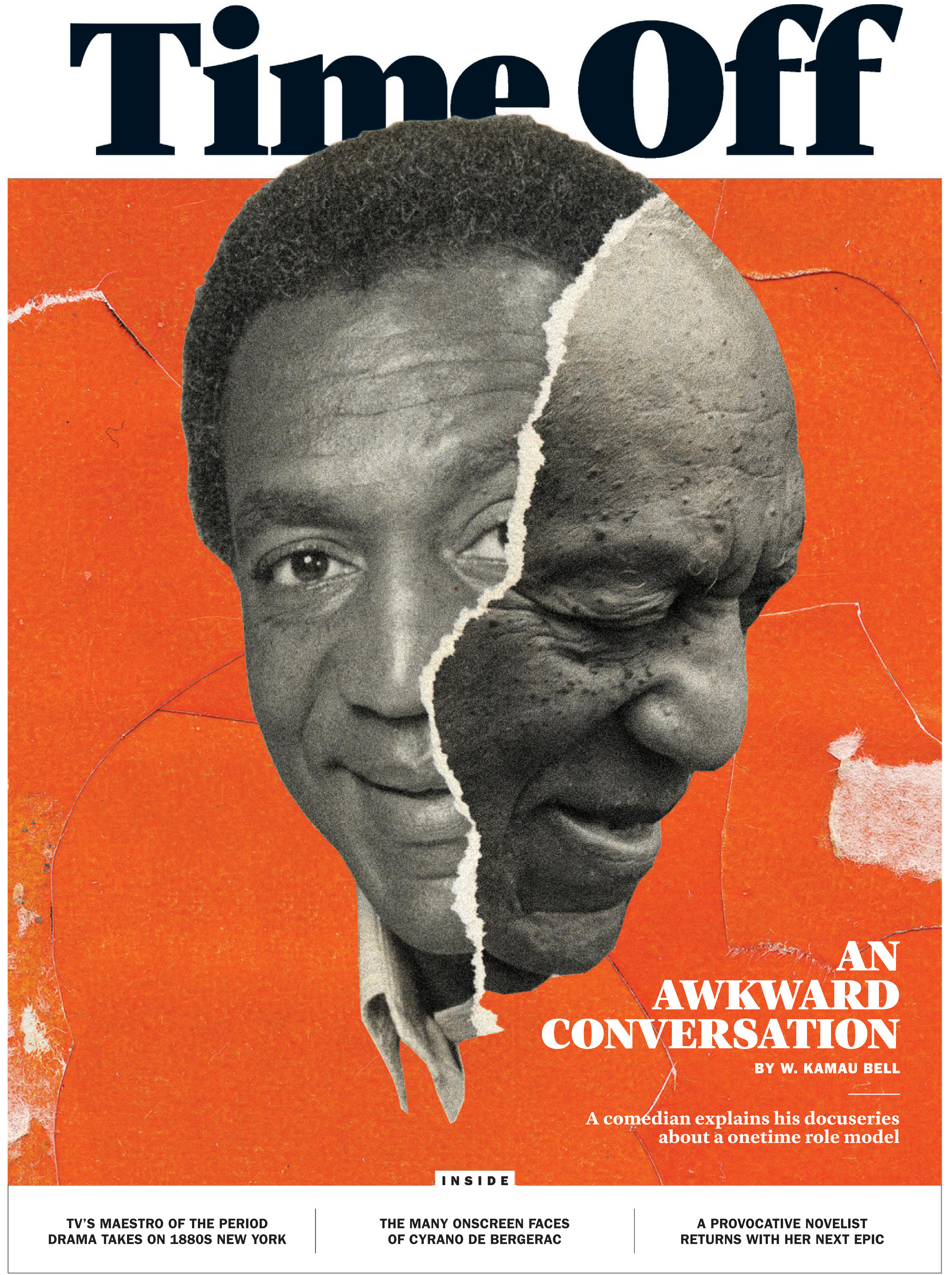
Time Off



AN AWKWARD CONVERSATION

BY W. KAMAU BELL

A comedian explains his docuseries about a onetime role model

INSIDE

TV'S MAESTRO OF THE PERIOD DRAMA TAKES ON 1880S NEW YORK

THE MANY ONSCREEN FACES OF CYRANO DE BERGERAC

A PROVOCATIVE NOVELIST RETURNS WITH HER NEXT EPIC

PHOTO-ILLUSTRATION BY ANTHONY GERACE FOR TIME

THERE IS A QUESTION THAT IS ASKED OF ALL stand-up comics. And it is asked most frequently of comics who are being newly discovered by the press. It is seen as the perfect way to really get to know the comedian: "Who were your favorite stand-up comics when you were growing up?"

It's a simple question. But when the press was first discovering me in the early 2010s, it felt really complicated, because the stand-up comic I loved the most growing up was Bill Cosby. He had been a part of my entire life, from his cartoon *Fat Albert and the Cosby Kids* in the '70s to his stand-up, and of course through *The Cosby Show* in the '80s. For my high school graduation, I wore a "Cosby sweater" instead of a suit jacket.

But when major media first took interest in me following the premiere of my FX show *Totally Biased,* there were already stories of women accusing Bill Cosby of sexual assault. They weren't getting much traction in the press—and wouldn't until several years later when the #MeToo movement ignited in full force—but it was enough that I couldn't just say his name without reservation. On the other hand, if I didn't say that I had loved Bill Cosby, I would be lying. And I would also look like the one Black kid who grew up in the '70s and '80s who didn't like Bill Cosby.

So I tried to get clever with it. I would mention other comics and at the end I'd say, "and the artist formerly known as Bill Cosby." It was my way of telling the truth but also acknowledging that there was something else going on that I couldn't ignore. The interviewer always seemed to get this and move on to other questions. But it left a bigger question in my mind that has only grown since then: How do we talk about Bill Cosby? How do we do it in a way that is honest to our own personal experiences and acknowledges the experiences of others? How do we hold these incredibly divergent truths? The gap from "my hero" to "my rapist" is unfathomable. But we have to try. I try to start to reckon with all this in the four-part docuseries I directed, *We Need to Talk About Cosby,* which premieres at the Sundance Film Festival before coming to Showtime on Jan. 30.

I THINK THE FIRST TAPE I ever rented from a video store was the stand-up comedy special *Bill Cosby: Himself.* It was the early '80s, I was 10 or 11, and I was already falling in love with comedy. Before the Internet, the only way you could watch comedians was to stay up late to watch *The Tonight Show Starring Johnny Carson* or *Saturday Night Live.* So when video stores opened and I discovered that I could just rent a tape and watch comedy whenever I wanted to, it felt like magic. The other tape I rented was Eddie Murphy's comedy special *Delirious,* although because of his R-rated reputation, I had to get my mom's permission for that one.

But I didn't need my mom's permission to watch Bill Cosby. She knew that one would be family-friendly. By the time *Himself* came out, Bill Cosby had more than 20 years in the spotlight as a G-rated comedian. And more than just being a clean comic, Cosby was already known as someone whose content was not only good to listen to but also good *for* you. Even more relevant to Black folks, he was someone to look up to at times when we needed heroes the most. Bill Cosby was someone who had his hand extended to pull you up with him. When I watched him—especially on his shows aimed at kids like *Fat Albert, Picture Pages* and *The Electric Company*—I saw a Black man who wanted me to be smart, like he was. He wanted me to be successful, like he was. He wanted me to be a good person, like I thought he was.

Throughout his career, Bill Cosby was the kind of Black entertainer Black folks were happy to support. He was successful without "bowing or scraping" or "shucking and jiving," as it was called back then. And though he was loved and celebrated by white folks, he didn't lose himself in the process. He was beloved by white America at a time when other Black folks were getting beaten up by police every night on the news. In the 1960s, when Martin Luther King Jr. was advocating for a world where Black and white could live together, Cosby was doing his part to make that a reality by integrating TV and nightclubs. Martin Luther King Jr. was being called uppity and under constant threat. Cosby was accepting Emmys and Grammys by the handful. And what most of us

In the 1980s, Cosby had the highest Q Score ever, recognized and regarded highly by 70% of Americans

PREVIOUS SPREAD: THE COSBY SHOW: NBC/EVERETT COLLECTION; COSBY: GILBERT CARRASQUILLO—GETTY IMAGES

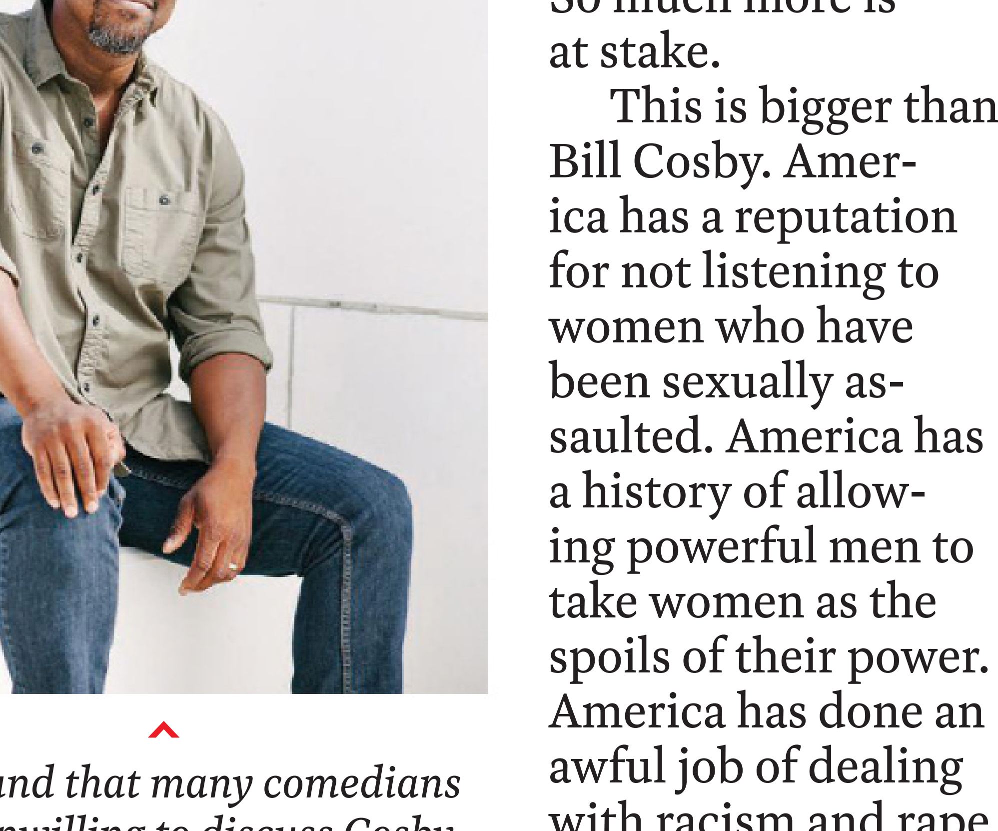
Time Off is reported by Mariah Espada

didn't know is that some of his most important work was being done behind the scenes. He revolutionized the stunt industry for Black performers by insisting his stunts be done by a Black man and not by a white man who was painted black. (Yes, that was a thing.) Cosby made sure to hire Black people behind the scenes before we all understood how important that is.

I didn't know all that when I was a kid. So much of the Bill Cosby story for me is about what I didn't know then, and what I do know now. I also didn't know that if you go all the way back to the early years of his career, there are women who have accused him of sexual assault or rape. These allegations are consistent throughout his career. When you look into the stories of the more than 60 women who have come forward, you see all kinds of women, of different races and backgrounds. Some knew him for one night, and some knew him for years. Some worked for him. Some looked at him as a mentor. Some only sort of knew who he was when they met him. The only common thread they have is their stories of Bill Cosby assaulting or raping them. Admittedly, I didn't look deeply into their stories until I worked on this project. My "artist formerly known as Bill Cosby" thing feels especially feckless and mealy-mouthed now.

WHEN BILL COSBY was sentenced to prison, I thought, "Well, the story is over now. He's 81, maybe now is the time to talk about all this." I started working on the docuseries in 2019. I reached out to the comedians I knew had a stake in the conversation. That list is pretty much every comedian I knew, and maybe even every comedian, period. I quickly found out that I was among the few who wanted to have the Bill Cosby conversation. Very few of the people who worked with him wanted to talk, either. And of course since this is about Bill Cosby, many of these people who didn't want to talk are Black. This is a third-rail conversation for Black folks. Whether you believe the women, whether you think Cosby is (or ever was) a hero, there are too many land mines. This is combined with the fact that no matter what you think about Cosby, Black folks in the U.S. are always living under a deficit of role models and representation. Consider all that alongside the fact that America has a well-earned reputation for criminalizing and killing innocent Black men. There is no perceived gain in taking a Black man down.

I wondered if I was making a mistake taking this on. (I have wondered that many, many times, even as I type this.) Then COVID-19 hit, making production impossible. And then on our last day of filming, in June 2021, the crew and I were in Philadelphia, waiting for our last interviewee to arrive, when I got a text message from a friend: "Your film just got way more interesting." Bill Cosby was being released from prison, less than an hour's drive from where we were. I'm sure that everybody who had said no to me before this moment breathed a sigh of relief. The third-rail conversation had just gotten another shot of electricity.



Bell found that many comedians were unwilling to discuss Cosby

This docuseries feels like it could be the end of my career. Many times while making it I hoped it would just go away. Get canceled or permanently shelved. It had certainly happened to other Bill Cosby documentaries. But then every time I would have that thought, I would think about the women who have alleged harrowing encounters with Cosby and their bravery when they talked to me for this project. These are women who have gone through the wringer since they came forward. Lili Bernard, who claims Cosby drugged and raped her during the time she appeared on *The Cosby Show,* says there has been constant "blaming and shaming." Most of these women have learned to distrust the media as a whole. But they trusted me with their stories. I couldn't leave them on the shelf, even if my career is in the balance. We have to be able to at least have the conversation. So much more is at stake.

This is bigger than Bill Cosby. America has a reputation for not listening to women who have been sexually assaulted. America has a history of allowing powerful men to take women as the spoils of their power. America has done an awful job of dealing with racism and rape. I sincerely hope that we can do a better job of dealing with both those issues in the Bill Cosby conversation. I believe there is one more thing to learn from him, whether he wants us to or not.

Bell is an Emmy-winning producer, stand-up comedian and host of CNN's United Shades of America

THIS SPREAD: WE NEED TO TALK ABOUT COSBY: SHOWTIME; BELL: AUNDRE LARROW

‹ *In Fellowes' 1880s New York, change begins in the drawing room*

REVIEW

Downton's creator crosses the pond and heads uptown

BY JUDY BERMAN

JULIAN FELLOWES CONQUERED AMERICAN TELEVISION with *Downton Abbey,* transforming PBS's sleepy *Masterpiece* slot into appointment TV. So maybe it was inevitable that the Oscar-winning screenwriter and Conservative peer of the House of Lords would cross the Atlantic to meet his constituents. HBO's *The Gilded Age* is the product of that sojourn.

As its title suggests, this lavishly made, eminently watchable but mostly uninspired period drama takes on Manhattan high society in the late 19th century. Times are changing, just like in *Downton* (whose bittersweet eulogy for the landed gentry has long been undermined by its extension into an unkillable franchise). And with the self-made robber barons of the machine age invading their neighborhoods, multimillion-dollar fortunes and gaudy aesthetic preferences in tow, New York's so-called old people, whose families have wielded power there since it was New Amsterdam, sense a threat to their social hegemony.

Addresses are of paramount importance to both crowds, and *The Gilded Age* inhabits the upscale intersection of Fifth Avenue and 61st Street. Widowed socialite Agnes van Rhijn (Christine Baranski, serving Violet Crawley sass) has lived there for decades, reigning over her meek spinster sister Ada (Cynthia Nixon) and playboy son Oscar (Blake Ritson). "We only receive the old people," Agnes declares. But she can't stop a Beaux Arts palace from going up across the street, to house railroad magnate George Russell (Morgan Spector), his ambitious wife Bertha (a ferocious Carrie Coon), Harvard-grad son Larry (Harry Richardson) and daughter Gladys (Taissa Farmiga), for whom the couple longs to make an advantageous match.

The Gilded Age kicks off Fellowes' Wharton era

Into this silent standoff stumbles the obligatory ingenue, Agnes and Ada's niece Marian (Louisa Jacobson), penniless in Pennsylvania following her father's death. She arrives at the sisters' home with a new acquaintance: Peggy Scott (Denée Benton), a Black woman with literary aspirations, whom Agnes (a snob but not, by 19th century standards, a bigot) hires as a secretary. As willful, progressive young women in a home governed by old customs, Marian and Peggy present another set of challenges to the status quo.

IF ***DOWNTON*** IS the greatest story Evelyn Waugh never told, then *The Gilded Age* kicks off Fellowes' Edith Wharton era. It applies his addictive formula to a landscape that extends beyond the walls of one house, infusing big-budget costume drama with soapy plotting. At its best, it sheds light on how the social lives of Manhattan's most prominent families influence their patriarchs' world-historical careers.

But for the most part, it entertains without illuminating. Fellowes recycles too many of his favorite archetypes, from the closeted gay couple to the scheming servant. And while he includes two households' worth of "below stairs" characters, their story lines go largely undeveloped in the five episodes sent for review. It's as if their presence alone is meant to satisfy some sort of writerly noblesse oblige.

Downton Abbey, with its watercooler twists, brought the TV period drama into the 21st century. Its success paved the way for funnier, sexier, more irreverent historical shows, from *Bridgerton* to *Dickinson* to *The Great.* (*The Gilded Age* fails to generate enough heat to rival even Lady Mary's lethal affair with a Turkish diplomat.) Now it seems that, like so many of his characters, Fellowes is struggling to keep pace with progress.

THE GILDED AGE *premieres on HBO on Jan. 24*

An autistic son connects with Dad

REVIEW

A NEURODIVERSE HANGOUT COMEDY

After decades of ignoring the autistic community, pop culture is making strides toward inclusion. But as affirmed by controversies surrounding shows like *Atypical* and movies like *Music,* representation isn't enough. It's still rare to find a story that resonates with autistic viewers rather than mining their differences for material neurotypical audiences will find funny or moving.

For Jason Katims, the father of an autistic son, the drive to do better is personal. He built *Parenthood* around a family like his own. And his new sitcom *As We See It* follows a trio of 20-something autistic roommates—played by actors who identify as being on the spectrum—and their devoted caretaker (Sosie Bacon). Jack (Rick Glassman) is a cynical programmer. Violet (Sue Anne Pien) flips burgers and schemes to get laid. For Harrison (Albert Rutecki), just going outside is a challenge.

In taking such care to avoid offense, the show can err toward blandness or slip into the sentimentality that is Katims' default mode. But by spotlighting three distinct characters, and in hiring many neurodiverse crew members, this humane comedy frames autistic identity as more than a punch line or a sob story. *—J.B.*

AS WE SEE IT *premieres on Amazon Prime on Jan. 21*

REVIEW

Astrid & Lilly, the self-consciousness slayers

TEEN TV IS A HAVEN FOR OUTSIDERS. For every glossy mean-girl soap, there is a cult classic in the *Veronica Mars* vein. It makes sense: Has anyone survived high school without ever feeling like they didn't belong? Which might explain why, when it comes to portraying female freaks and geeks, Hollywood always gets away with casting actors who meet its superhuman beauty standards.

By virtue of its charming leads, Syfy's supernatural dramedy *Astrid & Lilly Save the World* breaks that mold. Samantha Aucoin and Jana Morrison play the eponymous besties—witty teens thrown together by the cruel calculus that so often relegates big girls to the social sidelines. Timid and self-conscious, Aucoin's Lilly takes refuge in a bedroom plastered with pictures of her pop-culture faves. Astrid (Morrison) is the bold one, with a hypercritical mom and a white-hot crush on gothy Sparrow (Spencer Macpherson).

The girls prowl their suburban hellscape by car nightly to keep tabs on their peers. When they end up at a house party and jerky jock Tate (Kolton Stewart) christens them the "Pudge Patrol," they react like any teen weirdo worth her Doc Martens—by ritually burning items associated with him while howling at the moon. They're just venting, but then Tate doesn't show up to school and a hunky stranger, Brutus (Olivier Renaud), materializes to inform them that their spell, such as it was, opened a portal to another dimension. If they don't close it, "humanity sort of disappears."

That quest entails vanquishing a series of monsters, with campy special effects and story lines that draw parallels between fighting demons and battling to love yourself in a world that hates you. If that sounds a lot like *Buffy the Vampire Slayer,* rest assured that creators Noelle Stehman and Betsy Van Stone are paying self-aware homage. Offbeat running gags and sharp, foul-mouthed dialogue keep the show fresh. But what makes *Astrid & Lilly* unique is its lovingly written, endearingly portrayed outsider heroines. —J.B.

ASTRID & LILLY SAVE THE WORLD *airs on Syfy starting Jan. 26*

Morrison, left, and Aucoin confront the evil that lurks in the hearts of high schoolers

THE GILDED AGE: HBO; AS WE SEE IT: AMAZON STUDIOS; ASTRID & LILLY SAVE THE WORLD: SYFY

MacKay and Irons, hoping to avert war with diplomacy

REVIEW

A wartime thriller for everyone's inner dad

BY STEPHANIE ZACHAREK

DAD MOVIES, AT LEAST AMONG those who aren't actual dads, tend to be undervalued pleasures; they pluck a certain satisfying, resonant chord, often without being particularly flashy. *Munich: The Edge of War*, directed by Christian Schwochow and adapted from Robert Harris' 2017 novel, is the ultimate dad movie: its setting is the 1938 Munich conference in which European leaders met with Hitler in an earnest, if naive, attempt to stave off war. That part really happened. The more intimate story *Munich* weaves around that event—involving two young men, one German and one English, who attempt a risky plot to stop Hitler—is largely fiction. Yet the made-up narrative melts seamlessly into the historical one. If the movie is handsome in an oak-paneled-office way, there's life in it too. You feel there's something at stake for the two young would-be heroes, as there is for the world.

Munich opens in 1932, at a champagne-fueled Oxford University garden party. Three friends gambol drunkenly on the lawn, noisy in their adamant youthfulness. One of them, whose slight accent marks him as someone-not-from-England, expresses his excitement about going home to what he calls the new Germany. His girlfriend, also German, protests that it's a nation "of thugs and racists." Their mini-argument ends with a flurry of sozzled kisses, but you know there's trouble in this paradise. The third friend, who is English, teases them with amused annoyance, though he's unsure of what to make of his best friend's belligerent devotion to the fatherland. He also, it seems, likes the girl.

FAST-FORWARD SIX YEARS, and the young Englishman, Hugh (George MacKay, putting his scrubbed-clean innocence to good use), is a husband and father stuck in a demanding job as a secretary to Prime Minister Neville Chamberlain (Jeremy Irons, buttoned-up and terrific). At that point, plenty of people in power are still underestimating Hitler, and Chamberlain isn't too worried. As Irons plays him, at least until the movie's swerving finale, this PM is a likable doofus, certain that any problem can be solved with a handshake and a cup of tea.

Even so, Hugh sees that war is coming. And over in Germany, his old school friend Paul (Jannis Niewöhner, thoughtful-looking in a matinee-idol way) has an even better idea of how horrible and far-reaching that conflict might be. He's now part of a resistance group plotting to stop, and maybe even kill, Hitler. The girlfriend—her name is Lenya, and she's played by the marvelous, somber-eyed German actor Liv Lisa Fries, from *Babylon Berlin*—is nowhere on the scene; we'll learn of her sad fate later. Paul and Hugh haven't spoken in years, as Paul's increasingly bullish nationalistic beliefs became too much for Hugh to bear. But when Paul comes into possession of a top-secret document—it's slipped to him by his secretary and lover, Mrs. Winter, played wonderfully by the sly German actor Sandra Hüller—he and his old friend cross paths again, now united in a plan that seems as doomed as it is urgent.

Not everything in *Munich* is particularly subtle. Now and then you'll hear a character note with alarm, "Hitler mobilizes tomorrow!" And the actor who plays the man himself, Ulrich Matthes, is a little too gaunt to convey much robust, dangerous charisma (even if his eyes do radiate a certain magnetic madness). But the movie gives a sense of what it's like to be a human perched on a particularly sharp ledge of history. And its fictional elements spring from seeds of reality: Harris has said that Paul's character was inspired by the anti-Nazi German diplomat Adam von Trott zu Solz, executed in 1944 for his role in Claus von Stauffenberg's failed plot to kill Hitler. Even if Paul doesn't suffer the same grim fate in *Munich*, its certainty hangs over him like a tense shadow. Sometimes the things you don't see in a movie are as effective as those you do.

MUNICH: THE EDGE OF WAR *is on Netflix beginning Jan. 21*

MUNICH: NETFLIX

ADAPTATIONS

The many faces of Cyrano

JOSEPH COTTEN (1945)
Mistaken identity and amnesia stir up a romantic brew in *Love Letters*

STEVE MARTIN (1987)
The comic actor was poetic with a prosthetic for '80s favorite *Roxanne*

TINA BELCHER (2018)
A *Bob's Burgers* episode gave the socially awkward Tina her Cyrano moment

LEAH LEWIS (2020)
In *The Half of It,* a shy teen helps a classmate woo the girl she has a crush on

LOVE LETTERS: MONDADORI PORTFOLIO/EVERETT COLLECTION; ROXANNE: AF ARCHIVE/ALAMY; BOB'S BURGERS: FOX; THE HALF OF IT: NETFLIX; CYRANO: MGM

REVIEW

The folly of love, as told by Cyrano

IN AN AGE IN WHICH PEOPLE HAVE gotten all too used to streaming new releases at home, sometimes the best a movie can hope for is to remind audiences of what a big screen is good for. The extravagant musical *Cyrano* is that kind of movie. If you're looking for visual grandeur, it's here in billowing quantities: you'll see gowns in macaron-pastel colors and duels that take place in the dusty velvet night. So at least there's that.

But Joe Wright's well-intentioned adaptation of Erica Schmidt's stage musical (itself drawn from Edmond Rostand's 1897 play *Cyrano de Bergerac*) can't survive its own petulant, self-centered love object, Roxanne (Haley Bennett). It's unclear if, in this particular interpretation of the source material, Roxanne is supposed to be deeply unlikable or just flawed but sympathetic. The most generous reading is that she's a silly thing who can't see beyond her own clouded romantic vision, a mirror counterpart to Cyrano (Peter Dinklage), the brainy, swashbuckling royal guardsman who loves her blindly but who fears—correctly—that she won't be able to see past what he deems his own ugliness. (There's no colossal proboscis in this *Cyrano*—the title character's insecurities stem from his own misgivings about his physical stature.)

The story is by now so famous that it practically writes itself: after learning Roxanne is in love with the beauteous newbie guardsman Christian (Kelvin Harrison Jr.)—charming enough but no great shakes in the poetry department—Cyrano agrees to pen florid love notes for the eager swain. Roxanne's ardor for Christian intensifies, as Cyrano pines for her from afar; Dinklage conveys this with a pained facial expression that suggests indigestion more than lovesickness.

Still, that's no excuse for Roxanne's failure, over and over again, at reading basic social cues. In the movie's most unintentionally comical scene, she flops around on a feather bed, clutching at her nightie as she gets fired up by one of Christian's faked letters. There's a lot going on in *Cyrano.* Every so often there's a song about thwarted desire, or a depiction of simple townsfolk dancing around merrily in their rough linen garments. Ah, humanity! What a mess we are. If this *Cyrano* gets at nothing else, it's that. —S.Z.

Bennett, Dinklage and the crossed romantic wires between them

QUICK TALK

Hanya Yanagihara is no cynic

The author of A Little Life *returns with* To Paradise, *a doorstopping novel split into three sections, each focused on a different era—and version—of America.*

The third section of *To Paradise* envisions a world facing rolling pandemics. What do you make of people referring to it as a "pandemic novel"? It's not *not* a pandemic novel. Ultimately, if it's predictive at all, it's less about the pandemic and more about the questions that many of us are asking ourselves as Americans at this moment. Who gets to write the history of America, and who gets to remember it?

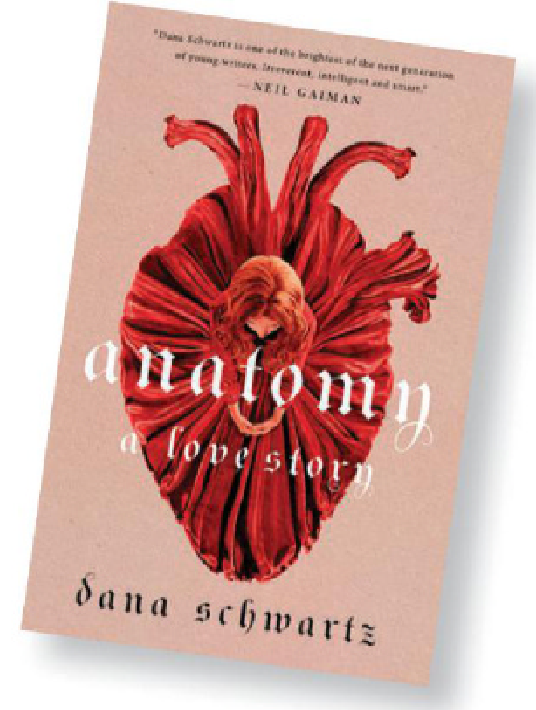
Many of the characters share the same name. What drew you to that decision? Humans always think we're the ones who are writing our names upon history, but what if it's the opposite? What if history is actually writing its names upon us? The worlds change and the circumstances change, but the characters and what they want—that they want to be loved and to love someone—remain the same. The human condition remains unaltered, no matter the circumstances or the era.

Your second novel *A Little Life* was a massive best seller, but it also seemed like readers either loved it or hated it. How did it feel to wade through all that feedback? When you aren't reading comments, you're not on Twitter or Facebook, you're not reading reviews and you're not on Goodreads, you really don't hear a lot about it. Very rarely will someone take the time to send you a mean note. Some people do like to get more involved with the reception of their books, but my feeling is the reader can react however he or she wants.

You're also the editor in chief of *T: The New York Times Style Magazine*. Has your editorial perspective changed over the past two years, with all the constant devastation we've been living through? Not really. At the heart, I'm not a cynical person. I hope I don't seem cynical on the pages of the magazine or in the pages of this book. Once you start becoming cynical, you stop engaging with the world around you because you feel that there's no point. An artist and an editor has to be able to do so with energy and a sense of curiosity.

—*Annabel Gutterman*

Yanagihara's follow-up to A Little Life *examines America*



INTERVIEW

A BLOODY LOVE STORY

Some will know Dana Schwartz as the host of the *Noble Blood* podcast, where she tells stories of royals past; others through the parody Twitter account @GuyInYourMFA, which she started as a college student in 2013. There are also her books—among them her globetrotting YA debut *And We're Off* and a misadventure-filled memoir, *Choose Your Own Disaster.*

Her latest, a YA novel that mixes the historical and supernatural, is the romance Schwartz wanted to read when she was growing up, complete with an ambitious heroine, a swoony first love and plenty of gore. *Anatomy: A Love Story* follows Hazel Sinnett, a noblewoman in 1817 Edinburgh who dreams of becoming a surgeon. In need of cadavers to study, she teams up with resurrection man Jack Currer to practice on the dead and living alike. But as live patients begin arriving with missing limbs, Hazel and Jack realize there's a sinister force at work in the city.

Anatomy may technically be a romance, but the real love story is between Hazel and surgery. That's just one of the notes Schwartz hits that feels a little more earnest than the snarky writer who first broke out on Twitter. "I'm writing for my teenage self, and part of being a teenager is this weird optimism that you can do anything in the world," Schwartz says. "That's the feeling I'm trying to capture." —*Simmone Shah*

SIAN DAVEY—THE GUARDIAN/EYEVINE/REDUX

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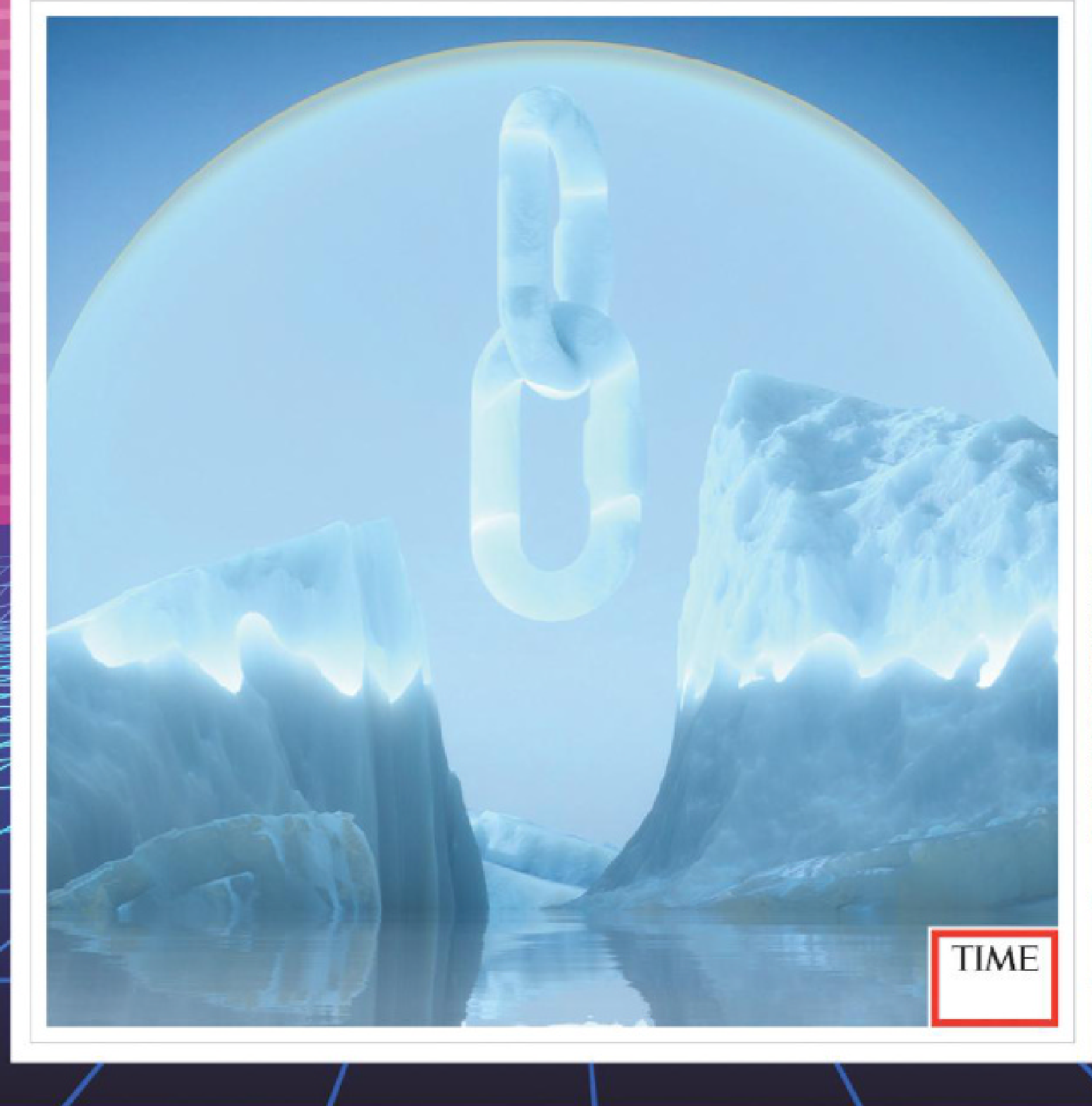
YOUR GUIDE TO THE FUTURE OF THE INTERNET



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IN PARTNERSHIP WITH

Bill Nelson The NASA administrator and former Senator talks about getting to the moon, competition with China, and America's long-term space ambitions

NASA just completed a very good year—most spectacularly with the landing of the Perseverance rover on Mars, the launch of the James Webb Space Telescope and the completed construction of the new Space Launch System moon rocket. To what do you attribute the space agency's banner 2021? It's attributable to the extraordinary workforce. For the last nine years in a row, NASA has been named the best place to work in the federal government. Employees get mentoring from their elders and management and through an extensive internship program. Go anywhere in the world, and next to the New York Yankees logo, it's the NASA logo that is the most recognized and appreciated. It's a way for the U.S. government to project soft power and to work not only with our natural allies like the European Space Agency but our onetime mortal enemy, Russia.

That early space race with the then Soviet Union was a bracing thing for both countries, driving technological innovation. Could you envision a similar race with China now? And could space be a venue for Sino-American détente as it was with the U.S. and Russia? Yes to the first question, and maybe to the second. Competition is good. It brings out the greatest efficiencies and the ultimate use of the talents that we have. As to a détente with China, that's just a qualified yes because there is nothing thus far to indicate that China is in any way willing to be less secretive about their space program and the military aspects of their space program.

That secretiveness extends to China's space budget, which is not disclosed because their space program is part of their military. Could China beat the U.S. back to the moon? Not if I have anything to say about it, and not if Joe Biden has anything to say about it.

Will commercial space activities eliminate the need for a government space program?

In any cutting-edge technology, government needs to sow the seed corn. What about the miracle of COVID vaccines? I'm glad there was U.S. investment in that.

The International Space Station has been in continuous operation for more than 20 years and is expensive to maintain. How much longer do you see it operating, and will the U.S. get out of the space-station business after that? It's the intent of Congress, in coordination with NASA, to keep the space station running until 2030. Then what we are doing is encouraging industry to get involved with commercial space stations so that NASA can concentrate on exploring the heavens.

That gets us to politics. One of the things that's kept us from returning to the moon is a lack of continuity, with every new presidential administration tossing out the past one's plans for NASA and implementing its own. In order for a space program to be successful, it has to be multi-administration. It's like building an aircraft carrier; that takes about 12 years and spans many administrations. So the space program has to be the same way.

You were in Congress for 30 years; what do you miss least about it? The inability to get along and therefore get things done, because of excessive partisanship and huge ideological rigidity. That's not the way it was when I was a young Congressman. And that's not the way it was when I came into the Senate—even after that disputed [2000] election with 537 votes [in Florida], Republicans and Democrats got along, and they could still today because they're all wonderful people. But they are listening to small cliques, extreme views, which is eliminating that very necessary middle ground.

—JEFFREY KLUGER

PAUL HENNESSY—SOPA IMAGES/SIPA/REUTERS

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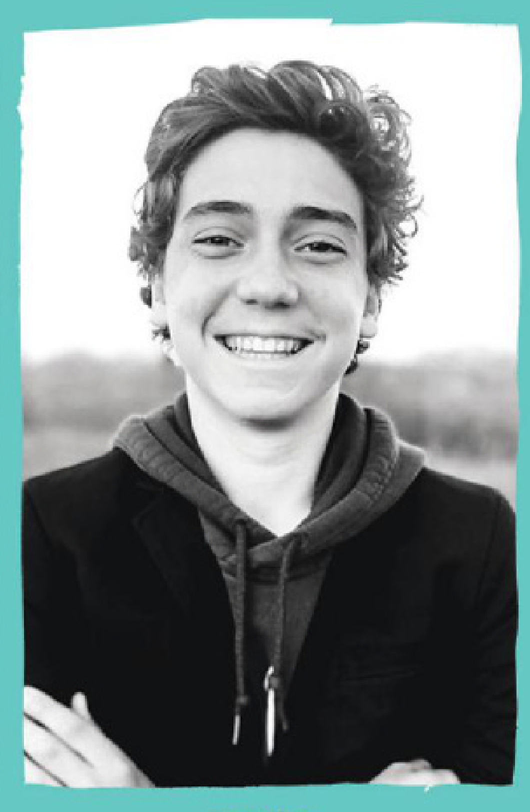

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