Bloomberg Businessweek

May 31, 2021 ● DOUBLE ISSUE

Never mind superstar fund manager Cathie Wood's recent slump. She wants to sell you a future so fantastic you'll beg her to take your money 36

Bloomberg Businessweek

May 31, 2021

◀ Robin Rue Simmons, one of the engineers of the reparations plan in Evanston, Ill.

PHOTOGRAPH BY LYNDON FRENCH FOR BLOOMBERG BUSINESSWEEK

FEATURES

How to Contact *Bloomberg Businessweek*
EDITORIAL 212 617-8120 ● AD SALES 212 617-2900, 731 Lexington Ave. New York, NY 10022 ● EMAIL bwreader@bloomberg.net ● FAX 212 617-9065 ● SUBSCRIPTION CUSTOMER SERVICE URL businessweekmag.com/service ● REPRINTS/PERMISSIONS 800 290-5460 x100 or email businessweekreprints@theygsgroup.com ● Letters to the Editor can be sent by email, fax, or regular mail. They should include the sender's address, phone number(s), and email address if available. Connections with the subject of the letter should be disclosed. We reserve the right to edit for sense, style, and space ● Follow us on social media ▶ FACEBOOK facebook.com/bloombergbusinessweek/ ▶TWITTER @BW ▶ INSTAGRAM @businessweek

■ COVER TRAIL

How the cover gets made

❶

"We're doing a story about Cathie Wood—the fund manager extraordinaire building investments on the most futuristic stuff!"

"How futuristic?"

"Think crypto—"

"*So* 2019. Thank you, next?"

"Robotics?"

"Meh."

"Gene editing?"

"Please."

"OK, how about using Bitcoin for robotic gene editing *in space*?"

"*Now* we're talking. How do I give her all my money?"

"Well, small caveat on that. Her funds haven't performed as well of late."

"Soooo…you're saying she's a buy?"

"Oh, our lawyers recommend that I not give investment advice."

"I want to be like Cathie and believe the dream!"

❷

"Yeah! But add more stuff. Just make sure it's not too believable."

"Oh, don't worry, I watch a lot of Syfy channel."

↓

Cover: Photo illustration by Rad Mora; photo: Reed Young

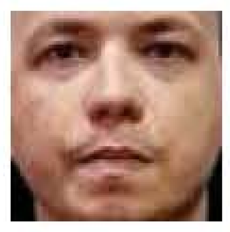
BUSINESS: MARY KANG/BLOOMBERG

● Global coronavirus cases have topped 168 million, and deaths are approaching

3.5m

More than 1.7 billion vaccine doses have been given. The virus is flaring up again in Japan, which is slated to host the Olympic Games starting on July 23.

● Belarus forced a Ryanair flight traveling from Greece to Lithuania on May 23 to land in Minsk, where they arrested a passenger, 26-year-old journalist and



political activist Raman Pratasevich, and his girlfriend. Politicians in the EU and the U.S. condemned the action and vowed sanctions.

● George Floyd's family, including his 7-year-old daughter Gianna, and family attorneys met with President Biden and Vice President Harris at the White House on May 25, the anniversary of Floyd's killing by a Minneapolis police officer.

● The New York prosecutor investigating Donald Trump convened a grand jury to consider charges.

The *Washington Post* reported on May 25 that Manhattan District Attorney Cyrus Vance Jr. recently convened the panel, indicating his two-year probe of the former president's business dealings has reached a pivotal moment. "This is a continuation of the greatest Witch Hunt in American history," Trump said in a statement released later that night.

● Vonovia and Deutsche Wohnen, Germany's two biggest residential property companies, are combining in a

€19b

($23 billion) transaction. Together, they will control more than 500,000 apartments.

● Climate advocates scored a pair of significant victories over Big Oil on May 26.

Engine No. 1, an activist firm that wants Exxon to come up with a better plan to fight global warming, won at least two seats on the company's board, according to a preliminary tally announced at the annual meeting.

A court in the Hague ruled that Royal Dutch Shell has a legal responsibility to cut emissions by 45% by 2030, not the 20% it had pledged. The decision could affect the rest of the global fossil fuel industry. Shell says it will appeal.

● "I made a mistake. I must say now that, very very very importantly, I love and respect China and Chinese people."

U.S. actor and wrestler John Cena apologized for calling Taiwan a country, a comment that had triggered a backlash in China, which considers the democratically run island part of its territory.

● Amazon.com agreed to buy Metro-Goldwyn-Mayer, whose film catalog includes the James Bond and Rocky franchises, for almost

$8.5b

● Commodities trading house Cargill is benefiting from unprecedented demand for corn and beef, which pushed its profit in the first nine months of its fiscal year to a record $4.3 billion.

FLOYD FAMILY: KEVIN LAMARQUE/REUTERS. PRATASEVICH: TELEGRAM@ZHELTYESLIVY/GETTY IMAGES. COW: GETTY IMAGES

The Fed Should Signal A Willingness to Change With Pandemic Data

The Federal Reserve had little choice last year but to promise pedal-to-the-metal monetary accommodation with no letup in sight. This unequivocal commitment was the only instrument it had left to provide what was then a necessary stimulus. Now, awkward as it might be—not least for its credibility with investors—the Fed needs to start walking this promise back.

Today's monetary policy settings aren't necessarily wrong. Interest rates close to zero and hefty monthly bond purchases might very well be the correct posture for the Fed. Yet economic data have underlined risks in the outlook. The Fed needs to show it's watching these uncertainties with an open mind, rather than telling markets, "Nothing to see here, move along."

Consumer prices in April were 4.2% higher than a year earlier. To be sure, this number is distorted. Prices dropped sharply in the spring of 2020, giving the latest year-over-year number a temporary boost. And April saw exceptionally big increases in some narrow components of the index, like used cars. So-called core inflation, which excludes some volatile components, increased by less than prices overall—3% over April 2020. Yet these and other factors were known in advance, and the figures were still higher than expected.

In response, Fed officials simply restated their earlier position: Interest rates will be held at zero until core inflation is averaging 2% and full employment has been restored. Fed Vice Chairman Richard Clarida said accelerating prices will have "only transitory effects on underlying inflation."

The second data surprise was bigger. Payrolls grew by 266,000 from March. Economists surveyed by Bloomberg had expected a hiring surge of 1 million. On the face of it, slow hiring, combined with an employment shortfall of more than 8 million jobs compared with before the pandemic, suggests a slack labor market and faltering recovery, implying that the Fed is right to keep monetary policy as loose as possible.

But other indicators say different. Wages are rising, vacancies are high, and many employers, according to the Fed's survey of business sentiment, are reporting labor shortages and difficulty in hiring. These are signs of a labor market that's tight, not loose.

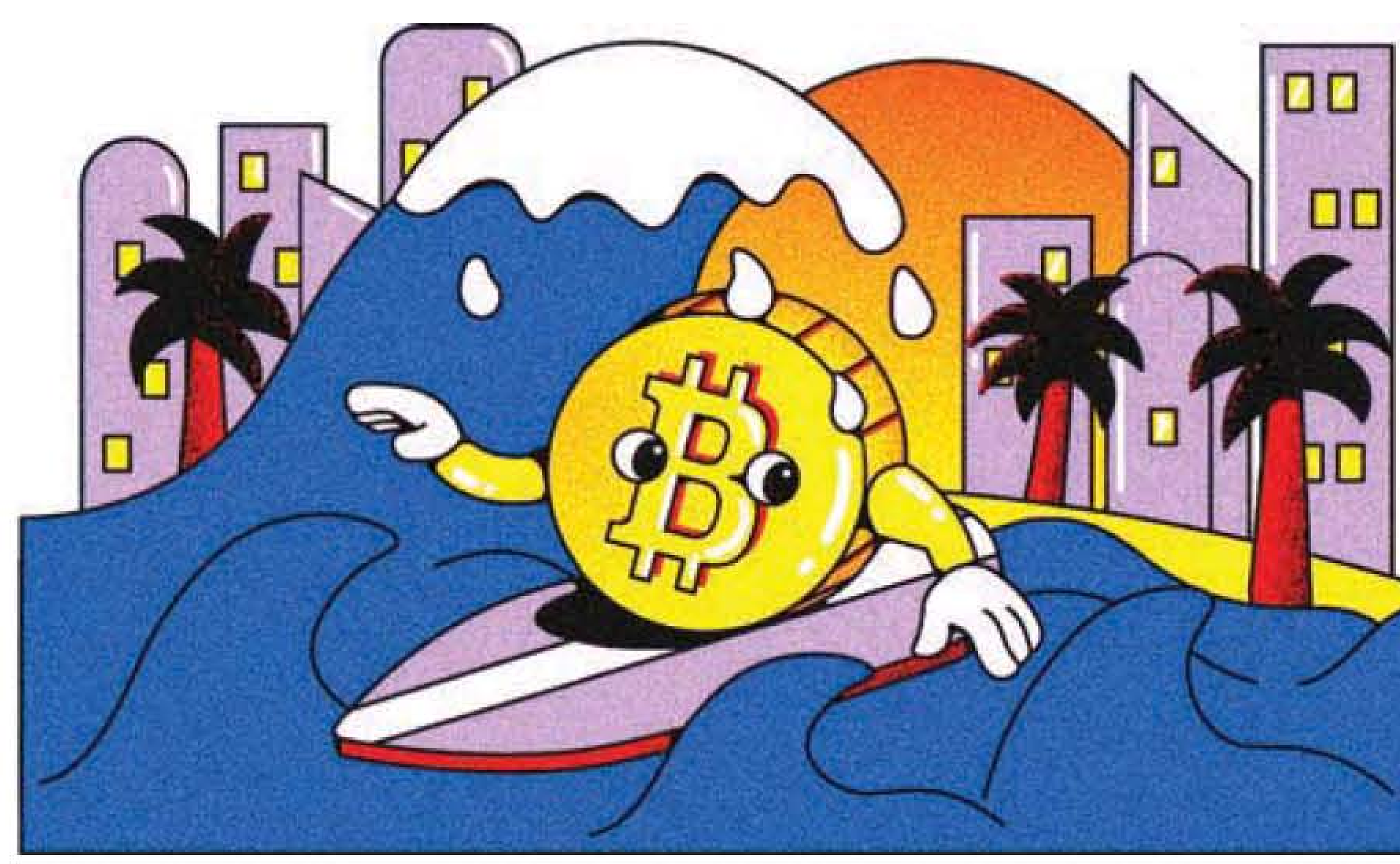
If the slow pace of hiring is due, in part, to the extended unemployment benefits provided in pandemic relief packages, hiring will pick up as those benefits expire, and employment will recover without dangerous pressure on costs. But if it's due to a post-pandemic mismatch between the workers who're available and the workers companies need—that is, to a lasting structural change—then the labor market is tighter than April's hiring number suggests, and total employment is a misleading metric. In that case, further demand from loose monetary policy risks adding to rising pressure on wages and prices.

As with the inflation numbers, the picture is uncertain—and, as with the inflation numbers, Fed officials are mostly sticking to their line. Clarida said that April's jobs report left the Fed no closer to tapering its bond purchases than before.

Former Treasury Secretary Larry Summers has accused the Fed of encouraging "dangerous complacency" in financial markets. With asset prices pushed to outlandish levels, this danger is real. Reluctance to acknowledge conflicting signals about the prospects for employment, wages, and prices is unwise. The longer it goes on, the greater the danger that an eventual, unavoidable course correction for monetary policy will shock the economy with brutal consequences.

The Fed needs investors to understand that it's willing to rethink its position as and when the numbers demand. At the moment, that message isn't getting through. Ⓑ *For more commentary, go to bloomberg.com/opinion*

AGENDA



▶ Decrypting the Crypto Craze

Bitcoin 2021, touted as the largest conference yet in the short history of the virtual currency, takes place in Miami on June 4-5. It's been a wild ride for the tokens, with Bitcoin's value about $25,000 below its mid-April record of $63,729.

▶ OPEC+ members meet beginning on June 1 to discuss their oil output. Excess inventories built up in the pandemic have almost been drained as demand rises again.

▶ The Reserve Bank of India makes its rate decision on June 4. The country's economy has been hit hard by a surge in coronavirus infections.

▶ The parliamentary vote for the next president of Israel will take place on June 2, a month before President Reuven Rivlin's seven-year term ends.

▶ The German state of Saxony-Anhalt holds elections on June 6. It's a test of the political mood in the country ahead of the general election in September.

▶ The St. Petersburg International Economic Forum will explore Russia's key economic issues on June 2-5. Vladimir Putin has presided over each gathering since 2006.

▶ JPMorgan Chase holds a summit on China on June 1-7. The virtual gathering coincides with the bank's 100th year of doing business in the country.

ILLUSTRATION BY EMMA ERICKSON


© Selective Search LLC 2021
LOVE
NOW MORE THAN EVER
No more waiting for love. Not for the weekend, next month or for next year. Life begins when you fall in love. Allow Selective Search to find you the love of your life.
SELECTIVE SEARCH®
EXECUTIVE SEARCH MEETS PERSONAL MATCHMAKING
866.592.1200
selectivesearch.com
info@selectivesearch.com

Paradise

● The Seychelles holds lessons for other countries on how to best battle the virus

● By Antony Sguazzin and Jason Gale

For epidemiologists, the past year and a half has been a voyage of discovery. Recently their journey aboard SARS-CoV-2 took an unexpected turn toward Seychelles, a palm-fringed archipelago in the Indian Ocean with fewer than 100,000 inhabitants. A country that few could pinpoint on a map suddenly became internet-famous as the most vaccinated nation on Earth, with 64% of the population having received the requisite two shots. Yet to the surprise of virologists–and the dismay of the government, which had been counting on the immunization drive to reopen the tourism-dependent economy–the infection count has been ticking up. As of May 13 a third of active cases–about 900 in all–were among residents who'd been fully vaccinated.

Vaccine skeptics pronounced themselves vindicated, while international health experts have been scrambling to answer a host of questions without the benefit of robust data. Did one or both of the vaccines used in Seychelles fail? Has herd immunity not been reached? Is the nation grappling with a more infectious variant capable of evading the defenses that certain types of vaccines provide?

"So what's going on?" asked Raina MacIntyre, professor of global biosecurity at the Sydney campus of the University of New South Wales, during an online presentation on May 18. "It's probably that the herd immunity threshold hasn't been reached, plus or minus, if it's the South African variant in there."

The answers to the questions MacIntyre and other experts are posing may influence the future course of the pandemic. For starters, the tiny nation has become a test case for two of the world's most widely used vaccines. In the Seychelles, 57% of the vaccinated population received Sinopharm's shot, and 43% got the Covishield vaccine developed by AstraZeneca Plc. Sinopharm's inoculation has been donated or sold to countries around the globe, including Indonesia, Venezuela, and Zimbabwe; Covishield makes up the bulk of shots distributed to poor nations in Africa and elsewhere through the Covax initiative, which seeks to make vaccine distribution more equitable.

What's happening in Seychelles is very different from the experience of Israel, the second-most vaccinated nation, where Covid-19 infections have plummeted. The contrast could yield crucial insights into the efficacy of the different types of immunizations. In Israel the dominant vaccine was the messenger ribonucleic acid shot made by Pfizer Inc. and BioNTech SE.

The pandemic has seen mRNA vaccines–Moderna Inc. makes another–being used in scale for the first time. Data from clinical trials so far suggest they are better at stopping Covid, tackling variants, and preventing the virus from spreading in the community. Sinopharm's and AstraZeneca's vaccines rely on more traditional methods, and their shots have been shown to have lower efficacy in studies.

What's also apparent, so far, is that though there's been a surge in cases in Seychelles, very few people are getting seriously ill. "We have only a few people needing intensive care. Two out of 40" in hospitals, said Seychelles President Wavel Ramkalawan in a May 10 interview. "The vaccine will protect people from getting serious symptoms."

Still, more answers are needed. The government hasn't disclosed what vaccine was administered in the breakthrough cases that make up a third of the total count. No agency has done any genomic sequencing to determine

or Petri Dish

which variant is dominant on the islands, though the one first identified in South Africa, B.1.351, was detected in Seychelles in February.

On May 13, Jude Gedeon, the country's public-health commissioner, said samples were to be sent to the Kenya Medical Research Institute for testing. The World Health Organization is also taking action. "We are very concerned, and we are sending a multidisciplinary team there to help the Seychelles government address the situation," says Richard Mihigo, program area manager for immunization and vaccine development at the WHO's regional office for Africa in Brazzaville, Republic of Congo. "We are also in discussion with the government to conduct a vaccine effectiveness study."

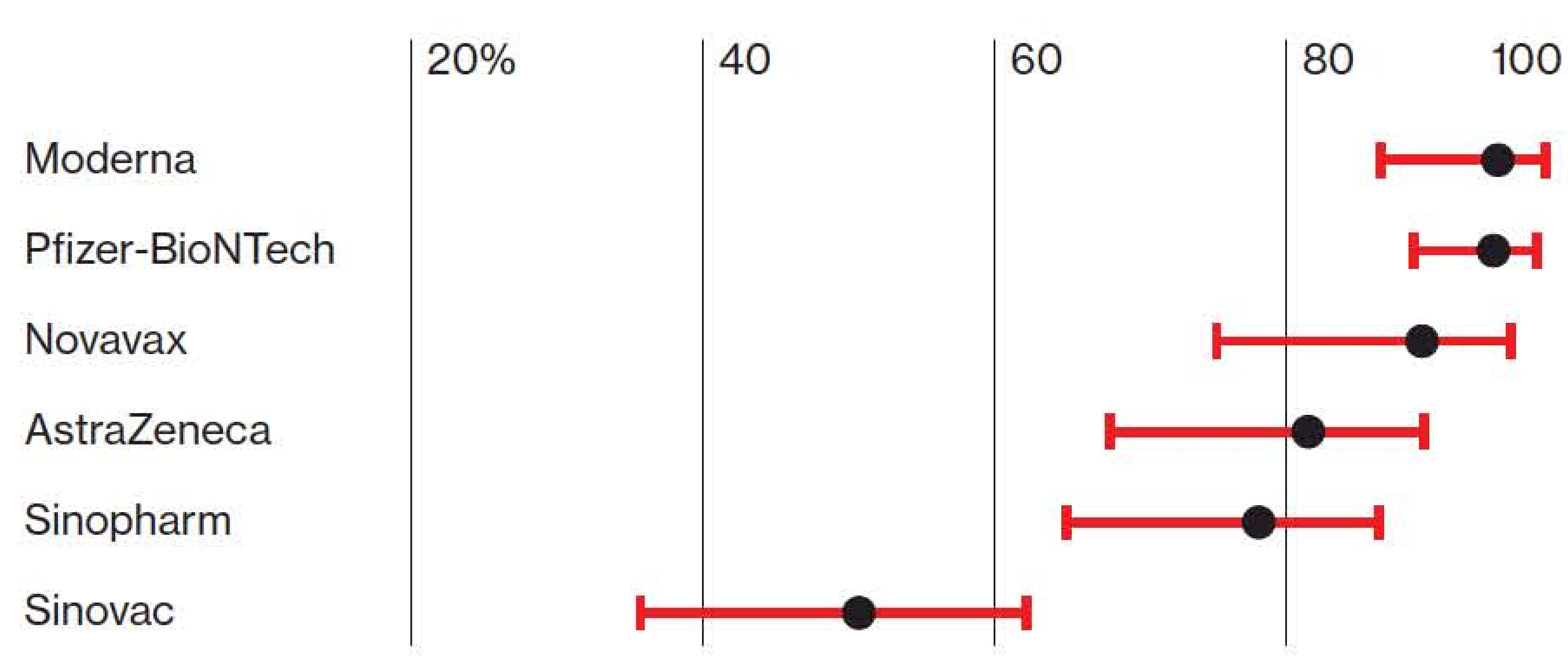
The situation in Seychelles also offers a fresh reminder that our understanding of herd immunity—the theoretical threshold at which the virus can't find enough hosts to keep spreading—continues to evolve. Scientists once estimated that 55% to 82% of the population would need to have immunity against SARS-CoV-2, either from recovering from an infection or through vaccination. But 17 months into the pandemic, there's recognition that the threshold may vary depending on the susceptibility of a population to the circulating strains, adherence to physical distancing, mask-wearing, and other practices known to reduce transmission, as well as the season—epidemics typically worsen as either colder or hotter weather encourages people to congregate indoors.

"It's probably not likely that we are going to drive to zero the transmission of this virus or have it disappear," says Jennifer Nuzzo, an epidemiologist and senior scholar at the Johns Hopkins Center for Health Security in Baltimore. Still,

Comparing Shots

How well vaccines prevent Covid disease after a second dose

● Estimated efficacy ▬ Range



DATA: SHAPIRO, DEAN, LONGINI ET AL. EFFICACY ESTIMATES FOR VARIOUS COVID-19 VACCINES (PRE-PRINT PAPER)

she see vaccines "doing the thing that we care most about, which is preventing serious illness."

Lessons from Seychelles could be valuable to other countries in assembling their own vaccine arsenals, through purchases or donations—or a combination of the two, as the tropical nation did. "It's about quality vaccines that are shown to be effective against your variant," says Glenda Gray, president of the South African Medical Research Council and co-lead of a Johnson & Johnson Covid vaccine trial in the country.

Finance Minister Naadir Hassan, who had to steer Seychelles's economy through a 13% contraction in 2020, says the government cannot afford to stand still while it awaits answers to these Covid riddles. The country is "an open, vulnerable economy," he said in a May 13 interview. "The country needs to be safe, and the country needs to be open." Ⓑ

LI YAN/XINHUA/GETTY IMAGES

Can Climate-Friendly Eggs Bring Home The Bacon?

MARY KANG/BLOOMBERG

● At up to $8 a dozen, they're the latest in the march upmarket for the once-pedestrian food

On a recent sunny day, 13,000 chickens roam over Larry Brown's 40 windswept acres in Shiner, Texas. Some rest in the shade of a parked car. Others drink water with the cows. This all seems random, but it's by design, part of what the $6.1 billion U.S. egg industry bets will be its next big thing: climate-friendly eggs.

Over the past decade, producers have skillfully persuaded consumers to pay four times the price for a dozen eggs that are marketed as good for you (organic) or as much as seven times the cost for eggs raised under conditions considered better for the animals that laid them (pasture-raised and hand-harvested). That's no mean feat, given that a carton of conventional eggs can still be had for less than $1. But savvy marketing has resulted in so-called specialty eggs grabbing about a third of the market today, and they're projected to hit 70% in five years. Now, Brown and his peers are betting they can profit further by adding another layer of premiumization: eggs from a special type of sustainable farm that can be trumpeted as being better for the planet.

These eggs, which are making their debut now on shelves for as much as $8 a dozen, are still labeled organic and animal-friendly, but they're also from birds that live on farms using regenerative agriculture—special techniques to cultivate rich soils that can trap greenhouse gases. Such eggs could be marketed as helping to fight climate change.

"I'm excited about our progress," says Brown, who harvests eggs for Denver-based NestFresh Eggs and is adding more cover crops that draw worms and crickets for the chickens to eat. The birds' waste then fertilizes fields. Such improvements "allow our hens to forage for higher-quality natural feed that will be good for the land, the hens, and the eggs that we supply to our customers."

The egg industry's push is the first major test of whether animal products from regenerative farms can become the next premium offering. In barely more than a decade, organic eggs went from being dismissed as a niche product in natural foods stores to being sold at Walmart. More recently there were similar doubts about probiotics and plant-based meats, but both have exploded into major supermarket categories. If the sustainable-egg rollout is successful, it could open the floodgates for regenerative beef, broccoli, and beyond.

Regenerative products could be a hard sell,

Edited by
James E. Ellis
and David Rocks

because the concept is tough to define quickly, says Julie Stanton, associate professor of agricultural economics at Pennsylvania State University Brandywine. Such farming also brings minimal, if any, improvement to the food products (though some producers say their eggs have more protein).

Proponents say regenerative agriculture increases organic matter in the soil, which is nutritious for plants and keeps carbon dioxide locked up. With healthier soil, crops can grow using less energy and without chemical fertilizers. There are no regulatory definitions, so claims and goals can vary. But several third-party certification groups have emerged.

◀ Hens are allowed to roam free at Brown's farm, which produces sustainable eggs for NestFresh

▼ Brown practices regenerative agriculture, which aims to increase organic matter in the soil and lower carbon emissions

Back on Brown's farm, about 80 miles southeast of Austin, the hens are scattered across the land, coming and going as they please. The chickens will forage for hours, eating vegetation and bugs. Their waste fertilizes the plants, creating a food cycle that proponents say strengthens farmland and helps with emissions. But it's hard to understand that pedigree just by looking at an egg.

That's why marketing will be so crucial. Egg Innovations, a big producer that's introducing its regenerative eggs at supermarkets nationwide in September, tells a story on its packaging about creating a "sustainable future" with its "helpful hens" being "on a mission to restore soil." And the company isn't shy about describing its lofty mission: "At its core," it says on its website, "regenerative agriculture aims to combat climate change and improve the ecosystem of the planet."

Consider Pastures eggs, a new brand from Pete & Gerry's Organics, which sells for $6.99 a dozen (one buck more than its other specialty eggs). It's packaged in an almost Tiffany-blue container with gold-foil lettering to hold a dozen "speckled beauties" that have "intensely hued amber yolks," according to the company's website. The cartons, now being sold at Whole Foods Markets, open from the center, inspired by egg carton design from the early 20th century. "We just wanted to do something really, really unique," says Jesse Laflamme, founder and director of Pete & Gerry's. "Something that stood out in the egg category."

The industry is betting that the same consumers paying more for premium attributes such as free-range, non-GMO, and pasture-raised eggs will embrace sustainability. Surveys show that younger generations are more concerned about climate change, and some of the success of plant-based meat can be chalked up to shoppers wanting to signal their desire to protect the environment. Young adults "really care about the planet," says John Brunnquell, president of Egg Innovations. "They are absolutely altering the food chain ▶

● Growth of cage-free egg volume in the past year, vs. a 3% drop for conventional eggs

12%

◀ beyond what I think even they understand what they're doing."

Producers keep looking for ways to add more premium eggs, because they're generating the U.S. industry's growth. Cage-free sales volume jumped 12% in the year ended on April 10, while organic eggs rose more than 7%, according to NielsenIQ data. Meanwhile, sales of conventional eggs dropped about 3%. "People were very skeptical when we first began" selling free-range, organic eggs, says Laflamme, who's been in the industry for two decades. "We had a glimmer of hope that approach would resonate with consumers. And as consumers have become savvier about where their food is coming from, it has." *—Leslie Patton and Kim Chipman*

THE BOTTOM LINE Sales of organic and cage-free eggs are growing fast, even as sales of conventional eggs fall. Growers of sustainable varieties hope to join the premium growth trend.

Instant Cure for the Munchies

● Investors are pouring billions into startups that aim to deliver groceries in under 30 minutes

On a quiet street in the rapidly gentrifying London neighborhood of Shoreditch, a small storefront thrums to a disco beat. Workers in black jackets wielding tablet computers hustle from aisle to aisle, packing bags with indulgences such as beer, avocados, and ice cream. As soon as the sacks are full, couriers on electric bikes whisk them off to customers who placed their orders less than 10 minutes earlier.

The fulfillment center in a former handbag store is one of more than 60 such operations in four countries run by Gorillas, an instant-delivery startup based in Berlin that will begin operating in the U.S. on May 30. Around the world, dozens of companies have jumped into the fast-growing business, including newcomers such as Philadelphia-based Gopuff, Turkey's Getir, and Dija in London, as well as gig economy veterans like Uber Technologies and Delivery Hero. Although their approaches differ, they're all seeking to capitalize on the sloth and impatience of consumers by delivering groceries and other goods in mere minutes—a convenience that many grew accustomed to during the pandemic. "Every crisis accelerates some sort of model, this one accelerated e-commerce grocery penetration," says Kagan Sumer, chief executive officer and co-founder of Gorillas. "Some of this accelerated adoption will go back to traditional retail, but a significant amount of this peak is going to stay because of convenience."

Over the past year, people shut in by pandemic lockdowns have embraced online shopping, sending grocery and restaurant-meal delivery services into the stratosphere. The increased demand has spurred established grocery-delivery specialists Ocado Group Plc in Britain and Instacart Inc. in

ILLUSTRATION BY LARISSA HOFF

the U.S. to up their game with faster service. The latest bunch of startups now aim to deliver smaller impulse purchases in less than 30 minutes.

The question is whether the industry can thrive as the world adapts to post-pandemic life. With more diners getting vaccinated and trickling back to pubs and cafes, investors are watching closely for signs of slippage. Some apps are seeing their growth slow, and upscale restaurants have threatened to walk away from the hassle and fees of delivery once their tables are full. Shares in London-based meal-ordering service Deliveroo have fallen by more than a third since their March debut amid concerns over profitability and the company's reliance on gig workers.

In instant delivery, two models are emerging: Gorillas, Getir, London-based Zapp, Germany's Flink, and several other newcomers are building ▶

Physical Distancing helps stop the spread of COVID-19. When someone coughs or sneezes, they can spray small liquid droplets from their nose or mouth which may contain the virus. So please remember to maintain a physical distance of at least 6 feet or 2 metres between yourself and others. Avoid all unnecessary physical contact. And please stay home when you can.

Find out more by visiting who.int

COVID-19
RESPONSE

◀ "dark stores," or micro-warehouses, where their workers pack bags for waiting delivery staff. Bigger outfits such as Uber, Deliveroo, and Amsterdam-based Just Eat Takeaway.com are instead working with supermarkets to fulfill the orders, while they haul them to consumers' doorsteps. For anyone in the delivery business, groceries are a must, says Giles Thorne, an analyst for Jefferies. "If you're not doing this," he says, "someone else will."

Americans spend some $800 billion a year on groceries, market researcher Mintel estimates. Even though only 4% of those sales were ordered via the web before the pandemic, investment bank UBS predicts that figure will rise to 22% by 2024 as people become more comfortable with clicking through screens of food options. Because of the outbreak, "we're probably talking about a three- or even a five-year leap forward," says Miki Kuusi, CEO of Finnish meal-delivery startup Wolt, which is adding groceries. "The growth is going to be ridiculous."

It's not clear how much money these companies can earn, with high upfront costs for attracting customers and establishing locations. Gorillas has about a dozen warehouses in London, but each serves a radius of only a bit more than a mile. And groceries typically carry lower margins than restaurant meals, which means the startups are counting on customers to spend more on each purchase. Morningstar Inc. estimates companies will have a hard time earning profits on orders below £30 ($42)—not an easy target for a business built on impulse buys of snacks, even with prices that are roughly 10% above what supermarkets charge. "Is this really a large market?" asks Morningstar analyst Ioannis Pontikis. "I'm not 100% sure how all these startups—the Gorillas of the world—will be sustainable."

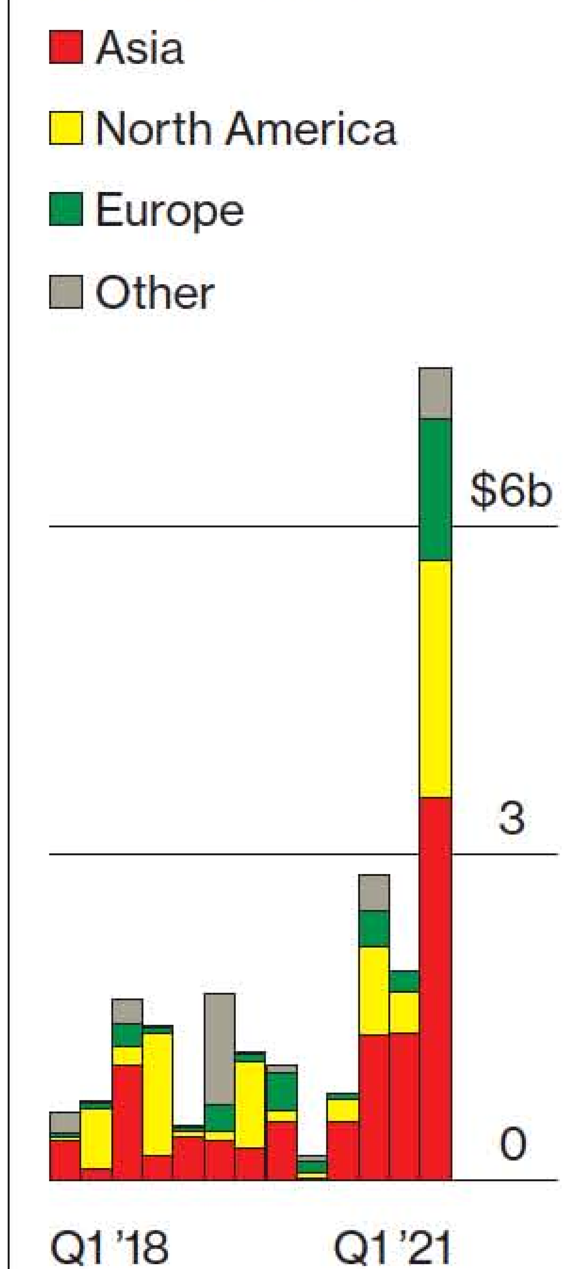
Investors are betting that profitability will come as customers get more accustomed to the services and start placing bigger orders. David Buttress, former CEO of Just Eat and a venture partner at 83North, says more than half the people who try grocery delivery will become loyal customers, a higher share than those who use meal-delivery services. He says dark stores can become profitable at around 350 orders per day. And their limited stock boosts efficiency: A Gorillas site will have about 2,000 items, vs. 30,000 at a typical grocer. "Supermarkets are antiquated and obsolete," Buttress says.

DoorDash Inc., the largest U.S. delivery company, added groceries last summer, working with stores across the country to promise delivery in less than an hour. Deliveroo says grocery sales have jumped 700% in the past year, and Uber says its grocery-delivery business, introduced last summer, is on track to see $3 billion a year in bookings across 32 countries. "It's definitely a rising star in our global portfolio," says Pierre-Dimitri Gore-Coty, Uber's senior vice president for delivery.

Even as the established companies pile in, investors are backing a slew of startups. Venture capitalists concluded 66 deals in the sector valued at a combined $7.4 billion in the first quarter, according to research company PitchBook, up from $222 million a year earlier. In their upcoming fundraising rounds, Gorillas and Getir are targeting valuations higher than $6 billion. For consumers, the good news is there will be lots of free delivery offers heading their way as the companies spend all that money, seeking to win enough customers to survive the winnowing that's sure to come. "Everybody understands the value of being in the grocery space," says Rahul Mehta, a managing partner at DST Global, which has invested in food-delivery startups. "It's too big to ignore but not an easy one to execute." —*Ivan Levingston*

THE BOTTOM LINE Only 4% of grocery sales were ordered online before the pandemic, but UBS predicts that will rise to 22% by 2024 as people get more comfortable with delivery services.

▼ Value of venture capital deal activity in grocery delivery



Employers Are the New Covid Cops

● As the CDC loosens masking restrictions, U.S. businesses become the arbiters of health rules

During much of the pandemic, the restrictions placed on Americans have been handed down by governors or county health departments. But for millions of employees returning to the office after a long stretch of work-from-home, one of the biggest changes will be getting most of their pandemic orders from a new Covid-19 czar: their employer.

The decision by the U.S. Centers for Disease

DANIA MAXWELL/GETTY IMAGES. DATA: PITCHBOOK

Control and Prevention to relax masking and social distancing guidelines for vaccinated Americans has compelled employers to quickly determine how to apply them in their workplaces. The results have been anything but consistent. As of May 25, JPMorgan Chase, Southwest Airlines, and Walmart are telling vaccinated U.S. office workers they can drop the masks. Other large companies, such as Citigroup Inc., are keeping the requirement. Meanwhile, M&T Bank Corp. and Starbucks Corp. will allow vaccinated customers, but not employees, to forgo facial coverings.

The lack of a centralized database of vaccinated Americans or a system employers can use to verify who has gotten Covid shots—and the legal and privacy ramifications of tracking them—means that calling workers back may be even more complicated than sending them home was. And relying on the honor system risks bringing the acrimony that has roiled the public square into the private office.

"We are seeing businesses small, medium, and large flexing their muscles and saying, 'This is what we want, this is what we need, and this is what we're going for,'" says Mara Aspinall, a professor of practice at Arizona State University's College of Health Solutions. "This is a significant new state in the pandemic. Employers are beginning to, and will continue to, play a bigger role."

The CDC caught employers and workers by surprise, announcing on May 13 that vaccinated workers can now drop their masks in most situations and no longer need to social distance, while keeping in place restrictions for those who haven't been inoculated. As of May 25, 50% of U.S. adults were considered fully vaccinated and nearly 62% have had at least one shot, according to the CDC.

The new rules have created a "cascade of confusion," says Neal Mills, chief medical officer for insurance brokerage Aon Plc. Only one client he's aware of has a workforce that is 100% vaccinated, and levels of inoculation may vary widely even within subgroups at the same company. Claims data from companies is often weeks or months out of date, he says, and companies can't afford to let their guard down. "The pandemic is not over," Mills says. "We may have to mask up again later in the year. We can think of a whole host of scary scenarios we may have to be prepared for."

More businesses are basing rules on vaccine status. Amazon.com Inc. said it will no longer require vaccinated warehouse workers to wear masks, as long as the employees upload their inoculation data to Amazon's portal. JPMorgan also requires workers to document their vaccinations. United Airlines Holdings Inc. is taking a similar stance at its nonairport offices, making face coverings optional for those who prove they've had shots.

But requirements vary widely within industries. While United and Southwest have made masks optional for vaccinated workers at their corporate locations, Delta Air Lines Inc. and American Airlines Group Inc. still require them. And all airline workers on planes and in airports still must wear masks, in accordance with CDC guidance.

It's similarly confusing in retailing. Costco, Target, and Trader Joe's eliminated mask requirements for vaccinated shoppers, while Apple Inc. and many other retailers haven't. Walmart, the nation's biggest private employer, said it was dropping its mask requirement for fully vaccinated staff at all U.S. Walmart and Sam's Club locations, distribution centers, and offices—but it's not requiring proof of vaccination. And there is an asterisk, as at most workplaces: Masks could still be required by local ordinances. New York has lifted indoor mask mandates for the vaccinated, for instance, while California, the most populous state, is keeping them in place until June 15, after which vaccinated people can follow the new relaxed CDC guidance.

On the other end of the spectrum, Texas Governor Greg Abbott has issued an executive order that makes it illegal for local governments to require masks.

Jenifer Bologna, a member of the disability, leave, and health management group at the Jackson Lewis law firm in White Plains, N.Y., says she's been "inundated" by employer questions since the CDC announcement. She says companies have three choices: rely on the honor system and assume anyone without a mask is vaccinated; have employees sign a policy saying they acknowledge they have to wear a mask if unvaccinated; or require proof of inoculation.

Even those choices are subject to local laws. Some privacy statutes may prohibit asking employees about their vaccination status, while California's Santa Clara County—the heart of Silicon Valley—is requiring companies to obtain the inoculation status of all workers before they return to the office, Bologna says. "This is a very complicated time, and the messaging and rules have changed drastically in a very short period of time, which leaves a lot of us reeling," says Brad Sagarin, a professor of social and industrial psychology at Northern Illinois University. "Clues and cues we were using only recently just don't apply anymore." *—Jeff Green and Michael Tobin, with Mary Schlangenstein, Justin Bachman, and Jenny Surane*

THE BOTTOM LINE Relaxed masking requirements for vaccinated individuals are forcing businesses to consider rules based on inoculation status. But there's no database of who's received shots.

"This is a significant new state in the pandemic. Employers are beginning to, and will continue to, play a bigger role"

● Share of U.S. adults who have had at least one vaccination dose, according to the CDC

62%

Best Friends Forever

Scientists interested in extending life spans for humans are focusing first on dogs

Edited by
Joshua Brustein
and Jenny Paris

As the tech industry has matured, people in Silicon Valley have become obsessed with developing ways to stop the human aging process. It started with really long bike rides and intermittent fasting, but some venture capitalists and startup employees have moved on to taking dozens of pills every morning, or injecting stem cells into their brain, or infusing their body with the blood of the young and virile.

This brand of life-extension experimentation remains fringe, probably because it's weird and there's not a ton of evidence any of it works. But Celine Halioua has a plan to take the field mainstream, and it involves dogs. Her startup, Cellular Longevity Inc., is developing treatments that extend the life span of dogs while also making them more active in their later years. Should such treatments work in canines, Halioua, 26, expects consumers and regulators will be more favorably disposed to similar techniques being used on humans.

"Dogs are unquestionably considered the best model of human aging," says Halioua, who studied neuroscience and then worked for a longevity-focused venture capital fund. "We have co-evolved with them, and they have a shared environment with us. They also develop age-related diseases over time. If we can do this for dogs, people will want it, too." Her company, operating under the brand Loyal, has raised $11 million and plans to start trials in early 2022 on two compounds with potential anti-aging properties. Halioua declines to identify them.

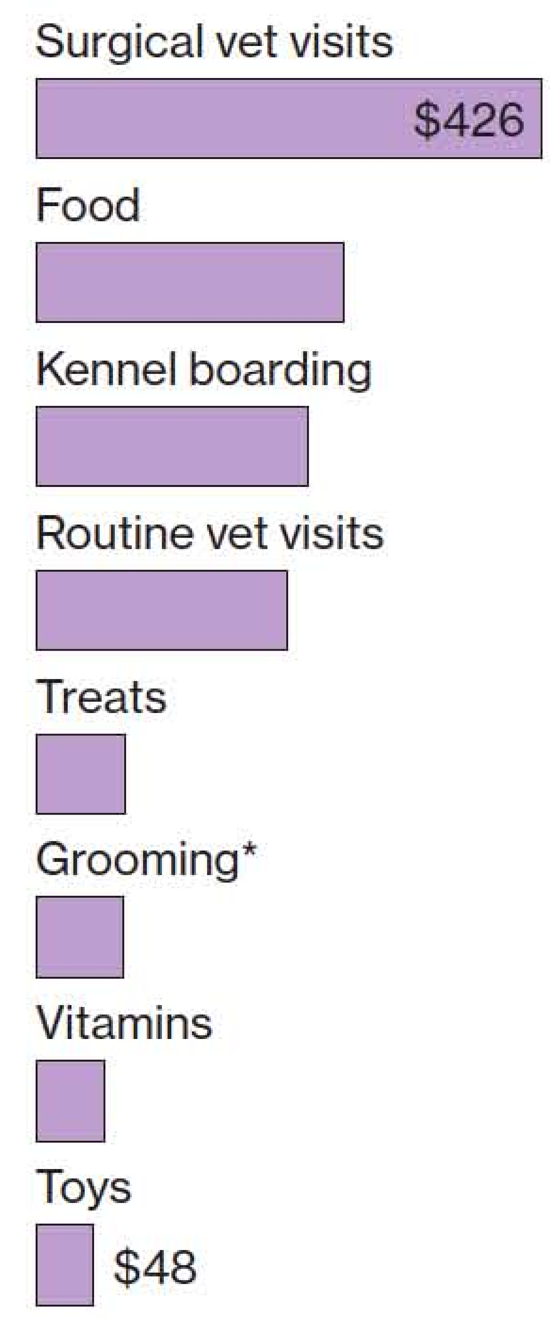
The main barrier to developing anti-aging drugs and therapies for people is that we live too long. Drug companies are reluctant to invest in clinical trials that stretch over decades, and the U.S. Food and Drug Administration is more comfortable with medications that tackle a specific illness or symptom, rather than something as broad and abstract as aging. As a result, a number of promising anti-aging compounds have been largely untested on people in clinical settings.

The notion of running these types of trials on dogs first is not entirely new. Over the past several years, about 30,000 dog owners have entered their pets into the Dog Aging Project, an academic research study backed by $25 million from the National Institutes of Health. The project examines how genetic and environmental factors affect dogs' aging processes, and it's also running a trial in which about 200 middle-age dogs will receive the compound rapamycin, which is used by people to prevent organ transplant rejection and some types of cancer. "Rapamycin seems to delay or reverse aging in pretty much every tissue where it has been looked at," says Matt Kaeberlein, a professor of pathology at the University of Washington and the project's co-director.

Despite its potential, rapamycin has developed a poor reputation among doctors. It causes a lot of side effects in organ transplant patients, who've suffered from maladies ranging from mouth sores to pseudodiabetic states.

Kaeberlein, who's also an adviser to Cellular ▶

▼ Average annual spending by dog owners on selected products and services



◀ Halioua with her dog Wolfie at Loyal's offices in San Francisco

ILLUSTRATION BY JACK SACHS. PHOTOGRAPH BY CARLOS CHAVARRÍA FOR BLOOMBERG BUSINESSWEEK. *INCLUDES SPENDING ON GROOMERS AND GROOMING AIDS. DATA: 2019-2020 AMERICAN PET PRODUCTS ASSOCIATION NATIONAL PET OWNERS SURVEY

◀ Longevity, says this result occurs because of the high doses organ transplant patients receive. He expects fewer issues with the low doses in the pills his team is sneaking into the peanut butter they feed the dogs. He's used rapamycin himself to reduce inflammation and pain in his shoulder. "I'm a believer," he says, though he stresses that his experience should not be taken as a recommendation for others to conduct similar experiments.

Canine studies involving caloric restriction have shown that a dog's life span can increase by almost two years, while also delaying cancer, degenerative bone disease, and other conditions. The expectation scientists share is that a combination of therapies would show far more dramatic results. "We might be talking a 50% or 60% or 70% effect on life span," Kaeberlein says, adding that it's very difficult to predict without doing the trials.

Halioua was working on a doctorate at the University of Oxford, studying the economics of gene therapies, when she dropped out in 2019 to work for the Longevity Fund, a venture capital firm based in San Francisco. Halioua helped research and invest in more than 20 companies working on aging for Longevity, then pitched her own startup idea to Laura Deming, a managing partner at the firm. Deming was skeptical at first. She didn't have pets and struggled with the idea that pet owners would pay much to get their dogs to live longer. "I did not get it," she says.

Halioua eventually persuaded Deming to invest, then she broke away from the firm to start Cellular Longevity in 2020. The company will look to recruit hundreds of pet owners for the studies, aiming to get a therapy approved for dogs by 2024. The first will target larger breeds, which have a shorter life span, while the second will be for all breeds. The hope is that pet owners could expect these animals to live longer—anywhere from six months to three years—and also have better, more active lives.

Halioua shies away from predicting exactly how much she thinks a dog's life can eventually be expanded, but she tamps down any expectation of a sci-fi result. "We are not going to make 80-year-old dogs," she says. She's also vague on pricing, saying only that Loyal's products will be "affordable but not dirt cheap" and will come down in price over time.

A major appeal of using dogs for the trials is that clinical studies can be conducted in three to five years, with dogs living at home under normal conditions. This is a major step forward from the laboratory mice often used for these types of experiments, which are young and must be bred or altered to have age-related illnesses.

Deming says the dog-first approach could be the key to helping people warm up to anti-aging technology. "If it works, it changes the whole psychology around aging drugs in general," she says. "It could be this important moment where these drugs become more mainstream."

Loyal is holding out the possibility of eventually expanding its business to humans. In the meantime, Halioua is happy not to be working only with mice. "We have extended the life spans of mice hundreds of times," she says. "Nobody cares outside of the field because it's a mouse. Doing this in an organism that people care about could change a lot about the aging field. I want to prove a point." —*Ashlee Vance*

THE BOTTOM LINE Academic researchers and private companies are designing trials to test compounds with potential anti-aging properties on dogs as a precursor to tests in humans.

The Next Comcast: City Hall

● A Biden administration plan to bring broadband to all pits local efforts against dominant carriers

After years of unhappy reliance on Comcast Corp. and other carriers, Pleasant Grove, on Utah's Wasatch Front, is turning to a new broadband option: a municipally owned company called Utopia Fiber. The choice follows a pandemic year that showed just how much households need fast,

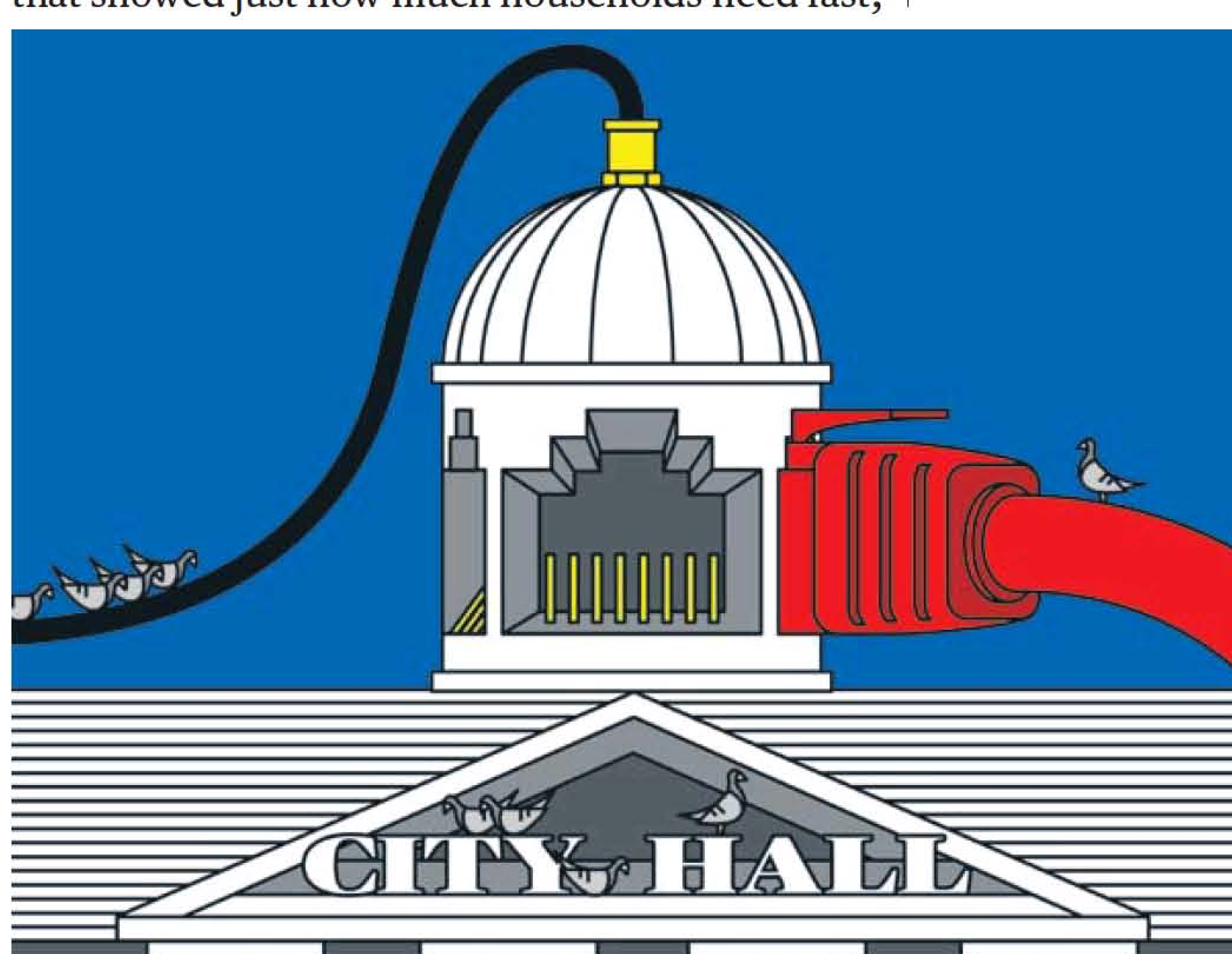


ILLUSTRATION 731

reliable internet connections for jobs, schooling, and medical care.

To reach homes that lack good service, or have none at all, President Joe Biden has proposed funding networks such as Utopia Fiber that are run by cities and nonprofits. That's not sitting well with Comcast, AT&T, Verizon Communications, and other dominant carriers, which don't like the prospect of facing subsidized competitors.

Pleasant Grove shows why established carriers might be vulnerable. With 38,000 residents, it's nestled between the Wasatch Range and the Great Salt Lake Basin, just south of Salt Lake City. When it asked residents about their broadband, almost two-thirds of respondents said they wouldn't recommend their cable service. Almost 90% wanted the city to pursue broadband alternatives.

"We could sit and wait for the private sector to do this—we just didn't really know when that would be," says City Administrator Scott Darrington. Residents have complained of slow broadband, and Utopia's fiber network holds out the promise of fast speeds that don't lag as more households log on, Darrington says. It will also reach areas not served by current providers.

Utopia, owned by 11 Utah cities, builds the network and charges consumers $30 a month. To complete the package, they choose from a dozen other companies that offer internet and video service and charge about $35 monthly. That brings the tab near Comcast's advertised rate of $70. Comcast has invested "to keep communities like Pleasant Grove reliably connected with the fastest broadband speeds available," says Sena Fitzmaurice, a spokeswoman for the company. She says it offers fast service across the city.

Still, when the city council voted unanimously to approve Utopia's $18 million build-out in April, the mood was a mix of giddy and vengeful. "I'll be your first customer that signs up and says goodbye to Comcast," said one council member moments before the body voted. "I'm right behind ya," another added.

The events in Pleasant Grove jibe with the rhetoric coming out of the White House. Biden says he wants to reduce prices and ensure that every household in the U.S. gets broadband, including the 35% of rural dwellers the administration says don't have access to fast service. To connect them as well as others languishing with slow service in more built-up places, the president wants to give funding priority to networks from local governments, nonprofits, and cooperatives.

Established carriers are pushing back against the proposal; they have long criticized municipal broadband as a potential waste of taxpayer funds, while backing state-level limits on it. Almost 20 states have laws that restrict community broadband, according to a tally by the BroadbandNow research group. The carriers say the administration and its Democratic allies are calling for blazing upload speeds that have little practical use for consumers, who already get fast downloads for videos and other common web uses.

"These models have the best chance of finishing the job of connecting America"

Assertions that Americans pay too much rest on faulty comparisons, according to NCTA-The Internet & Television Association, a trade group. Government-owned networks "can be part of the solution in certain communities," says Brian Dietz, a spokesman for NCTA, which represents the largest U.S. cable providers, Comcast and Charter Communications Inc. "There have been more failures than successes."

That's not the case, advocates for municipal networks say. "These models have the best chance of finishing the job of connecting America," says Christopher Mitchell, director of the Community Broadband Networks program at the Institute for Local Self-Reliance. Local governments offer about 600 networks that serve about 3 million people, he says.

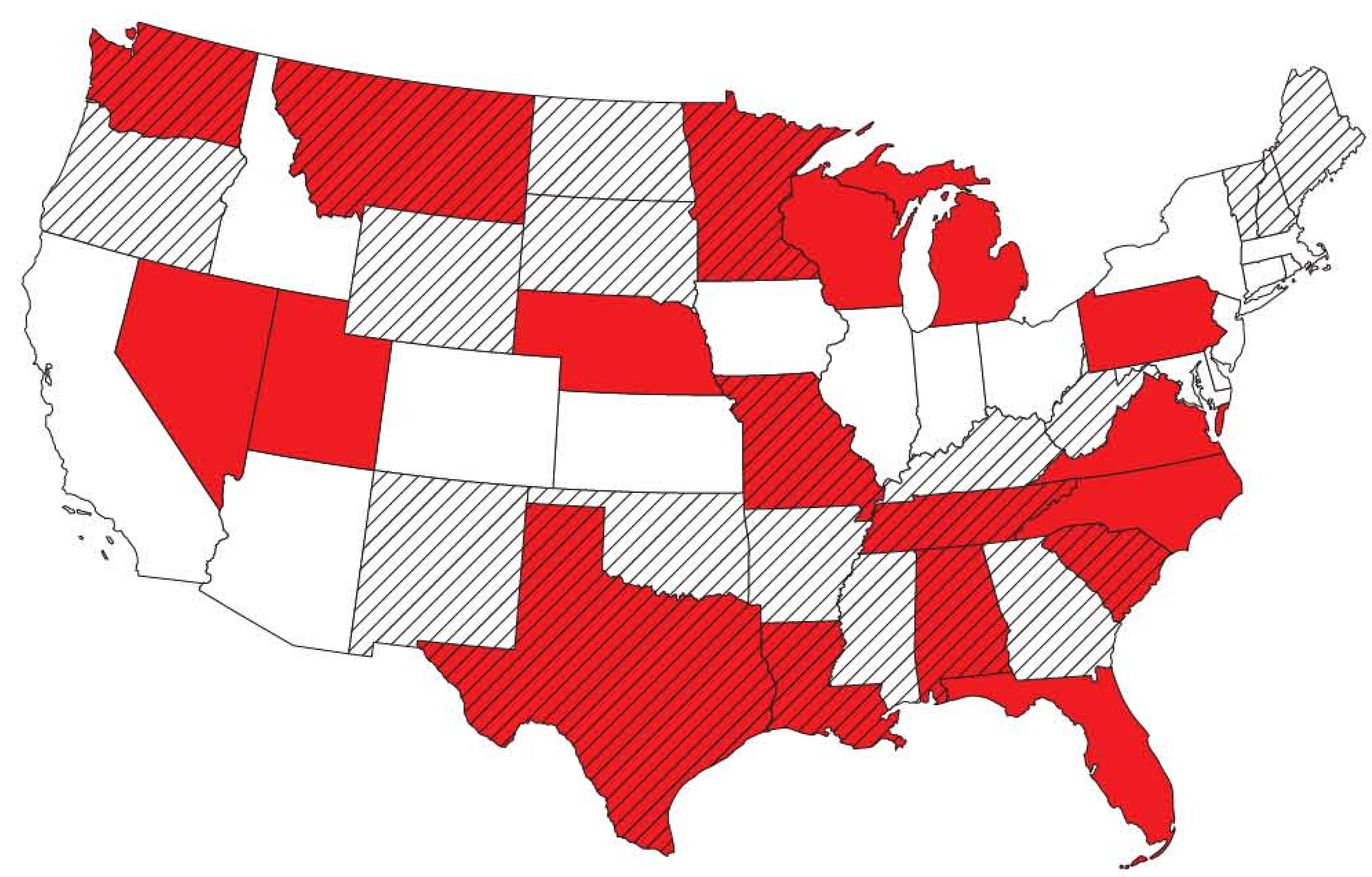
There's "definitely a spike in interest" from cities in making their own broadband investments, says Angelina Panettieri, a legislative director for the National League of Cities.

Rules issued on May 10 by the Department ▶

Broadband Access

■ States with explicit municipal broadband restrictions

▨ States where less than 85% of the population has access to broadband



EXCLUDES ALASKA AND HAWAII BECAUSE OF SMALL SAMPLE SIZES. DATA: BROADBANDNOW

◀ of the Treasury seem to funnel the broadband portion of a $350 billion Covid-19 relief bill to rural areas. That's "a little bit dispiriting" because it jeopardizes federal funding for new networks in cities and suburbs, says Kim McKinley, Utopia's chief marketing officer. The administration wants to help areas that are suffering the greatest lack now, regardless of location, says a Treasury official who wasn't authorized to speak publicly. Republicans want to bar spending on municipal networks and have criticized Biden's broadband plan as too expensive. In response the administration scaled back its plan to $65 billion, from $100 billion.

In the meantime, some cities that had been discussing broadband projects suddenly developed cold feet, McKinley says. She says Treasury's rules may show the administration is shying away from challenging the largest broadband companies: "When was competition ever a bad thing?" *—Todd Shields*

THE BOTTOM LINE Households' growing need for broadband is creating a challenge for established carriers from municipal networks vying for funding from the Biden administration.

I'm Leaving on a Space Plane

● Venus Aerospace wants to get passengers anywhere in an hour by rocketing them to the edge of the atmosphere

Traveling in a space plane is a lot like traveling in a regular plane, except for the middle part. After reaching cruising altitude, the pilot hits the rocket boosters and blasts the aircraft to the edge of space at more than 9,000 mph, or about 12 times the speed of sound. The plane travels at that speed for about 15 minutes, then glides against the atmosphere to slow itself down, cruising back to Earth to land at a conventional airport.

Venus Aerospace Corp., a startup pursuing a hypersonic space plane, is aiming to use this technique to ferry people from Los Angeles to Tokyo in about an hour.

The company was started by two former Virgin Orbit LLC employees: Sarah "Sassie" Duggleby, a code-writing launch engineer, and her husband, Andrew, who managed launch, payload, and propulsion operations. They became fascinated by hypersonic travel after missing Sassie's grandmother's 95th birthday party because the flights were too long from Japan, where they were living at the time. So they left Virgin last June to build their own space plane.

Venus now has 15 employees, most veterans of the space industry, and has received investment from venture capital firms including Prime Movers and Draper Associates. "Every few decades humans attempt this," says Andrew Duggleby, in a tacit acknowledgment of the idea's repeated failure. "This time it will work."

The Dugglebys say their space plane will differ from past efforts because it has a more efficient engine, allowing it to handle the extra weight that comes with having the wings, landing gear, and jet engines that enable takeoffs and landings similar to a passenger airplane. Jack "2fish" Fischer, a former NASA astronaut who's reviewed Venus's plans, says the initial blast of acceleration "throws you back in your seat" but soon disappears because "you get going so fast that you don't even feel it anymore."

Still, flights aren't imminent. The shape of the aircraft is a work in progress, and the company will begin testing three scale models this summer. The Dugglebys, who've secured a small research grant from the U.S. Air Force and are pursuing additional funding from the Department of Defense, expect the project to take a decade or more.

Once the technology is worked out, Venus will still have to figure out the business, which consists of finding passengers willing to pay a premium to get halfway around the globe quicker. "This is for regular people," Sassie Duggleby says. But past attempts at superfast flight, such as the Concorde, which traveled at twice the speed of conventional aircraft, and Aerion Supersonic, which promised travel between any two spots on Earth in three hours, didn't last. Jesse Klempner, a partner at McKinsey & Co.'s aerospace and defense practice, says there's a limit to people's impatience: "It hasn't been proven that the vast majority of humanity will pay a lot for an hour of time." *—Lizette Chapman*

● Estimated top speed of Venus's planned space plane, in mph

9,000

THE BOTTOM LINE Air travel could be much faster with planes that fly at the edge of space, but daunting technical and commercial questions have yet to be addressed.

ILLUSTRATION 731

● Adeyemi Ajao, founder of the venture firm Base10 Partners

PHOTOGRAPH BY CARLOS CHAVARRIA FOR BLOOMBERG BUSINESSWEEK

Bridging the Endowment Wealth Gap

● A new venture fund aims to help HBCUs get in on promising startups

Edited by Pat Regnier and Jenny Paris

College endowments illustrate just how deep-rooted inequality is in higher education.

U.S. college endowments held about $630 billion in fiscal 2019. But just a few schools account for much of that: More than one-third comes from the top 10, led by Harvard, the University of Texas, and Yale. By comparison, the assets of the approximately 100 historically Black colleges and universities (HBCUs) total just under $4 billion, with Howard University holding the most—$712 million as of June 2020.

The disparity reflects the structural inequalities in U.S. society. For years, the wealthy schools have churned out graduates who amassed large fortunes and made big donations to their alma maters. For much of the past decade, either Harvard or Stanford has taken in the largest haul. In fiscal 2020, Stanford raised $1.36 billion in donations and Harvard $1.2 billion, more than the entire endowments of most colleges. Also, larger endowments can take bigger risks in search of higher returns and are offered the chance to invest in fast-growing companies before they go public—opportunities not available to poorer schools.

Yale, with $31 billion, tripled its endowment over the past two decades thanks to a portfolio that includes hedge funds, private equity, and venture capital, which allowed it to get in on the ground floor of successful startups. At the other end of the spectrum, Florida A&M University, a 134-year-old historically Black college with an endowment of about $100 million, has barely enough to fund scholarships for some of the neediest students, let alone invest in risky venture capital.

The difference in endowments leads to an ever-widening gap in everything from the ability to give student aid and attract top professors to improving campuses and building cutting-edge science, technology, engineering, and mathematics (STEM) complexes. According to a 2018 U.S. Government Accountability Office report to Congress, the average endowment amount per student was $15,000 for HBCUs, compared with $410,000 for non-HBCUs of the same size.

Howard and other HBCUs say they lack the clout to be included in profitable early-stage investments. "If you're not able to write the size of large checks they're looking for, you won't be invited into the room," says Frank Bello, who became Howard's first chief investment officer in 2016. He estimates the school would have seen at least 10 times its returns if it had invested in the most recent cohort of tech startups.

This may be starting to change. A new venture fund seeks to entice HBCUs to pool endowments that will invest in startups. Promising young companies are also becoming more eager to diversify their funding pool, as well as gain access to a more diverse group of college graduates.

Adeyemi Ajao, co-founder of San Francisco-based venture firm Base10 Partners, has been working with friends and founders for the past year to persuade HBCU endowments—including those of Florida A&M and Howard—and late-stage startups to commit to one another. He hopes his $250 million fund will also open a path for HBCU students interested in technology and venture capital by connecting them with mentors, internships, and jobs. "Systemic inequality is really about wealth inequality," he says.

Born in Spain to a Nigerian father and a Spanish mother, Ajao had an early interest in tech. He co-founded what for a time was Spain's version of Facebook, called Tuenti, which he and his partners sold for almost $100 million in 2010. At the age of 26 he moved to California to attend Stanford Business School. He got to know powerful people in Silicon Valley, co-founding two startups and launching Base10, now among the largest Black-led funds in the U.S. Just 3% of VC firms have any Black partners, and only a handful of Black-founded firms have funds of $100 million or more, according to the National Venture Capital Association.

Ajao's Advancement Initiative stands out for targeting HBCUs as its primary investors. HBCUs have tried venture capital before: Spelman College invested in two funds with 645 Ventures, a Black-led firm based in New York. But the Advancement Initiative offers special terms: It allows the schools to invest as little as they like, pay no fees, and receive their own share of the fund's profits along with half of Base10's share. Its goal is to create 100,000 scholarships of various amounts at HBCUs within 10 years.

Base10 has hired three fund managers, all Black, and has already signed up eight late-stage startups. Ajao is in talks with 15 others. Having Florida A&M, Howard, and other HBCUs as investors is seen as a competitive advantage for startups seeking diversity.

But many HBCUs have stayed away. Ajao says some decision-makers viewed him with suspicion because they either weren't as familiar with the asset class or considered it too risky. Some of that skepticism is warranted: There are almost 2,000 venture firms in the U.S., with varied records in quality and performance. Only the top venture firms—such as Sequoia Capital, which built a reputation through its early bets on Apple Inc. and Google—get access to the best deals.

HBCUs, with their tiny endowments, don't

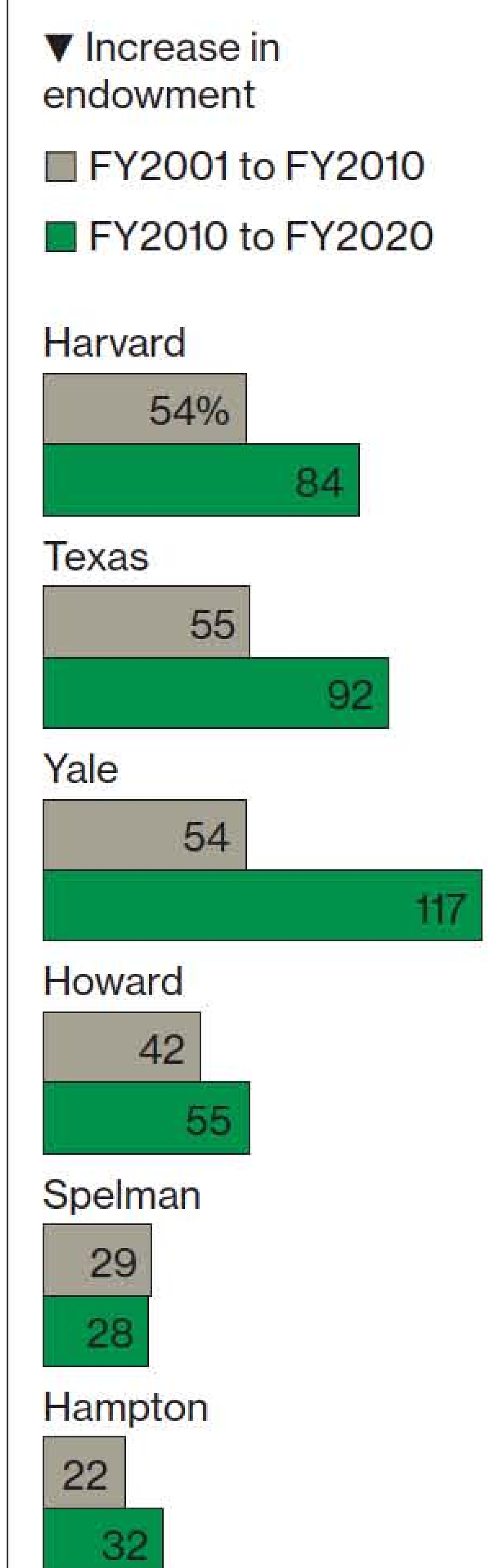


ILLUSTRATION BY JACK TAYLOR. DATA: NATIONAL ASSOCIATION OF COLLEGE AND UNIVERSITY BUSINESS OFFICERS have the risk tolerance and long-term investment horizon of richer investors. "We knew we were missing out," says Marcelia Freeman, a member of the board of directors of the Florida A&M University Foundation. "We can't afford to fly high, but we want to be in the game."

Not everyone agrees that venture investments are appropriate for small endowments. Bill Abt managed the endowment of Carthage College in Wisconsin for 15 years, using plain-vanilla index funds. When he retired in 2018, the $120 million fund's 10-year average return was in the top 10% of all endowment returns. "I would try to stay clear of all alternatives, including venture capital," he says. "Certainly no more than a small portion."

Howard's Bello says that access to venture firms has improved in recent years and that he's eager to continue on that path. "You're going to see more of this opportunity and value creation come about over the next 5 to 10 years," he says of digital transformation. "We want to be a part of that."

Startups Attentive Mobile, Aurora Solar, Brex, Circle Internet Services, KeepTruckin, Nubank, Plaid, and Wealthsimple have all sold shares to the Base10 fund, Ajao says. Some founders say ensuring that HBCUs share in their success is a good move for employee morale and helps recruit from a diverse pool of students.

Brian Long, chief executive officer and co-founder of short-message service Attentive, says these reasons—as well as Base10's hiring of former Bain Capital Ventures partner Jamison Hill, whom he'd worked with before—persuaded him to make room for the fledgling fund while finalizing a funding round at $7 billion.

David Vélez, founder and CEO of Nubank, an 8-year-old Brazil-based digital bank, says Base10's Advancement Initiative allows him to use his investors strategically. "If I have 50 funds wanting to invest and they all look the same, this is really a no-brainer," says Vélez, who met Ajao when they were both students at Stanford. Nubank was worth $10 billion when Vélez invited the fund to buy shares last year. It's now worth $25 billion. —*Lizette Chapman and Janet Lorin*

THE BOTTOM LINE Tiny endowments and lack of access have kept historically Black colleges out of lucrative startup investment. A new venture fund promises to change that.

Bonds Are Turning Right Side Up

● A flip from negative to positive yields in Europe may upset borrowers and investors

Fewer bond investors are having to pay for the privilege of lending out their money.

For the first time in years, the global supply of debt with a negative yield is in meaningful decline. The trend is strongest in Europe, where subzero bonds have been an everyday reality for investors. Although the shift will be welcomed by those seeking safe income from new investments, it means current bondholders are losing money. (Bond prices fall when yields rise.) It also signals that higher borrowing costs are on the way for everyone from governments to corporations to homeowners. It could be an especially nasty jolt for junk-rated companies and emerging-market governments, which have been able to gorge themselves on debt at much lower rates than they're used to as investors have taken on more risk in search of better return.

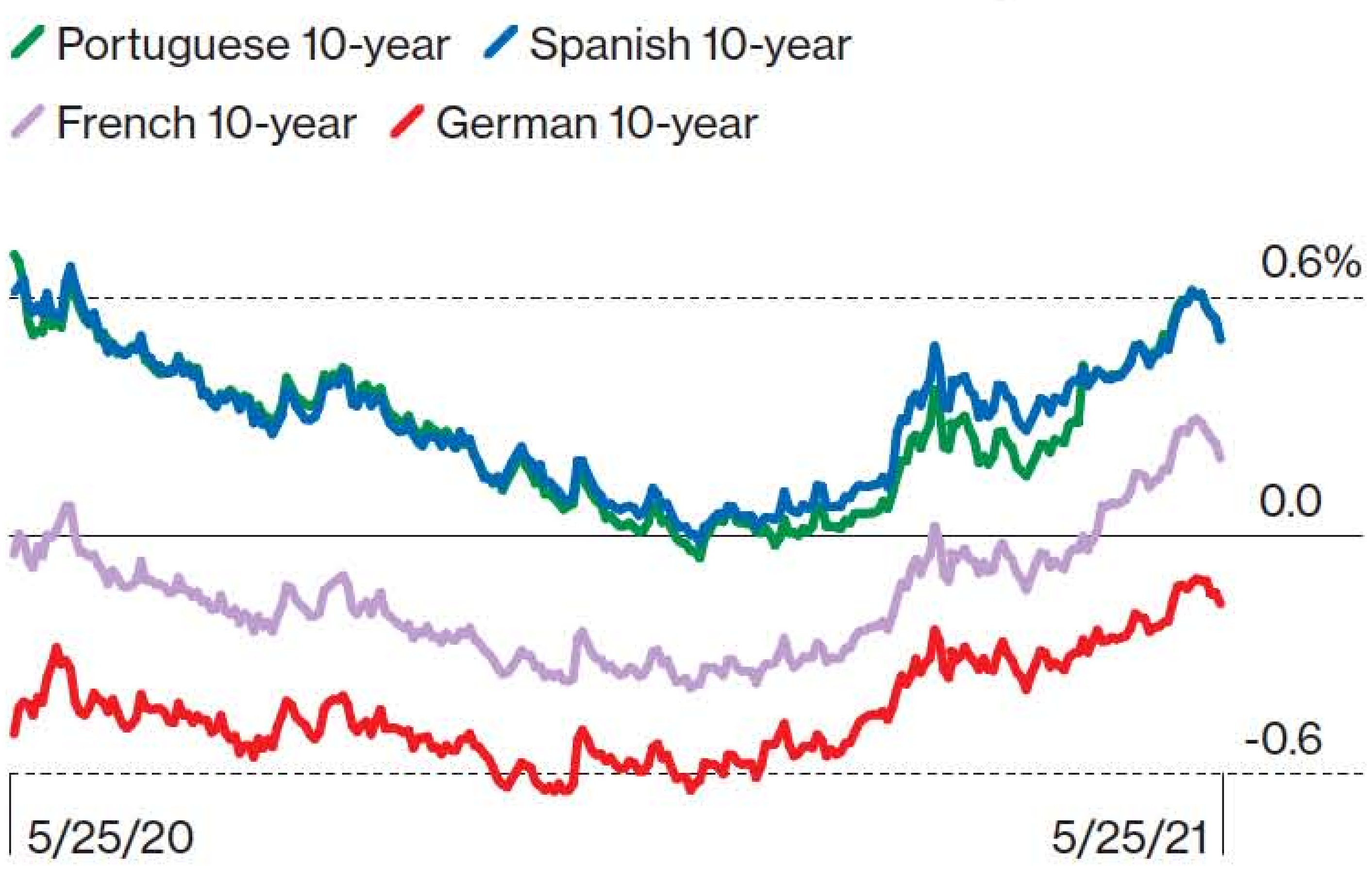
If sustained, rising yields could mark the end of a phase in which a key assumption of investors—that you get paid for lending money—has been turned on its head. The worldwide amount of subzero bonds began seriously building up in 2014, then spiked in 2016. The yield on the 10-year German government bond, a benchmark for safe investments, has been below zero since May 2019. But it's climbed from a low of -0.9% to a recent -0.2%. The 30-year German bond, which was ▶

◀ negative for most of last year, now pays 0.35%. The global total for negative-yielding debt has dropped from a high of more than $18 trillion in December to about $13 trillion.

A bond produces a negative yield when the price investors pay for it is more than the interest and principal they'll get back over its life. Investors may be willing to accept this loss in exchange for the relative safety that a borrower such as a fiscally strong government or a major corporation provides. Europe accounts for about 60% of the world's negative-yielding debt.

Negative yields in Europe came about as a result of a weak economy and a half-decade of unprecedented monetary intervention. The European Central Bank cut interest rates to the bone and bought loads of bonds, helping to push up their prices and lower their yields. It now holds a third of the entire debt of some member states. The policy worked, slashing borrowing costs for nations struggling to emerge from the global financial crisis and, more recently, the fallout from Covid-19.

Government Bond Yields Are Rising



DATA: COMPILED BY BLOOMBERG

Now Europe's economy is stirring back to life. The ECB forecasts the economy of the 27-nation European Union will expand more than 4% in 2021, after shrinking 6% last year. Such a turnaround may represent the "biggest contribution to global growth" in the coming months, Goldman Sachs Group Inc. said in a recent note to investors. In general, improved growth means falling bond prices and higher yields. That's because investors expect central bankers to allow interest rates to rise again, and because growth over time brings inflation, the bond investor's nemesis. Bond buyers demand higher yields when they worry about rising consumer prices eroding their returns.

Recently investors have taken short positions on German 10-year bonds, betting their prices will fall and yields will rise. A sale of two-year German notes on May 18 also saw the weakest demand since July 2019, while appetite at an auction the next day for 10-year bonds fell to its lowest level in more than a year. "I'm short European rates right now, because in the next few quarters we will see some pretty spectacular growth numbers," says Liam O'Donnell, head of nominal rates at Aberdeen Standard Investments, which is putting in bets against French, German, and Italian bonds. "With inflation rising globally, it's a pretty toxic mix for negative-yielding European government debt."

This bodes particularly ill for the weakest economies, such as those of Italy and Greece, where investors are more concerned about governments' debt burdens. That's why LongTail Alpha, a U.S. fund that made a huge return on the crash in equities last year, said in May that it's betting on an implosion in the region's so-called peripheral bond markets, which would send borrowing costs spiraling. This could complicate the task of the ECB: While it may want to allow rates to rise gradually as the overall European economy improves, a sharper spike in yields in the most vulnerable economies could force it to delay or slow the unwinding of its stimulus.

Bob Michele, chief investment officer at J.P. Morgan Asset Management in New York, says he's "increasingly uneasy about holding longer-dated bonds," which are most sensitive to changes in the direction of the economy and inflation expectations. Austria's 100-year debt is a case in point. One of the standout performers during the Covid-triggered flight to safety in 2020, the century bonds have tumbled this year, sending yields up almost twofold. An investor who bought the securities when they were issued would now be nursing a steep loss.

Just how far yields could rise is unclear. Historically, lots of investors have gotten hurt betting against German bond yields in particular. ("Never short the bund" is at least one trader's motto.) There are still likely to be plenty of buyers eager to jump into German bonds if and when yields break above zero, most notably pension funds that need a safe positive yield to help hedge their future liabilities. The government's commitment to a balanced budget means those bonds are always in short supply. And investors such as Aberdeen see Europe's low-growth challenges persisting after the current bounce. In the down-is-up world of bond investing, that could push bond prices back higher–and keep some yields underwater. —*John Ainger and Anchalee Worachate*

THE BOTTOM LINE Right now, investors who want safety are paying to let the German government hold their money. But an improving economy and inflation fears may change the math.

The Bank That Didn't Blow It

● Deutsche Bank's nightmare decade is gone but not forgotten

On the day before one of the biggest margin calls in history, Deutsche Bank AG Chief Executive Officer Christian Sewing joined an urgent meeting with a not-unfamiliar message: There was a problem, and billions of dollars were at stake.

But as executives on the late March call briefed him on the bank's exposure to Bill Hwang's Archegos Capital Management, it wasn't all bad news. Risk managers had been concerned by Archegos's growth for some time and were collecting more collateral on its highly leveraged market bets. The bank's traders stood ready to quickly offload the slumping assets.

Archegos's fall in the following days slammed rivals with more than $10 billion in losses. But Deutsche Bank walked away without a scratch, reporting its highest profit in seven years. The escape added to a growing sense that Sewing, who was appointed in 2018, may be moving Germany's largest bank past a decade and a half of dysfunction during which it went from one crisis to the next.

"At some point you really have to rip the Band-Aid off, and Sewing seems to have done that," says Matthew Fine, a portfolio manager at Third Avenue Management. The bank's shares have more than doubled from a record low in March 2020, when the pandemic revived old worries about whether it was strong enough to survive another crisis. Instead, Deutsche Bank successfully rode the trading wave that's buoyed investment banks globally.

To be sure, for a bank that lost money in five of the past six years, the bar to success is low. The stock still trades at one of the steepest discounts to book value among European lenders. But the CEO, who initially planned to focus on corporate banking and cut back trading, was quick to adapt when conditions changed. To make money in a country with negative interest rates and almost 1,700 banks battling for business, Sewing has raised fees and slashed jobs and branches. And he's made progress with internal issues that undermined his predecessors.

Sewing ended the divisional infighting that he once called "Deutsche Bank's disease" and addressed risk lapses that had caused the company, over and over, to stumble. When the world stepped up scrutiny of the industry after the 2008 financial crisis, Deutsche Bank ended up footing the biggest legal bill of any European bank, spending more than $19.4 billion on fines and settlements.

Archegos wasn't the first blowup the bank avoided under Sewing. It cut its exposure to Wirecard AG as doubts about the company grew before its collapse last year. It also hasn't taken a direct hit from Greensill Capital, the supply chain finance operation whose demise forced European rival Credit Suisse Group AG to liquidate a $10 billion group of funds.

Of all those fiascoes, Archegos had by far the biggest potential to do lasting damage. Deutsche Bank had joined several other investment banks in financing Hwang's business. Credit Suisse, for instance, allowed it to borrow as much as 10 times the value of its collateral. It ended up with $5.5 billion in losses, the most of any lender.

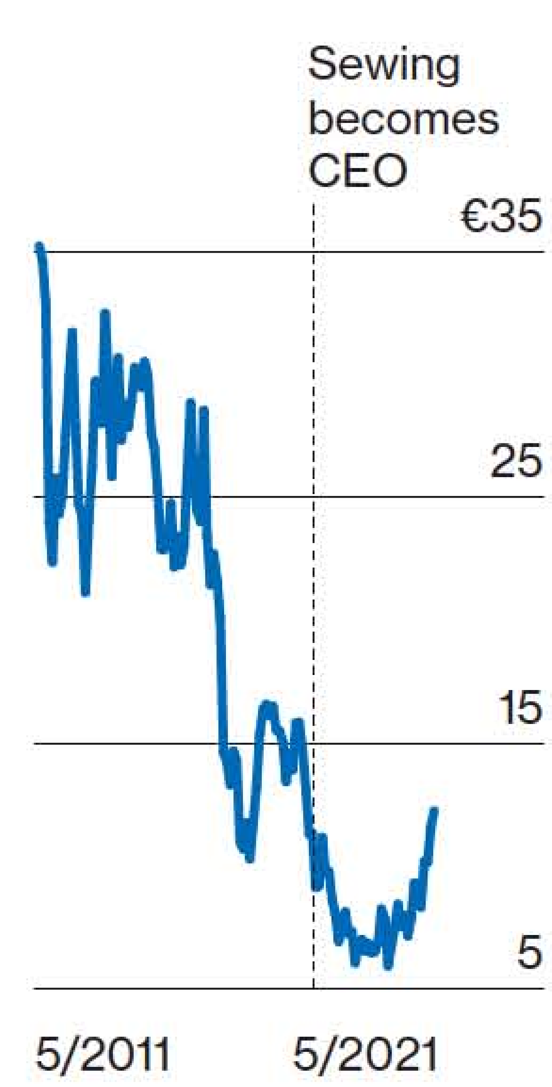
Deutsche Bank had run up an exposure worth several billions of dollars, according to people familiar with the matter, who asked for anonymity discussing internal information. But it hadn't lent as aggressively, and its arrangement with Archegos allowed it to ask for more collateral. The German bank had decided two years earlier to exit the business, known as prime brokerage, of working with big hedge funds and family offices such as Archegos. It was in the process of transferring its relationships to BNP Paribas SA, giving it even more reason to keep things in check.

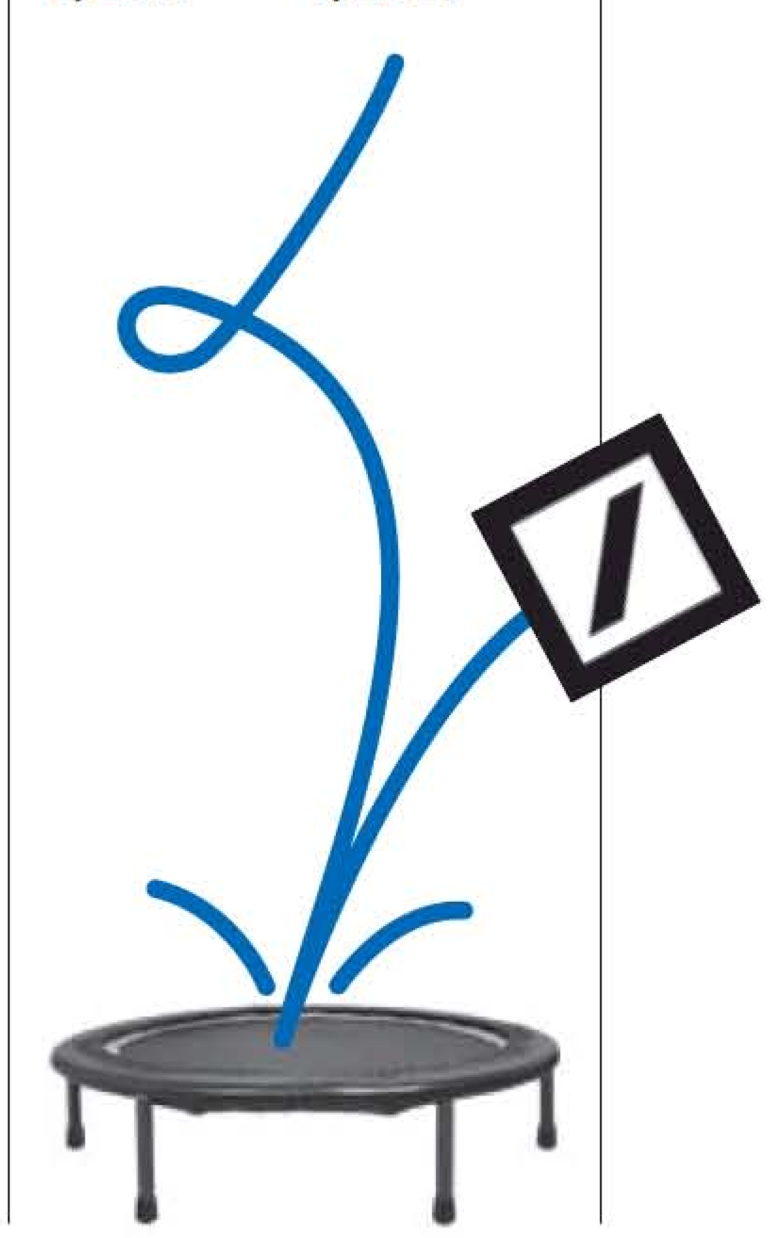
Avoiding self-inflicted distractions allowed the bank to ride the trading rally; its fixed-income unit has won market share from rivals for three quarters in a row. But that leaves the question of what happens when markets cool and trading profits slow, as they inevitably do. Sewing's original vision for fixing the bank focused on its more stable lending operations. Yet the units at the heart of that strategy have repeatedly missed their targets after being hit hard by negative rates.

"Deutsche Bank has managed a remarkable turnaround in the past quarters," says Andreas Dombret, a former top official at the German central bank who used to supervise the lender. "Now it's about making sure that is sustainable." *—Steven Arons, Nicholas Comfort, and Donal Griffin*

THE BOTTOM LINE For years, Germany's largest bank seemed to be making every mistake in the book. But it's managed to avoid some of the latest problems that have tangled up rivals.

▼ Deutsche Bank share price





Bloomberg Businessweek May 31, 2021

India's Covid Orphans

Pleas for help are flooding social media platforms, potentially putting parentless children at risk

In early May, Mumbai resident Akancha Srivastava noticed something unusual. Her social media handles and the chatbot on the website of the nonprofit she runs were swamped with anguished appeals to help children orphaned by India's ferocious second wave of Covid-19, which has claimed more than 150,000 lives just in the past two months. Veering from her usual work of promoting cybersafety, the thirtysomething engineer assembled a team of eight and set up a WhatsApp Covid helpline for children in distress. Within hours after the number went live on May 3, Bollywood stars, TV personalities, and police chiefs shared it on social media. Panicked messages began flooding in from Delhi, Mumbai, and distant small towns.

"People were asking us to rescue orphaned children, alerting us about illegal adoption rackets and child trafficking," says Srivastava, whose helpline has been logging 3,500 to 4,000 messages daily. Her team is working with authorities to locate relatives or place children in already overflowing state-run shelter homes. "The children are in shock," she says. "They don't understand what's happening."

The virus has shattered families and orphaned children around the world. But in India, where 27% of the population of 1.3 billion is under 14, the scale of the crisis is unparalleled. The country had an estimated 350,000 orphans in institutional care going into the pandemic. Now authorities are scrambling to get a count of how many children have been abandoned, either because their parents have been hospitalized or died or because the surviving parent isn't able to care for them. Priyank Kanoongo, chairman of New Delhi-based National Commission for Protection of Child Rights, says his office has directed all district child protection units, child welfare officials, and police check posts to keep track. In a recent tweet, Smriti Irani, India's women and child development minister, said that since April 1 state governments have reported 577 children who've been left parentless by Covid.

What is a health crisis could well morph into a human-rights crisis in a country where child exploitation has long been a problem. The International Labor Organization estimates that more than 10 million Indian children under 14 are in the workforce. The real number may be far higher: Four times as many aren't enrolled in school, according to the country's most recent census data.

"Millions of children across the country are facing severe child-rights violations right now and being pushed into transactional sex, child labor, or sexual exploitation," says Sonal Kapoor, the founder and director of Protsahan India Foundation, a nongovernmental organization that works with slum children. Protsahan, which is active in 48 Delhi slums, has been logging more than 25 distress calls a day, she says, up from 15 to

Edited by Cristina Lindblad

ILLUSTRATION BY DANIEL ZENDER

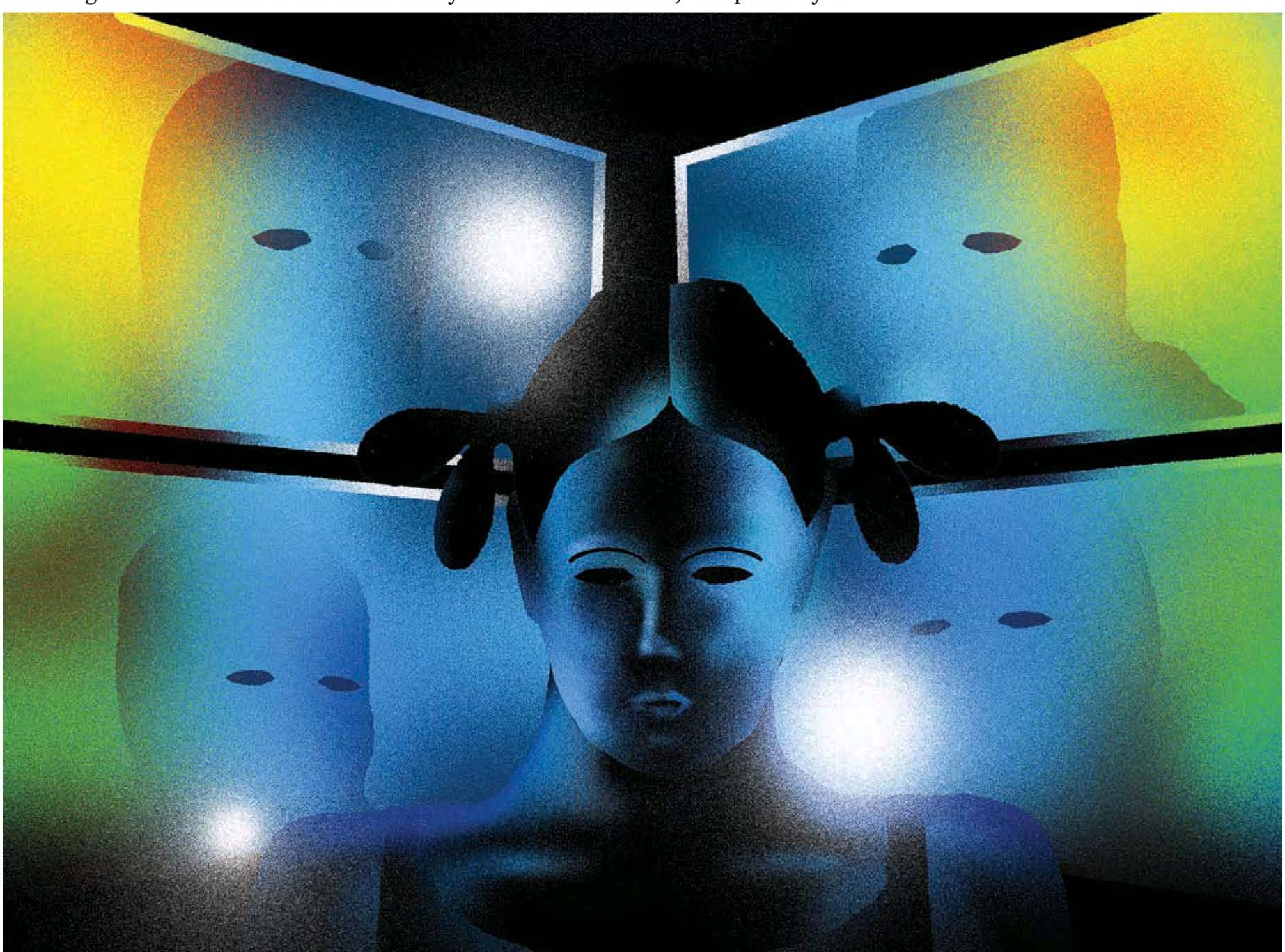
20 a month before the pandemic. In one case, three girls ages 5, 6, and 14 were being abused by their father while their mother was hospitalized. In another, two young children had received no nourishment for three days because their parents were too ill to care for them. “An estimated 20% of Delhi’s slum residents have died,” says Kapoor. “With so many children affected, the very fabric of India is in tatters.”

Orphaned children are at risk of being trafficked in smaller towns and rural areas where poverty is endemic and police presence minimal, says Jalla Lalithamma, a social activist with the People’s Organization for Rural Development, based in Madanapalle, a city of less than 200,000 that’s a three-hour drive from Bangalore. During the current Covid wave, Lalithamma has documented dozens of cases of child-rights violations in the area. Destitute children are being recruited to brew bootleg alcohol and haul sacks of tomatoes at the wholesale vegetable market in town. “If the breadwinner in the family has died, young girls are being lured to work in factories in nearby cities and then trafficked” for prostitution, she says.

While there’s no reliable data on the number of children at risk, what’s available is unsettling. In Jharkhand, a state in eastern India with high levels of rural poverty, the National Commission for Protection of Child Rights has mapped the location of 4,700 vulnerable children in a single district that has a history of child exploitation.

Calls for help have deluged social media platforms, including Twitter, where the hashtag #CovidOrphans first trended. “If anyone wishes to adopt a girl, please contact Priyanka,” read one message. It included a phone number. “One girl is 3 days old and another is 6 months old. They lost their parents recently due to covid. Share as much as possible help them get a life.” While most of these posts may be well meaning, say child welfare experts, they pose a danger. “When photos and locations are shared, child-trafficking networks become active under the guise of adoption,” says Srivastava. Overnight, “new ‘donors’ have come up saying, ‘We’ll fund Covid orphans if you share their details,’ ” Kapoor says. ▶

“With so many children affected, the very fabric of India is in tatters”



◀ Irani, the minister, has attempted to put a stop to the messages, counseling good Samaritans to contact their local police departments or the ministry's hotline. "Please do not share pictures and contact details of vulnerable children in distress situation in social media," she pleaded in a series of tweets. "Their identity is to be protected as per law."

The legal adoption process in India is arduous and can take years. While extended families might take in abandoned children in better times, Covid has brought worries about contagion and expense.

So far, the official response has been local and ad hoc. To incentivize relatives to give the children a home, the governments in Delhi and central Madhya Pradesh have pledged free education and monthly stipends to support Covid orphans. The government in Kerala has put an emergency protocol in place specifically for adopting Covid orphans.

Puja Marwaha, chief executive officer of Child Rights and You, a nonprofit that supports hundreds of grassroots child development initiatives across the country, worries that the pandemic has erased years of hard-won progress in such areas as child malnutrition and education that resulted from the work of her own organization and others like it. "It has been an uphill battle to secure our children's education, health, and safety and took huge efforts, resources, finances as well as building community habits over the past couple of decades," she says. "We have reasons to be worried that much of that success can go to waste." —*Saritha Rai and Shwetha Sunil, with Bhuma Shrivastava*

▲ A boy working at a brick kiln on the outskirts of Jalandhar

THE BOTTOM LINE Indian officials and NGOs are scrambling to keep track of children who've become parentless because of Covid, worried they could fall into the hands of child traffickers.

Democrats Can't *Kumbaya* on Taxes

● Looking toward 2022 midterm elections, the party's moderates are resisting some of Biden's hikes

Weeks after President Joe Biden pitched the first major tax hikes since 1993, signs are mounting that anxiety among congressional Democrats will significantly temper any increases that manage to pass Congress. "We are trying to identify a menu of options," said Senator Chris Van Hollen of Maryland in a May 21 interview. "You need to get every one of your 50 Democratic senators on board. There is no room for error."

The U.S. Department of the Treasury is slated to release the administration's most detailed tax proposals yet on May 28 in a report known as the *Green Book*. But congressional staff are already paring down the ideas that have been floated and are fine-tuning to make them workable from both policy and political standpoints, according to a Democratic aide speaking on condition of anonymity because they were not authorized to discuss private deliberations.

More than 8 million Americans are still without jobs even as the recovery gathers steam, which makes some Democrats wary of criticism that higher taxes could hold back growth. Moderate Democrats in the House of Representatives, who

INDIA: SUSHAVAN NANDY/GETTY IMAGES. NEAL: ANNA MONEYMAKER/GETTY IMAGES. DATA: TAX POLICY INSTITUTE; COMPILED BY BLOOMBERG

are vital to preserving the party's slim majority in next year's elections, are well aware of Republicans' success in tarring the Obama administration's spending and tax plans as government overreach. That strategy paid off for the GOP in the 2010 midterm elections.

Biden's proposal to increase the corporate tax rate to 28% from 21% hit a roadblock early on, with Democrat Senator Joe Manchin of West Virginia saying he preferred 25%. A proposal that would dramatically hike the inheritance tax bill for wealthy Americans is also running into headwinds. Staff for Representative Richard Neal, chair of the House Ways and Means Committee, have floated options that could ease the hit for heirs. At the same time, a group of lawmakers from high-tax states primarily in the Northeast is demanding greater relief for taxpayers whose state and local tax, or SALT, deductions were capped in the Republican tax overhaul of 2017.

Expect the wrangling to carry on for months, as lawmakers work to determine how much new spending in Biden's American Families Plan, which envisions a sweeping expansion in social programs, needs to be funded from the tax measures. Revenue generated by increases in levies would also pay for some infrastructure improvements. Talks on a bipartisan infrastructure deal have made little headway, increasing the likelihood of a Democrat-only push for Biden's $4 trillion in spending and tax proposals.

Neal, whose committee is in charge of drafting tax legislation, said in a May 20 interview that he's been inundated with ideas from colleagues about how to craft a package and added that he intends to move quickly. Yet he's mindful of what can get through the 50-50 Senate. "As closely as we can align ourselves with Senate thinking and administration thinking, the better off we are going to be," he said. "That's why I've been so deliberative about not thinking out loud about tax policy. I've been very guarded on it, and I'm going to stay that way" until a consensus is reached among Democrats and on the committee.

White House aides and Democrats in Congress are continuing to make the case to the public while assessing what is politically possible on Capitol Hill. Biden aides frequently cite nonpartisan polls showing a majority of Americans support raising taxes on the rich and corporations. But there is no guarantee this level of support will translate into Democratic lawmakers voting for a raft of tax increases ahead of the 2022 midterms.

One Democratic operative who's worked with the White House and for lawmakers says many of the party's lawmakers remember the 2010 elections, during which nascent Tea Party Republicans pummeled them for passing the Affordable Care Act and its accompanying tax increases. Democrats lost control of the House that November.

Representative Josh Gottheimer, a New Jersey Democrat who co-chairs the bipartisan Problem Solvers Caucus, has cautioned that there is little enthusiasm for tax increases among moderates. He is also leading a charge to balance out some of the hikes with a more generous SALT deduction that had been limited under President Donald Trump.

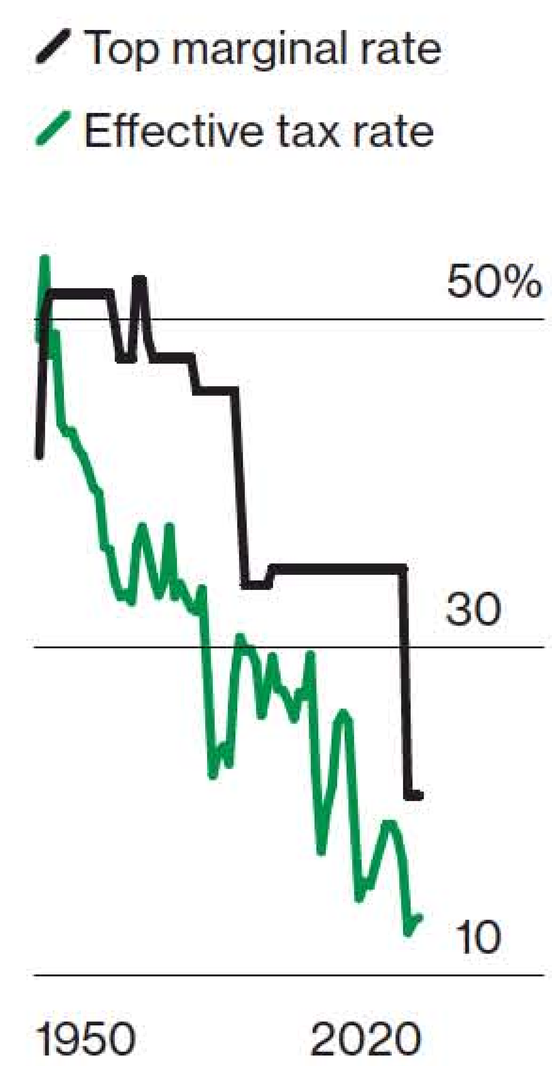
Progressives in turn have become frustrated with the moderates, arguing that the coming year is the party's best chance to roll back the Trump tax cuts and use that money to fund items on progressives' wish list, including child care, community college, and universal preschool. "The tax increases, in a way, are the most popular parts of the proposal," says Chuck Marr, who served as an economic policy adviser to former Senate Majority Leader Tom Daschle and now works for the left-leaning Center on Budget and Policy Priorities. "The public is so there." Marr says lawmakers need "more education" on the tax hikes.

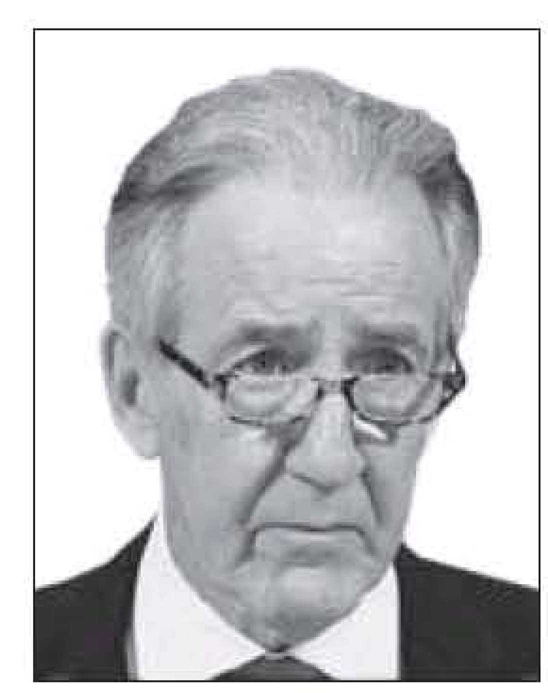
Democrats also disagree over the White House's stance in international negotiations on a global minimum corporate tax. Treasury Secretary Janet Yellen initially floated a rate of 21% but then offered 15% at a May 20 meeting with representatives of the Organization for Economic Cooperation and Development. Some Democrats view that as too low: "Fifteen percent represents a weak lead and should be an absolute floor," said Representative Lloyd Doggett, a member of the Ways and Means Committee, in a statement.

Neal, a Massachusetts Democrat, says he plans to schedule public hearings from stakeholders who'd be affected by Biden's infrastructure and tax proposals. Among the target groups are the AFL-CIO, the U.S. Chamber of Commerce, the American Trucking Association, and the Teamsters Union. "I think they may get the broad support at the end of the day," says Ben LaBolt, who worked in the Obama White House and remains close to several Biden aides. "If you are someone like Manchin, if this can be the ticket to getting a bunch of middle-class union jobs in West Virginia that don't require a four-year or even two-year degree, this could have a major impact on the state." —*Nancy Cook and Laura Davison, with Kaustuv Basu*

THE BOTTOM LINE Biden's 28% corporate tax rate and higher levies on inherited assets are getting pushback from Democrats who fear they'll be fodder for Republican attacks.

▼ U.S. corporate taxes





● Neal

The C-Suite Splits From The GOP

● Why the Republican Party and big business are at odds

Big business broke with President Donald Trump over tariffs and immigration and resented his Twitter attacks on various Fortune 500 companies. A wider rift opened in January, when supporters of the then-president invaded the U.S. Capitol and 147 Republicans in Congress refused to certify Joe Biden's Electoral College victory.

Still, it seemed as if corporations and the GOP might patch things up once Trump was out of the White House.

If anything, relations are worse now. And the reason is becoming apparent: The animus toward the business establishment emanates not only from Trump but also from the grassroots of the Republican Party. As long as the rank and file is at odds with big business, politicians will be as well.

Differences run deep. Although large corporations benefited from the tax cuts and deregulation of the Trump era, they also prioritize free trade and easy immigration—which some rank-and-file Republicans blame for taking their jobs. A bigger political flashpoint is that many corporations, in attempting to promote inclusiveness at work and with customers, have supported issues that cultural conservatives deride as "woke," such as Black Lives Matter, voting rights, and LGBTQ rights.

Georgia's new voting law, which critics say will disenfranchise minorities, has led to the worsening of an already troubled relationship. Major League Baseball pulled the All-Star Game out of Atlanta in response, and Ed Bastian, chief executive officer of hometown carrier Delta Air Lines Inc., called the law "wrong." Trump supporters seethed, and politicians channeled their anger. "You are, in fact, morally inferior to the working men and women of this great country," Senator Rick Scott of Florida wrote in an open letter to "woke corporate America." Another irritant among many is the suspension of Trump's social media accounts by Twitter and Facebook. Senate Minority Leader Mitch McConnell of Kentucky complained on April 5 that "parts of the private sector keep dabbling in behaving like a woke parallel government."

Several Republican senators, including Tom Cotton of Arkansas, Josh Hawley of Missouri, and Marco Rubio of Florida, are pitching their party as a friend of the working class—not an easy task given the party's traditional skepticism of things such as labor unions and generous unemployment benefits. "The days of conservatives being taken for granted by the business community are over," Rubio wrote in an op-ed in *USA Today* in March, expressing support for Amazon.com Inc. workers attempting to unionize.

Things are easier for small businesses, because Republicans remain with them on their two leading issues: low taxes and light regulation. Trade, immigration, voting rights, and inclusion are further down small business owners' list of priorities. "The annual cost per employee of complying with federal regulations is significantly higher for smaller firms than larger firms," the National Federation of Independent Business says on its website.

The charts on the next page show the widening gap between the Republican Party's grassroots and big business. One, from Gallup, shows a sharp drop this January, to 31%, in the share of Republican and Republican-leaning voters who are satisfied with the size and influence of major corporations.

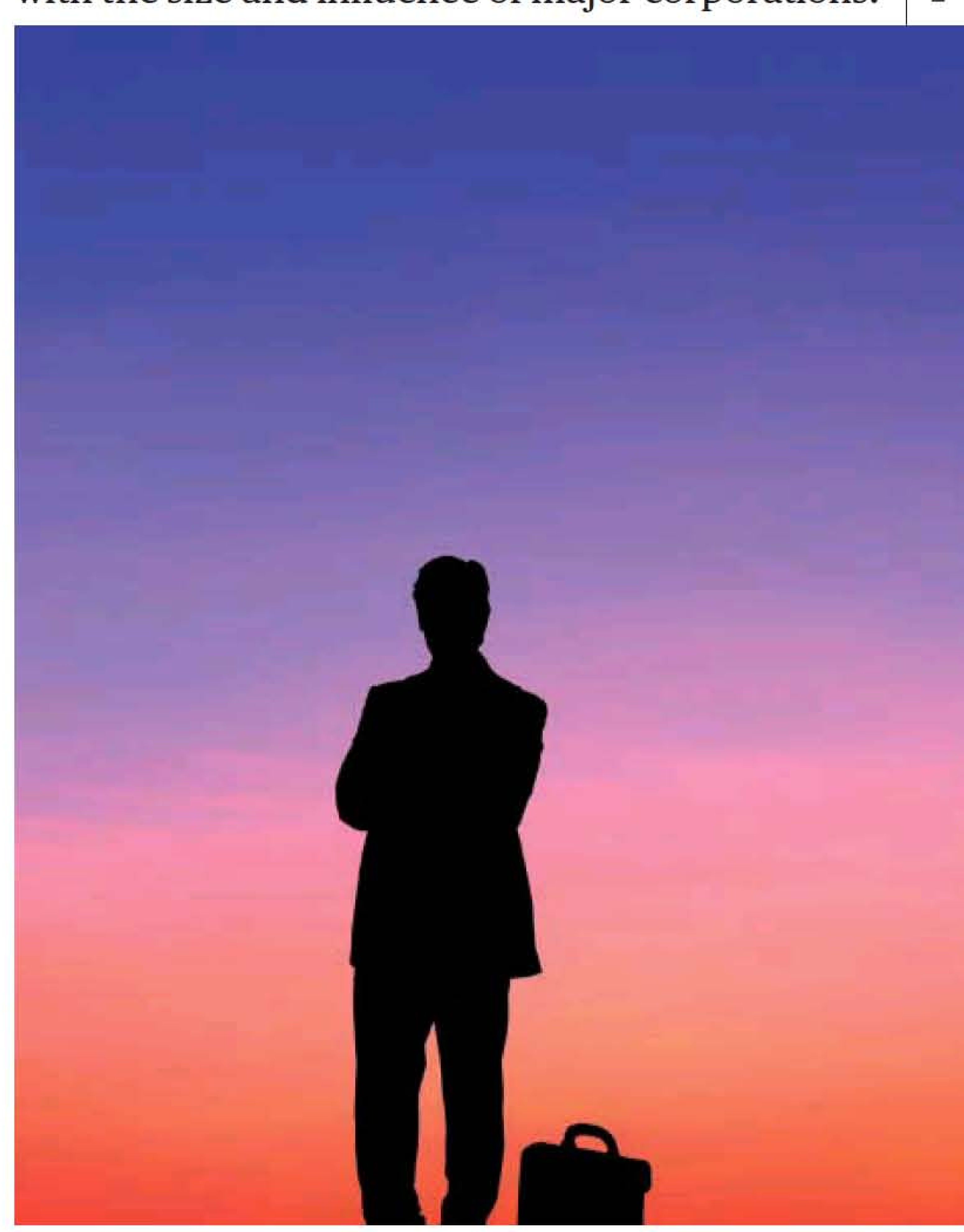


PHOTO ILLUSTRATION BY 731; PHOTOS: GETTY IMAGES (4)

Edited by Amanda Kolson Hurley

The percentage was 57% in January 2020.

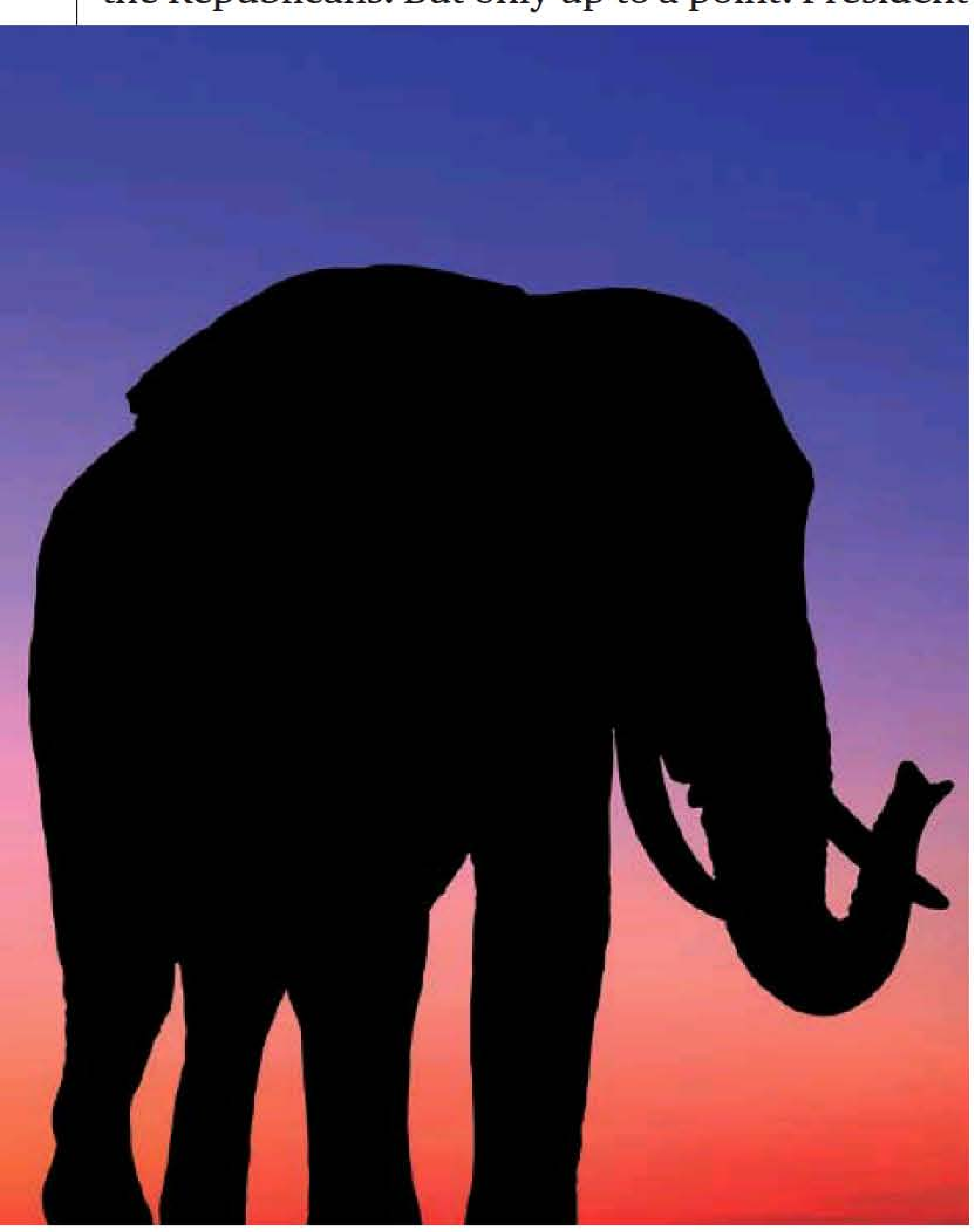
"Even though Trump was populist, I think he was equated in many people's minds with big business and capitalism," says Lydia Saad, Gallup's director of U.S. social research. When he left office, Saad says, that association faded.

Republican voters, who tend to be older and more rural than Democrats, have become increasingly concentrated in less economically productive parts of the country. Counties won by President Biden last year accounted for 71% of the nation's gross domestic product in 2018, according to a Brookings Institution analysis.

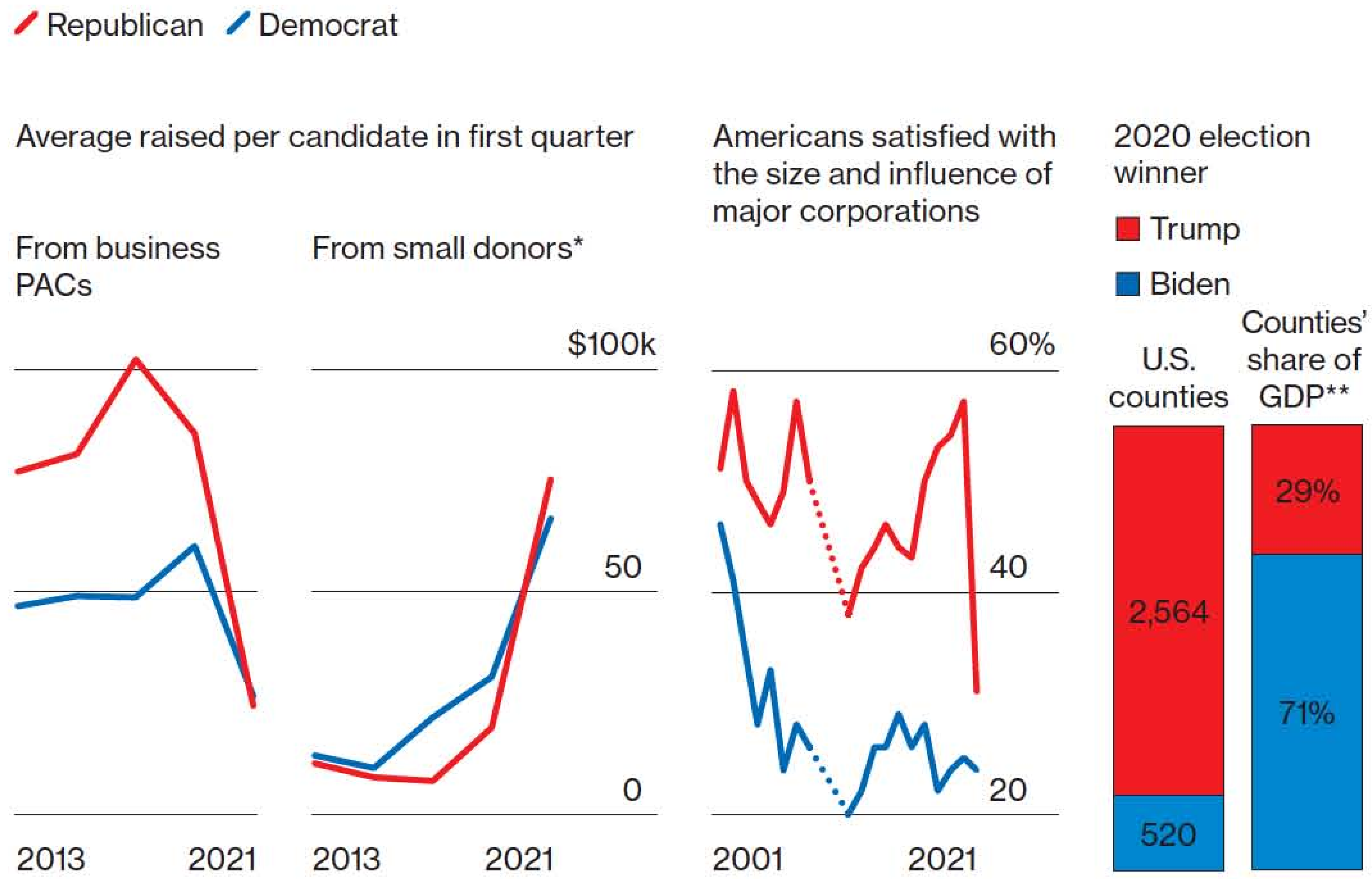
The average Republican candidate got less money from business political action committees in the first quarter of 2021 compared with the start of previous biennial election cycles but took in more money, on average, from donors giving $200 or less. (This is true of Democratic candidates as well, but not to the same extent.)

Because candidates tend to heed whoever gives them money, this means that the Republican Party is being steered more by the grassroots and less by corporations. "If big business cuts off financial support and no one notices, does it matter?" Dan Eberhart, an energy investor who donates to Republicans and conservative causes, wrote in an email.

In some respects—such as on social and climate issues—a substantial segment of big business is more aligned with the Democratic Party than the Republicans. But only up to a point. President



GOP Voters Distrust Large Corporations—and Out-Donate Them



*DONATED $200 OR LESS. **SHARE OF 2018 GDP. DATA: CENTER FOR RESPONSIVE POLITICS; GALLUP; BROOKINGS ANALYSIS

Biden has governed so far as a liberal, supporting labor unions, higher minimum wages, social spending, and higher taxes on corporations and wealthy individuals, none of which is popular in the C-suite. The Business Roundtable, which represents CEOs of some of America's biggest companies, has come out against Republican efforts to restrict voting but has also criticized the Biden administration's support for a global minimum tax on corporate income.

Republican George Walker, a second cousin of former President George W. Bush, who is CEO of investment management firm Neuberger Berman, says that "all of the energy has been hijacked by folks on the extremes of both parties." Speaking from a car on the way to his 4-year-old's birthday party, Walker says, "What's happening today? A shouting match between Ted Cruz and Brian Williams. I'm about as eager to engage in that discussion as I am to hit my hand with a hammer."

What's a political orphan to do? The U.S. Chamber of Commerce, traditionally a Republican bulwark, endorsed 23 freshman House Democrats for reelection in 2020 and got nothing but pain for its initiative. Arkansas' Cotton called the chamber "a front service for woke corporations." Meanwhile, all 14 of the Democrats it endorsed who won reelection voted in favor of the PRO Act, a measure opposed by the chamber that would make it easier for workers to form unions.

Neil Bradley, the chamber's executive vice president and chief policy officer, says it's a mistake to think that "everyone has to be sorted and you must put on either a red jersey or a blue jersey." Often, Bradley says, "our priorities are not exclusive to one party." The chamber has organized a ▶

◀ series of discussions called Common Grounds, each involving a Republican and a Democrat from Congress who hash out tough issues such as immigration and climate change.

Big business has "lost support among the GOP but is not rewarded by Democrats, at least yet," says Gallup's Saad.

For many large corporations, the breaking point with Republicans was their vote against certification of the Electoral College results. Many suspended donations to those members of Congress through their PACs or said they were reviewing their contributions, but a few have given to election objectors since, including JetBlue Airways, Toyota Motor, and Cigna.

"Control of the House is so close" that corporations may resume support for Republicans soon, because they perceive it's in their economic interest, says Paul Herrnson, a political scientist at the University of Connecticut, who's a fellow at the Center for Responsive Politics. Even if big business does seek rapprochement with the GOP, it might not get much love back. "Business has always been the scapegoat," says Daniel Lufkin, a founder of the former investment bank Donaldson, Lufkin & Jenrette. With populists in the ascendant in both parties, large corporations will struggle to regain the influence to which they're accustomed. *—Peter Coy, with Max Abelson*

THE BOTTOM LINE The rise of the small donor, cultural battles, and economic clustering have driven a wedge between old allies. But corporations aren't finding much love from Democrats, either.

Cuba Bets Big on Its Own Vaccines

● If they prove effective, locally made drugs could be an economic lifeline for the island

Cuba is taking a high-risk gamble that it can solve a worsening Covid-19 crisis on its own, with vaccines made by local labs. The communist nation is inoculating hundreds of thousands of people with the shots even as they're still being tested. Unlike almost every other nation in the Americas, Cuba hasn't reached out to the global Covax program to seek vaccines being used elsewhere.

The Cuban strategy centers on Soberana 02 and Abdala, made by the Finlay Institute of Vaccines and the Genetic Engineering and Biotechnology Center of Cuba (CIGB), respectively. Both drugs are in Phase III clinical trials, and more than 415,000 doses have been administered during the testing process, using a three-dose regimen. The government says that, based on preliminary results, it's forging ahead with inoculating frontline workers and at-risk populations.

In addition to the shots given during the trials, more than 445,000 Cubans have received at least one dose of Abdala, President Miguel Díaz-Canel said on May 18. Soberana 02 will be added to the mix soon. When the pandemic raged across the Western Hemisphere last year, Cuba was able to keep a lid on the outbreak. But now the country of 11 million is reaching records, averaging 1,255 new cases per day in late May—up from 165 a day in January.

"When you're talking about life or death, we believe that the elements of safety and efficacy are present that allow us to move forward," Health Minister José Angel Portal said on state-run television on May 7 as he announced the expanded vaccination program. "There's no time to waste."

While most countries in Latin America and the Caribbean are scrambling to acquire vaccines and only a small fraction of the region's population has been fully vaccinated, Cuba's government says it can have 70% of its population inoculated by August. "We'll likely be the first country in the world to vaccinate its entire population with its own vaccines," Portal said. Argentina, Brazil, Mexico, and Peru are also working on their own vaccines, but they're still in the early stages of development.

Cuba's decision not to negotiate with Covax

"Cuba has a track record, so it's logical that it should take this leap and try to produce its own candidates"

YAMIL LAGE/AFP/GETTY IMAGES

▲ A technician at the Finlay Institute of Vaccines in Havana

probably comes down to finances. Even though the cash-strapped island is buckling under the pandemic and grinding U.S. sanctions, it isn't considered a low- or lower-middle-income economy by the World Bank and therefore isn't eligible for free vaccines under the program. It would, however, "qualify as a self-financing participant, should they decide to participate," the organization said in a statement.

"Of course there's a risk when you're betting everything on your own vaccine candidates," says Amilcar Pérez Riverol, a former professor of molecular virology at the University of Havana and a former researcher at CIGB. "At the same time," adds Riverol, who lives in São Paulo, "Cuba has a track record, so it's logical that it should take this leap and try to produce its own candidates."

Although much of Cuba's economy suffers from a lack of investment, the government has always made its bioscience sector a priority, and the country has been making advanced vaccines for decades. It developed the world's first meningococcal B vaccine in the 1980s. A Cuban vaccine for the prevention of lung cancer, CIMAvax-EGF, is undergoing Food and Drug Administration-approved trials in the U.S. And since the Cuban Revolution more than six decades ago, the island has sent hundreds of thousands of doctors and nurses abroad as part of a diplomatic charm offensive.

Clare Wenham, an assistant professor of global health policy at the London School of Economics, says international sanctions on Cuba have forced its medical community to be creative and self-reliant. "The quality of Cuban research is excellent," she says. "And that's allowing them to develop these vaccines that we haven't seen in the rest of the region."

The homegrown vaccines could be a financial lifeline for a country whose economy contracted 11% in 2020. Already, Bolivia, Mexico, and Venezuela have expressed interest in buying or licensing Abdala and Soberana 02.

The Cuban government says it will administer the third and final doses of both formulations under the Phase III trial by the end of May. Then researchers have to wait to see how safe and effective the drugs are and send their findings to the World Health Organization—or other international regulators—for independent evaluation.

The need for locally produced vaccines is urgent, said Carissa Etienne, director of the Pan American Health Organization, at a press conference on May 19. Although Latin America and the Caribbean have become a center of the pandemic, the region produces less than 4% of the medical supplies needed to fight it, which has set off a scramble for imports.

"Expanding our regional capacity to manufacture strategic medical supplies—especially vaccines—is a must," Etienne said, "both for our people and as a matter of health security." —*Jim Wyss*

THE BOTTOM LINE Cuba's strategy centers on two homegrown drugs. Although there's risk in that approach, it's mitigated by the country's scientific expertise and history of vaccine development.

● Cubans who've received at least one dose of the Abdala vaccine candidate, not including trials

445k

THE GOSPEL OF CATHIE WOOD

By BEN STEVERMAN, CLAIRE BALLENTINE & ANNIE MASSA

A few months of poor performance haven't shaken the superstar fund manager's faith in a future where technology makes everything better and her investors get very rich

IN THE WEIRDEST YEAR OF OUR LIVES, THE RISE OF Cathie Wood is hardly the weirdest thing to happen. But still. She's the first star in an industry, the $6.3 trillion world of exchange-traded funds, that wasn't supposed to have any. She's a throwback—a money manager who's actually famous among regular investors, like Peter Lynch or Warren Buffett. And not only is she the first woman to play that role, she's taken a throne in the pantheon of meme stock demigods, up there with the Elon Musks and shiba inus.

Wood moves stocks with her trades and her tweets. On social media and in online forums around the world, her name is synonymous with a certain brand of technophilia, an enthusiasm for the next big thing, whether that's robotics or gene editing or digital currencies. Some of her bolder predictions for Bitcoin and Tesla came true, to the shock of Wall Street analysts who found them ridiculous.

The company she founded, ARK Investment Management, went from an unprofitable niche operator to a runaway success in just a few years. Her flagship ARK Innovation fund gained almost 150% in 2020, then as much as 26% more in the new year. Droves of investors, many of them young novices, bet on Wood, pouring almost $21 billion into ARK in 2020.

In the depths of the pandemic, she championed a beautiful future where technology would make everything better and more profitable. It was part of a rising subculture of belief, in both technological change and financial risk-taking, that reached a fever pitch in the dark winter of 2021. Stocks soared even as the coronavirus carnage mounted: joblessness, business closures, deaths. Retail traders with stimulus checks shocked hedge funds by bidding up GameStop Corp. and other meme stocks. Wood's swift ascent was emblematic of a struggle playing out in financial markets, where investors giddy over the promises (and entertainment value) of innovations such as cryptocurrency seemed to be winning out over skeptics. Dogecoin, created as a joke, surged 20,000%.

Sooner or later, the market was bound to turn on her. Vaccinations accelerated, and the economy reopened. Investors responded by turning from speculative high-tech stocks toward boring ones that would benefit from a broader recovery. Wood's flagship fund gave up all its 2021 gains and then some. As broad stock indexes continued to climb, she went from having one of the best performances among money managers to losing money year-to-date. She blamed fears of inflation for sending "the innovation-oriented part of the stock market"—her bread and butter—into a correction. Tesla Inc. tumbled more than 30% from its peak, the same amount Bitcoin fell in one shocking morning in mid-May.

Wood's always-online fans are sticking by her. Investors who poured a net $34 billion into ARK's eight funds in the past 12 months have withdrawn only about $1.2 billion since the end of February. They're betting that the world, emerging from Covid-19, will catch up to the future she proselytizes for. To the true believers, her sudden fame won't be an oddball footnote in market history, like GameStop, but a forerunner to decades of glorious change. Just as Mary Meeker cheered early internet ▶

◀ companies Yahoo! and Priceline.com as a Morgan Stanley analyst during the dot-com boom, Wood preaches a peculiarly American gospel of utopian change powered by capitalism.

She drives home her message with repetition. “We have a five-year investment time horizon,” she says over and over again, especially when her funds are dropping in value. Other Cathie catchphrases get emblazoned on ARK merchandise, sold to the company’s more devoted clients with all profits going to charity. A T-shirt reads “Truth Wins Out”; a baby onesie says “Invest in the Future Today.” She spreads the word in a steady stream of videos, webinars, and commentaries posted on ARK’s website, along with frequent appearances at conferences and on media including CNBC, Bloomberg TV, and a variety of investing podcasts. Despite this, ARK turned down requests for an in-depth interview for this story.

As Wood and her company’s research frequently remind investors, electrification, the telephone, and the internal combustion engine turned the world upside down a century ago. Now, she tells anyone who will listen, five technologies—artificial intelligence, blockchain, DNA sequencing, energy storage, and robotics—are bringing about an equally profound transformation of the economy. These innovations will converge, recombine into things like autonomous taxis and whatnot, and create a perfect economic storm of higher wages, falling prices, and wider profit margins. That leads to “virtuous cycles” of more investment in faster innovation.

It’s a lot. And it may be familiar to anyone who remembers that other spasm of tech-stock fever, the dot-com bubble. But Wood’s got a riff ready for that, too. “The dream was right. It was just 20 to 25 years too early,” she often says. Now, “the seeds are beginning to flourish. We are ready for prime time.”

IN SOME WAYS, WOOD IS AN UNLIKELY EVANGELIST FOR change. She’s 65 and conservative, both politically and economically. For decades she’s championed green investments, but she rarely uses the terms “climate change” or “clean energy.” After donating $1,000 to elect Donald Trump in 2016, she gave $25,000 to his presidential campaign and associated Republican political action committees in 2020, Federal Election Commission records show. Her mentor is Arthur Laffer, the 80-year-old economist who’s pushed his tax-cutting philosophy on Republican presidents since Ronald Reagan, ideas many modern economic thinkers blame for ballooning inequality.

Wood has bemoaned President Joe Biden’s plans to spend big and tax the wealthy, even though many of his proposals are designed to bring the economy closer to her futuristic vision for it, and though higher capital-gains taxes could push more money into tax-efficient funds like hers. She warns that higher taxes on companies and investors will discourage future innovation.

She surrounds herself with an unusually young and diverse team at ARK, some of whom openly disagree with her politics. Director of Research Brett Winton, whose work Wood often cites, gave $2,800 donations (the individual maximum) to Biden and other Democrats, including both of Georgia’s successful Senate candidates. About a quarter of ARK’s staff of about 35 are people of color, including the chief financial officer and chief compliance officer, who are Black men. One-third are women, and most are younger than 35. The youngest are the analysts, who produce the research that gets so much online attention for being gutsy or delusional, depending on who’s tweeting. Only a few have finance backgrounds; they’ve more likely been cancer researchers and sailboat captains. The office culture is, by all accounts, collegial, casual, and collaborative. “Cathie believes in a circle table as opposed to a rectangular table,” Kellen Carter, ARK’s chief compliance officer, told Bloomberg last year. “She wants everyone around the table offering their ideas.”

Wood can be combative, too, especially when mocking the low-effort, passive index strategies that have gained popularity at the expense of active managers like her. “Many investors appear to be afraid of companies that offer newer, faster, cheaper, and creative products and services,” says the narrator in an ARK parody of a pharmaceutical ad. “Ask your adviser today if investing in a traditional broad-based index is right for you.”

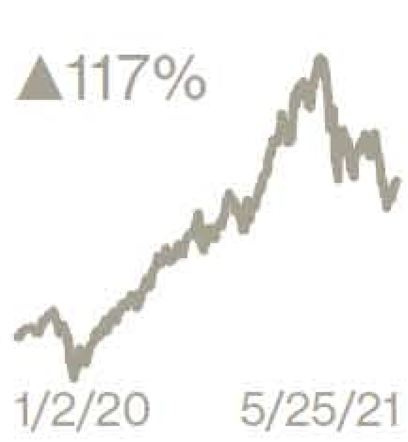
Every Friday morning, she convenes an investment ideas meeting with her analysts and outside experts that’s part business school seminar and part free-form futurist bull session. They’re “a wind tunnel for the analysts,” allowing them to test assumptions and defend themselves against critics, says David

Cathie Wood’s ETFs

ARKK

ARK Innovation

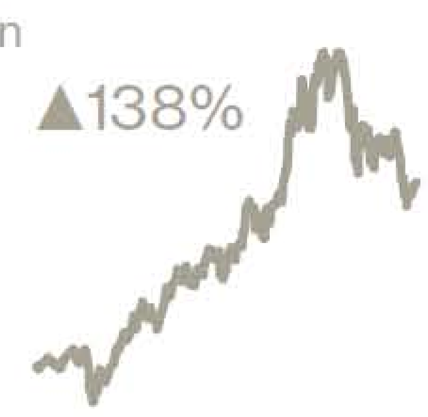
Focuses on “disruptive innovation,” businesses with technologies that could change how the world works



ARKG

Genomic Revolution

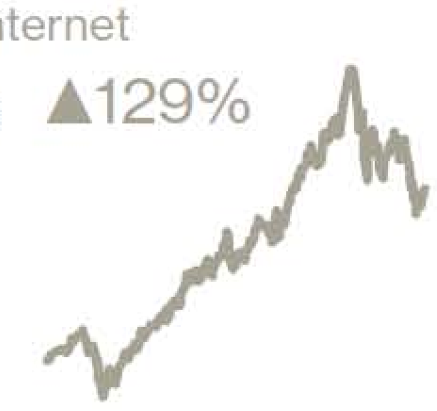
Companies involved in Crispr, gene editing, therapeutics, agricultural biology, and health-care innovation



ARKW

Next Generation Internet

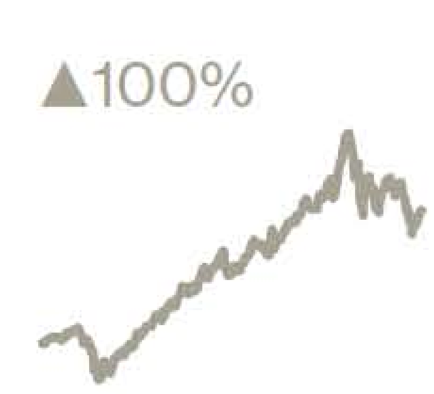
Provides exposure to artificial intelligence, Big Data, cloud computing, cybersecurity, and blockchain technology

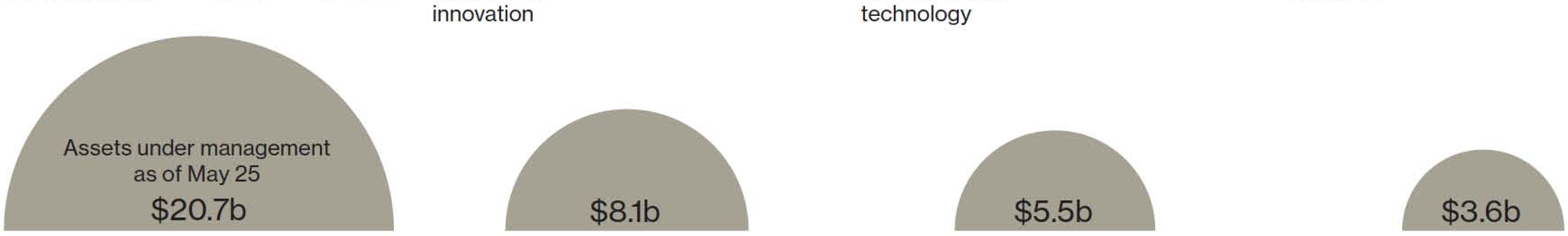


ARKF

Fintech Innovation

Focuses on mobile payments, digital wallets, blockchain technology, and other fintech advances





PREVIOUS SPREAD: REED YOUNG. DATA: COMPILED BY BLOOMBERG

Bodde, a retired engineering professor who's been attending them for years. "The lovely thing about it is you don't have to talk the party line. You can say things that are heretical." But Wood's techno-utopianism comes through loud and clear, occasionally to a degree that surprises her employees. "I thought I was a tech obsessive," said James Wang, who was until February ARK's artificial intelligence analyst, last year. "Cathie, it turns out, is even more aggressive than I am in imagining future outcomes. She sees things management itself hasn't even considered."

By her own description, Wood spent her childhood as "a very serious little girl." Her parents, Gerald and Mary Duddy, immigrated to the U.S. from Ireland. Gerald worked on military radar systems, and so Cathie, the oldest of four children, grew up on U.S. Air Force bases in England, Ireland, Alabama, upstate New York, and California. Her father's interest in technology and investing made an impression on her.

She got to know Laffer at the University of Southern California, where she majored in finance and economics and he was a professor of graduate-level classes. "You could tell there wasn't a lot that was going to get in her way," he says. Wood graduated summa cum laude in 1981, and Laffer helped her land a job at Capital Group in Los Angeles as an assistant economist. He soon introduced her to Jennison Associates—"where I effectively grew up," she has said. She joined AllianceBernstein Holding LP in 2001, where she oversaw more than $5 billion focused on innovative growth investments. Then as now, Wood's fund was volatile, causing rifts with the company's distribution teams, who at times found the performance hard to sell.

At AllianceBernstein, she first hit on the idea that would transform her career. Exchange-traded funds, or ETFs, are mutual funds that trade throughout the day like stocks. Their flexible, tax-efficient structure allows anyone to buy in, with shares that can be created depending on demand. They're typically fully transparent, eliminating any confusion around why prices are going up or down, and based on a set list of investments rather than the judgment of a human manager.

The ETF boom was just beginning when Wood suggested AllianceBernstein introduce its own, with a twist: an ETF that would be actively managed. The idea never went anywhere because, she said later, executives "weren't quite sure what it would mean for their business model." For one thing, ETFs, which usually have lower fees, could have created cheaper competition for the company's existing mutual funds. AllianceBernstein declined to comment.

By 2014, Wood had left and started her company, ARK. The name officially stands for Active Research Knowledge, though she has also said it's inspired by the Old Testament Ark of the Covenant. The early years were rough. Wood, then 58 and not well known, financed the company out of her life savings, and had a hard time finding investors willing to take a chance on an actively managed ETF. "When I first met her a couple months before she launched, I was sure she would be gone within a year or two," says Bloomberg Intelligence ETF analyst Eric Balchunas. The inherent transparency of ETFs didn't help the pitch: Wall Street traders typically guard their brilliant investment ideas like the crown jewels. With ARK, any investor can see what Wood's funds own and copy her ideas day by day.

A rare source of capital was her friend Bill Hwang, a hedge fund trader and fellow Christian who had founded his family office, Archegos Capital Management, a year before she started ARK. She and Hwang met in 2013 when both were advisers to Financial Services Ministry, a group for Christians in finance affiliated with New York's Redeemer Presbyterian Church. They swapped stock tips, and, according to Wood, he was "very intrigued" by her plans to start ARK. The ARK Innovation ETF debuted in October 2014, along with specialized funds focusing on autonomous technology and robotics, the internet, and genomics. Hwang provided seed capital for all four. His risky bets caused Archegos and his $20 billion fortune to implode in a couple days in late March 2021.

ARK eventually stopped losing money for Wood, posting strong if volatile returns from 2017 through 2019. But few investors paid much attention—until last spring.

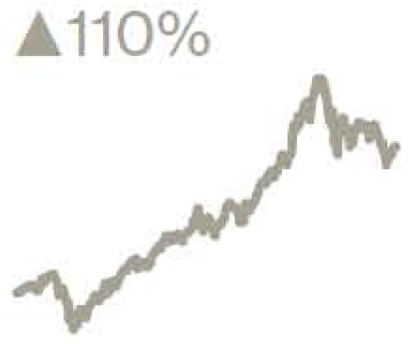
WOOD HAD BEEN PREPARING FOR SOMETHING LIKE THE pandemic for a long time. "The best thing that can happen for us—and this is going to sound odd—is a crisis," she said on a podcast in February 2019. "It's usually when innovation ▶

ARKQ

Autonomous Technology & Robotics

Includes companies involved in autonomous vehicles, energy storage, and robotics

▲110%



$2.9b

ARKX

Space Exploration & Innovation

Enterprises that help enable space exploration, as well as those that benefit from aerospace activities

▼1%

Change since 3/30/21

$619m

PRNT

3D Printing

The stocks of companies around the world that are involved in the 3D-printing industry

▲67%

$538m

IZRL

Israel Innovative Technology

Tracks Israeli companies dedicated to disruptive innovation in genomics, health care, biotechnology, the Internet, or information technology

▲36%

$310m

◀ takes root and gains traction.” Previous crises had taught her that fearful and uncertain consumers and companies are willing to try new things. She was optimistic even during the financial crisis, according to a former colleague at AllianceBernstein who spoke on the condition of anonymity. The disruptions of the 2007-09 recession ultimately boosted some of her favorite stocks then, such as Salesforce.com Inc. and Amazon.com Inc.

When Wood stopped by Bloomberg's New York headquarters on March 9, 2020, Covid cases were spreading exponentially. Stock indexes crashed 8%, the biggest one-day drop since 2008. But she was confident about what it all meant: Biotech holdings would get a lift, she said, along with Illumina Inc., a long-standing holding that makes gene-sequencing technology. Worries about international supply chains would finally popularize 3D printing, after decades of predictions that it was about to take off.

What's remarkable, looking back, is how much pre-Covid Cathie Wood sounds like herself today. She sticks to the same talking points in interviews years apart. Her vision of the future hasn't appreciably changed, even if her timeline has accelerated.

She frequently mentions Wright's law, the theory that the more of something that gets produced, the faster its cost goes down. For example, the price of screening a patient's genes for multiple cancers has fallen from $30,000 to $1,500 in five years, and should drop to $250 by 2025, ARK estimates. That would make annual genetic screenings affordable, saving 66,000 lives each year—more than “any medical intervention in history,” she says, with characteristic understatement. The same principle would slash the costs and inconveniences of transportation, as cheaper and cheaper batteries rapidly replace the internal combustion engine. ARK expects electric vehicle sales to soar from 2.2 million worldwide in 2020 to 40 million in 2025.

The pandemic turned out to be the transformative crisis Wood had been predicting—at least for her investment returns. From its March 2020 low to its February 2021 peak, the ARK Innovation fund jumped more than 350%. (Even after its recent selloff, the fund is still up about 220% from then.)

Nonetheless, she underestimated the virus itself. “I do think there is a lot of hysteria out there around the coronavirus,” she said during her Bloomberg visit in March 2020. Echoing Trump, she compared Covid to the flu.

A month later, she worried that the federal government's stimulus law, the $2.2 trillion Cares Act, was too generous and might hold back the economic recovery by giving workers incentives not to work. Ironically, those stimulus checks would get credit for luring a generation of young people into stock trading. And when they signed up for Robinhood accounts, or logged onto Reddit or Twitter, and started seeing performance charts, they quickly learned about ARK.

Wood's profile soared. Her Twitter following multiplied 28-fold since late 2019; she surpassed 900,000 followers after an interaction with Elon Musk's 56 million-follower account. From a global fan base, she acquired a range of nicknames including “Money Tree” in South Korea and “The Godmother” in Hong Kong. TikTok and Twitter are full of videos and memes celebrating her as a stockpicker and a female role model. “Wherever I go in the ETF world, Cathie comes up, Cathie is always in the conversation,” Balchunas says.

Her willingness to err on the side of being too early, rather than too late, has clearly hit a FOMO nerve. “I want to be part of the next Apple,” says Mark LeClair, a 43-year-old ARK investor who works in software support near Houston. He says he's not worried about temporary drops in her funds' share prices. “Over the next 10 years, these innovators are going to dominate these spaces, and I think Cathie is on the right track.”

The investing industry's response to ARK's success was, of course, to copy it. Giants including BlackRock, which manages $9 trillion, launched products built around themes such as robotics and self-driving cars. MSCI, one of the largest creators of the sort of indexes that Wood has spent years critiquing, collaborated with ARK on new ones inspired by her approach.

Financial advisers, tasked with steering customers to prudent investments, struggle to handle the Wood phenomenon. Earlier this year, Leon LaBrecque, chief growth officer for Sequoia Financial Group, said clients couldn't stop asking about her, even as her performance was beginning to falter. “Everybody wants to be with the rock star,” he said. He bought shares of the ARK Innovation ETF and ARK Genomic Revolution ETF for his own portfolio in 2019. After driving a Tesla and becoming fascinated by the car, he loved the idea of investing in an ARK fund and capturing some of the benefits of Tesla without shouldering 100% of the risk. In some ways, Wood reminded him of Tesla's CEO. “She's got that Musk confidence,” LaBrecque said. “You listen to her and you go, ‘Wow. Either she's right or she really thinks she's right.’ ”

But LaBrecque sold his personal ARK positions this year, saying he's uncertain whether the company can continue growing at the rate it did in 2020. He doesn't recommend ARK funds to clients, though he will buy shares if they specifically request it.

In 2020 and early 2021, Wood and her online defenders had an easy response to detractors: Look at her record. Her 2018 prediction that Tesla would hit $4,000 a share—which much of Wall Street found laughable—came true in early 2021. When Wood first bet on Bitcoin, in 2015, the cryptocurrency traded around $230. It peaked at over $63,000 in April.

Since then, Tesla has tumbled back below her 2018 target, which would now be $800 a share adjusted for a 5-for-1 stock split. As an unforgiving market has pushed ARK's flagship fund down a third from its peak, the skeptics have gotten louder. They were especially vociferous in March when ARK unveiled its new price target for Tesla, a 2025 “base case” of $3,000 a share, a fivefold increase. ARK was ridiculed for, among other things, saying Tesla could elbow into the car insurance industry, building a $23 billion business in a few years—an assertion, critics said, that showed the company just didn't understand how insurers are regulated and how much capital they require. Equally baffling to many auto experts are ARK's projections for electric vehicles, which suppose a tenfold increase in production in just a few years, and for Tesla's creation of an autonomous taxi network, based on a technology—driverless cars—that doesn't really exist yet. Wood says traditional auto analysts don't understand Tesla, which she sees as a technology company far more than a carmaker. "Tesla has pulled together the right people with the right data with the right vision," she says.

As for her crypto enthusiasms, her company projects Bitcoin will become a sizable part of mainstream portfolios, including 401(k)s and pensions. In February, Wood said Bitcoin could even replace bonds in the traditional 60/40 stock-bond portfolio—in other words, investors en masse would swap the stability of bonds for a new, untested, and highly volatile asset. That seems like a stretch, even by 2021 standards.

ARK has also made some policy changes that haven't exactly allayed concerns about Wood's appetite for risk. It used to impose a 20% limit on the amount of a company's shares any ARK ETF could own. It scrapped that cap in late March, giving her the flexibility to make even bolder, more concentrated bets in the future. In the same filing, ARK said it may buy into special purpose acquisition companies, or SPACs, the blank-check companies that have also become a stock market craze in the past year. The Securities and Exchange Commission has warned investors about buying shares of SPACs backed by celebrities, including professional athletes, and Wood has said some SPACs "are going to end badly." In March, though, the ARK Autonomous Technology & Robotics ETF (ticker ARKQ) bought shares of a SPAC backed by tennis star Serena Williams that merged with 3D-printing company Velo3D Inc. to take it public.

As her returns dip, Wood has urged everyone to keep the faith. "I know there's a lot of fear, uncertainty, and doubt evolving in the world out there," she said in a video posted on a Friday after a particularly brutal week for her funds. Look on the bright side, she told her investors. Lower stock prices now mean even bigger returns later for companies like Tesla with—another favorite phrase—"exponential growth opportunities." On Bloomberg TV, she said: "We keep our eye on the prize."

WOOD MAY SURVIVE BEING WRONG ABOUT THE LITTLE things if she's right about the big stuff. She and her clients may still make money if we really are at the beginning of a new economy that looks nothing like our pre-pandemic reality. With fears of inflation running rampant, she predicts the opposite, a sort of golden age for companies, workers, and investors. The economy can grow rapidly without triggering inflation, according to Wood, because these new technologies—batteries, DNA sequencing, robots, and others, all plunging in price—can make companies and workers so much more efficient.

An economy transforming this rapidly will have plenty of victims. An ARK "Bad Ideas" report published in October listed several: physical stores and bank branches, linear TV, freight rail and other forms of traditional transportation. Almost half of the S&P 500 is threatened, Wood has said. The hardest hit will be those who spent the past decade juicing earnings rather than investing in the future. "The other side of disruptive innovation is creative destruction."

Workers don't face the same threat, says Wood, who has predicted a coming labor shortage. Technology will create vast categories of jobs that "we cannot imagine today," she has said. Meanwhile, people will outsource tasks such as driving, grocery shopping, and food preparation to others, both robotic and human. "The more repetitive jobs are going to succumb to mechanization, and the more interesting jobs will go to human beings who will be helped by robots."

Even assuming the future she envisions does come true, she also has to be right on the timing. Epic breakthroughs can be costly and slow to deploy in the real world. "This is something that plays out over a period of decades, not months or years," says Erik Brynjolfsson, a Stanford professor specializing in technological change. For example, it took a generation after the invention of electric motors before they became incorporated in assembly lines. And with any technological change, "it's a lot easier to identify the companies that are vulnerable than the companies that are going to come out ahead," Brynjolfsson says. "The winners, a lot of them, are going to come out of left field." Meanwhile, history is full of hot investors whose luck eventually ran out.

To make money on the "five-year time horizon" that she mentions at every opportunity, Wood must somehow glean what technologies, supply chains, regulations, competitive dynamics, and the broader economy will look like years into the future. But operating in the future has its advantages. Hope springs eternal. No matter what's happening in the present—a global pandemic, for example—there's always five years from now. Listening to her, it's clear that technological change represents something more to Wood than an investment strategy. It's an open question whether making money is even her primary goal. ARK, especially given its substantial startup costs, has not made her fabulously wealthy, certainly not at the scale of billionaire hedge fund managers who are far less famous.

The dawning of a high-tech future is central to Wood's life philosophy, closely connected to her religious and political views. In starting ARK, her goal was "encouraging the new creation, God's new creation," she said on a Christian podcast last year, by investing in "transformative technologies that were going to change the world." The triumph of innovation also fits well with her free-market views. To a younger generation tempted by socialism, she's hoping to show that capitalism can still work its magic.

As stocks dropped and Bitcoin suffered a 30% crash on the morning of May 19, its worst decline in seven years, Wood said it "pains me more than anything" to think clients might be panicking and selling at the wrong time. Even when her funds were doing well, she said at a recent *Bloomberg Businessweek* event, she had tried to "stay humble," warning colleagues that a severe correction might be ahead. Now that it had arrived, "we're looking at this and saying innovation is on sale," she said. "I know it's been hard for our clients in recent months. Keep the faith." She still expected the stocks in her portfolios to more than triple in the next five years, she assured viewers. And Bitcoin, which almost fell to $30,000 that morning? She still believed her favorite cryptocurrency could someday hit $500,000. Ⓑ

hulu
HBO
ESPN
Disney+
fuboTV
prime
BINGE
Dr Pepper
Sprite
Coca-Cola
Coca-Cola zero
Barq's
Mike Ike
Good & Plenty
SOUR PATCH
POPCORN

A Viewer's Guide to the Future of Entertainment

The pandemic has changed Hollywood. Here are five shifts that will last

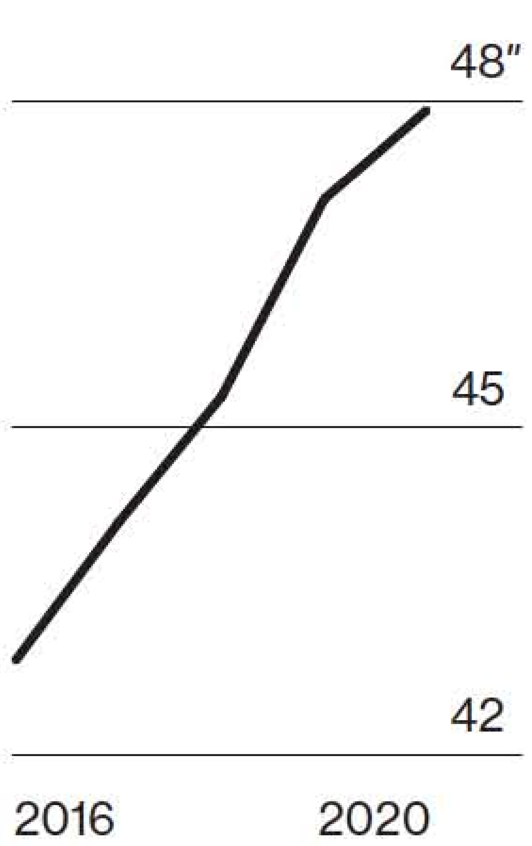
By Lucas Shaw

In the early days of the coronavirus pandemic, things seemed to be going from bad to worse for Hollywood. Studios, already suffering from declining ticket sales, now faced theater and theme park closures, release delays, and production freezes. Television networks, battered by cord cutting, saw sporting events canceled or delayed, depriving them of their most valuable programming.

But the chaos also sharpened Hollywood's attention, forcing it to focus on what consumers want. Streaming services, already a major priority, fast became the only way most people got their film and TV fixes. Netflix Inc. added 26 million customers in the first half of 2020, a record for new subscribers. And so media companies set aside legacy businesses and learned how to stream.

Warner Media LLC experimented with dropping TV episodes on its new HBO Max service all at once. Walt Disney Co. announced plans for more TV shows based on its Marvel and *Star Wars* properties, bolstering its approach of spacing out major releases to maximize Disney+ subscriptions. Universal, Warner Bros., and Disney all canceled plans to release major movies in theaters and put them online instead. News and sports divisions everywhere tailored programming to streaming audiences. And now Amazon.com Inc. is buying MGM.

Average screen size of televisions sold, U.S.



The transition hasn't been seamless. Some companies introduced services mid-pandemic, asking customers to subscribe based on films and shows that couldn't be properly marketed with billboards or as coming attractions in theaters. NBCUniversal Media LLC, which had planned to use the Summer Olympics to promote Peacock, instead had to rely on English soccer and reruns of *The Office*. Warner Media's introduction of HBO Max was hamstrung by its initial absence from the popular Roku and Fire TV streaming devices and by confusion over how it differed from HBO Now and HBO Go. And, of course, RIP Quibi.

Now, though, more than a year into a pandemic, the future of entertainment seems clearer. Pop culture has moved online—for everyone. "My 91-year-old mother is texting me now," says Tom Bernard, the co-president of Sony Pictures Classics. "A lot of the older generation—people who aren't teenagers and in their early 20s—the internet has now become the system for communication."

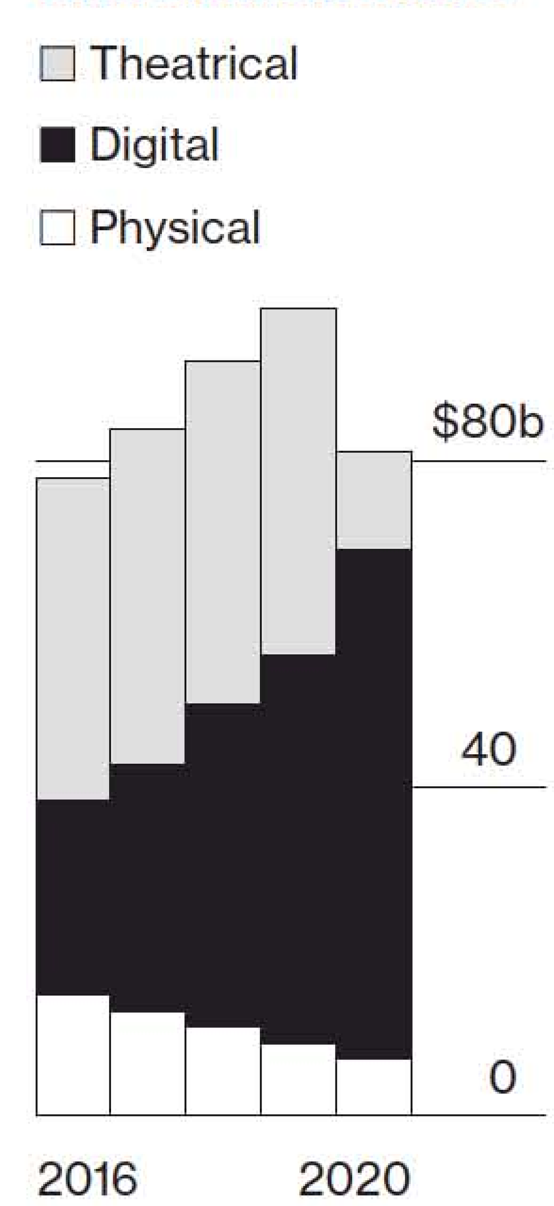
Although no one can say precisely how this will all play out once movie theaters, theme parks, and live events get back in full swing, there are some key ways the entertainment industry has evolved that will change life for you, the viewer.

1 You will now get cinema-quality new movies without entering a cinema.

When *Godzilla vs. Kong* was released this March, it signaled the return of the Hollywood blockbuster. The monster mashup has grossed more than $425 million at the worldwide box office, making it the biggest English-language movie since the pandemic began. But as it was filling theaters to their permitted capacities, *Godzilla vs. Kong* was also the most popular movie on HBO Max. Warner Media had released it in theaters and online at the same time, continuing its recent break from decades of orthodoxy.

Since the days of *Jaws* and *Star Wars*, studios have released movies more or less the same way: several months in theaters, followed by home entertainment, be it Betamax, VHS, or DVD. Universal Pictures Ltd. was the first to change things during the pandemic, releasing *Trolls World Tour* as a $19.99 rental in April 2020. Then Warner Bros. Entertainment Inc. followed suit, releasing *Scoob!* on HBO Max in May. Disney, which made $11.1 billion at the box office in 2019, released the film version of *Hamilton* directly to Disney+.

Global theatrical, mobile, and home entertainment market



None of the studios offered specifics on the returns they saw from their experimentation, but they clearly liked the results enough to continue. Universal skipped theaters and released *The King of Staten Island* as a stream over the summer, and Warner Bros. and Disney dropped *Wonder Woman 1984* and *Soul*, respectively, online and in theaters simultaneously in time for Christmas. Warner Bros. then moved to release its entire 2021 slate, including *Dune*, *Space Jam: A New Legacy*, and *Godzilla vs. Kong*, on HBO Max at the same time as in theaters.

This isn't the first time original movies have been released directly on the internet. Netflix and others have been doing ▶

ILLUSTRATION BY NATHAN LEVASSEUR. DATA: THE NPD GROUP (SCREENS); MOTION PICTURE ASSOCIATION (ENTERTAINMENT MARKET)

◀ it for years. But it's a first for the major movie studios. In the past, theater chains would have blocked such efforts, but once the pandemic began, their leverage was gone. "The movie business I grew up in is effectively over," says Alex Kurtzman, a veteran writer and producer whose writing credits include *Transformers* and *Star Trek Into Darkness*. "And I'm not sure that's a bad thing."

This doesn't mean cinemas are dead. Even with the pandemic dampening U.S. box office returns, *Tenet* brought in more than $360 million globally from its theaters-only release in August. But there will be no going back to the way things were. The influx of subscribers has further strengthened the streaming companies' hand, to the point that every major studio is producing original movies for them and shortening the planned exclusivity windows for theatrical releases. Warner Bros. announced in March that starting in 2022, movies would go to HBO Max 45 days after they leave theaters, down from 90. Universal has cut deals with theaters for a 17-day window, and Paramount Pictures Corp. has said it will go to as few as 30 days. "The experience in the pandemic for us with these films has been really good," says Andy Forssell, general manager of HBO Max. "Regardless of what happens, we'll do more and more."

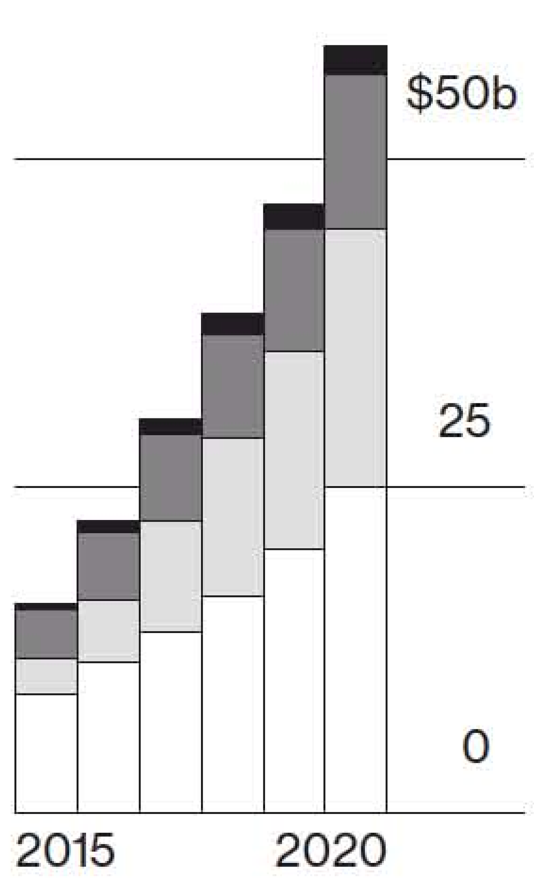
❷ The U.S. will no longer be your entire media universe.

China became the world's largest movie market for the first time last year, with $3 billion spent on tickets, almost $1 billion more than in the U.S. and Canada. And though it's easy to dismiss this change as a result of the pandemic—Chinese theaters reopened sooner than those in the West, and most planned major U.S. studio releases were delayed—analysts have been forecasting that it would happen sooner or later. The pandemic only accelerated the timeline by 5 or 10 years.

There are many reasons to believe the U.S. won't ever reclaim its primacy, starting with this one: China has built more than 20,000 screens in the past three years alone, bringing its total to 75,000, almost double the number in the U.S. and Canada. And the U.S. and Canadian figure is declining.

Global streaming video revenue

■ Latin America
■ Europe, Middle East, and Africa
□ Asia Pacific
□ North America



The globalization of the movie business is a sign of what's to come for TV as well. International markets contributed 83% of Netflix's new sign-ups in 2020 and now account for more than 60% of its user base. It will be only another year or two before African, European, and Middle Eastern customers outnumber those in the U.S. and Canada. Disney+, HBO Max, and Amazon are expanding their international streaming operations as well. India already accounts for a third of Disney+ subscribers, thanks in large part to the unique inclusion there of cricket, a national obsession. Disney is hoping to use its formula in India—a mix of sports, original series, and low prices—to expand its reach across South Asia.

As American media companies look abroad for growth, they're also bringing the stories they make there back home. Netflix is investing billions of dollars in programming in more than a dozen languages, and consumption of these shows is soaring everywhere. The French show *Lupin* and the Spanish *Casa de Papel* both rank among Netflix's 10 most popular series ever, globally, and *Lupin* was the first French show to crack the U.S. daily top 10.

"If you nail something and it's great, it doesn't matter where it came from," says Franklin Leonard, a producer and the founder of the Black List, an annual survey that ranks the most-liked unmade screenplays in Hollywood. "There is a willingness to take bigger risks on things that seem culturally specific, because you can gather all the audience that embraces it via streaming."

❸ You love sitcoms. Studios will make more.

The most precious commodity in U.S. entertainment right now is the old-fashioned situation comedy. Stuck in isolation, people have sought out comfort food. Viewers devoured *Ted Lasso*, Apple+'s comedy starring Jason Sudeikis as a U.S. football coach hired to lead a struggling English soccer team. They caught the final season of *Schitt's Creek*, a Canadian comedy about a wealthy family brought down to size. "Over the last 12 months, Americans have been looking for a solace away from the realities of the world," Nielsen Co. wrote in a March report that noted surging interest in comedy.

Top U.S. streaming content of 2020, billions of minutes streamed

□ Original streaming program

❶ *The Office*	57.1
❷ *Grey's Anatomy*	39.4
❸ *Criminal Minds*	35.4
❹ *Ozark*	30.5
❺ *NCIS*	28.1
❻ *Schitt's Creek*	23.8
❼ *Supernatural*	20.3
❽ *Lucifer*	19.0
❾ *Shameless*	18.2
❿ *The Crown*	16.3

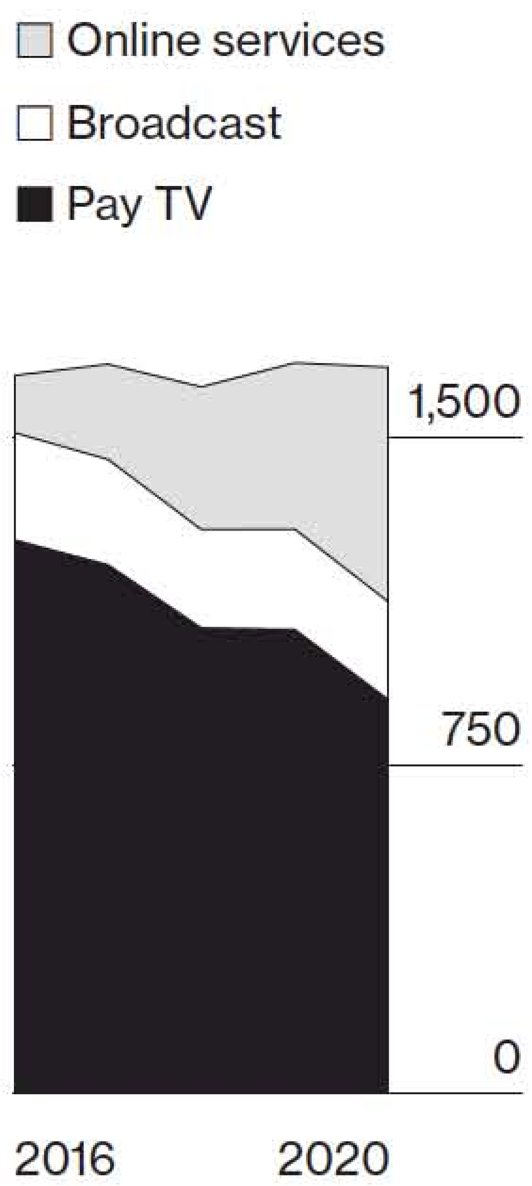
Many viewers have run out of good new stuff to watch, though. Sitcoms used to be the most popular type of program, led by NBC's powerhouse "Must See TV" Thursday night lineups. Broadcast networks still release a fair number of sitcoms each year, but streaming services and cable networks have been emphasizing prestige dramas—dark and depressing tales of murder and violence featuring controversial antiheroes. Even so-called comedies such as *Barry*, *Atlanta*, and *Fleabag* weren't necessarily laugh-out-loud funny. They could be awkward, stressful, and message-driven.

The lack of new sitcoms has pushed people deep into streaming-service libraries. Many users of HBO Max have started *Friends* at 8 p.m. and watched until they fell asleep, leaving episodes to play until morning. Viewership of other old comedies, such as *The Bernie Mac Show*, *Roseanne*, and *George Lopez*, soared. In 2020, Americans spent more than 11 billion minutes watching *Family Matters*, the 1990s sitcom about a middle-class Black family in Chicago and their ultranerdy neighbor, Steve Urkel.

DATA: PWC REPORT (PWC, OMDIA, BUNDESVERBAND AUDIOVISUELLE MEDIEN, ANCOM); 2019 IS PRELIMINARY (GLOBAL REVENUE); NIELSEN (STREAMING CONTENT); MOTION PICTURE ASSOCIATION, ENGLISH-LANGUAGE SHOWS BY U.S. PRODUCTION COMPANIES, INCLUDING CO-PRODUCTIONS (SERIES); MOTION PICTURE ASSOCIATION (ONLINE SERIES)

"Cable was this crazy machine that got built that extracted a certain number of dollars per household, and it was good for everybody for, like, 20 years"

Estimated number of total original series, U.S.



If there's one thing media companies know how to do, it's how to run with what works. Apple has ordered two more seasons of *Ted Lasso*. Reboots of *Saved by the Bell*, *Punky Brewster*, *Gossip Girl*, and more old series are being planned or released. Even with the possible end of the pandemic in sight, Netflix, Amazon, and Hulu LLC are all looking for more big, broad comedies and other escapist programming for the years ahead. Because when people return to the outside world, they'll be looking for anything but a return to darkness. "People are gravitating toward lighter content," says Mary Viola, producer of the teen romantic comedy *Tall Girl*. "The reason we're doing well at Netflix is we can deliver lighter, poppier fan fare that audiences really seem to respond to."

❹ Even sports fans won't need cable anymore.

Anyone looking to cut the cord over the past decade has run into the problem of live sports. Netflix offers the same sitcoms, dramas, and reality TV you can find up and down the cable listings, but it doesn't have the rights to the most popular sports in the U.S. The pro leagues and their media partners have worked hard to keep it that way. Media conglomerates pay huge amounts for the rights to air games, which in turn generate billions of dollars in customer fees for their TV networks; the leagues must respect those rights, and though most major sports operate their own streaming services for hardcore fans, they can be expensive and subject to local blackouts. The leagues have also been reluctant to emphasize streaming for showcase games that promise massive audiences, lest the feeds crash. "The whole business of cable was this crazy machine that got built that extracted a certain number of dollars per household, and it was good for everybody for, like, 20 years," HBO Max's Forssell says.

Until recently there was little reason to change the model. Even as ratings for most cable programs fell each year, live sports remained a big draw. But viewership has plummeted during the pandemic. The World Series was the least-watched on record. Ratings for the NBA Finals dropped 51% from the year before. The Super Bowl was the least-watched since 2007. At first networks blamed the twin disruptions of Covid-19, which had upset their schedules and forced them to modify their traditional formats, and the presidential election.

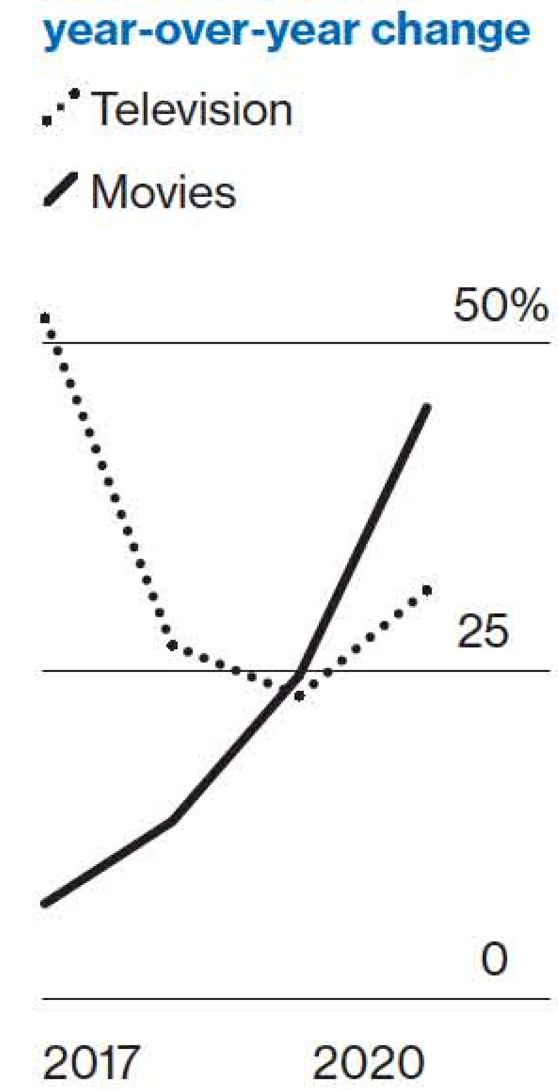
They responded, though, by doing something they've never done before: buying up lots of streaming rights for sports and putting them on their own platforms. In January, Comcast Corp. announced it would shut down NBC Sports Network and shift many of the golf tournaments and Nascar races the channel had hosted to Peacock. Then it bought exclusive rights to the WWE Network and put wrestling on Peacock, too. Disney's new rights buy for the NHL included 75 hockey games for ESPN+ and Hulu. In the biggest deals of all, Comcast, Disney, Fox Sports, and ViacomCBS Inc. secured agreements to stream NFL games on their services starting next year, in addition to airing them on cable. After years of using live sports to get people to pay for cable bundles, media companies realized they could do the same for streaming services.

By fall you'll be able to watch live football, baseball, tennis, soccer, and hockey on the internet without a cable subscription. A new basketball deal is only a year or two away. With sports in the fold, streaming will truly be the new hub of the entertainment universe. "Now that sports are moving out of the bundle and into streaming, you really have a recipe of the destruction for the legacy multichannel bundle," says Rich Greenfield, an analyst with LightShed Partners who coined the hashtag #GoodLuckBundle to denote the demise of cable.

❺ It's gonna cost you.

And now for the downside of all this. As media companies invest in their own streaming services, they're also reserving their best titles to entice you to subscribe. Want unlimited access to *Toy Story* for your kids? That'll be $8 a month for Disney+. How about WWE? Fork over $5 for Peacock. Oh, you like reruns of *Friends*? Add in $15 for HBO Max. If you stop paying for cable but sign up for all the major streaming services out there, you'll probably end up spending about the same amount.

U.S. online views and transactions, year-over-year change



The pandemic has also increased the cost of making movies and TV shows, because productions must hire health and safety personnel and film for fewer hours per day, thereby prolonging shoots. The average cost of production has grown at least 20%, most producers agree, and it may never go back down. Media companies already tried to recoup those costs by firing thousands of employees last year. Raising prices will be next. Netflix and Disney are already doing so, and it's only a matter of time before their competitors follow. Some customers will get around this by signing up for services when there's something they want to watch, then canceling when they're done, but it will be a hassle.

That hassle speaks to the growing belief among some analysts and executives that, as streaming services have proliferated, the ecosystem has grown too complicated to appeal to consumers. There are just too many different bills and support email addresses to deal with. There's no good universal guide to who's showing what. And toggling among apps can be confusing and annoying. What the industry really needs is for someone to bring the different services together and package them in one place. To create something like…the cable bundle. Ⓑ —*With Elizabeth Elkin*

The Ev
Reparations

In the first American city to offer reparations
including whether the payments should

By Susan Berfield
and Jordyn Holman

Photographs by
Lyndon French

ANSTON Experiment

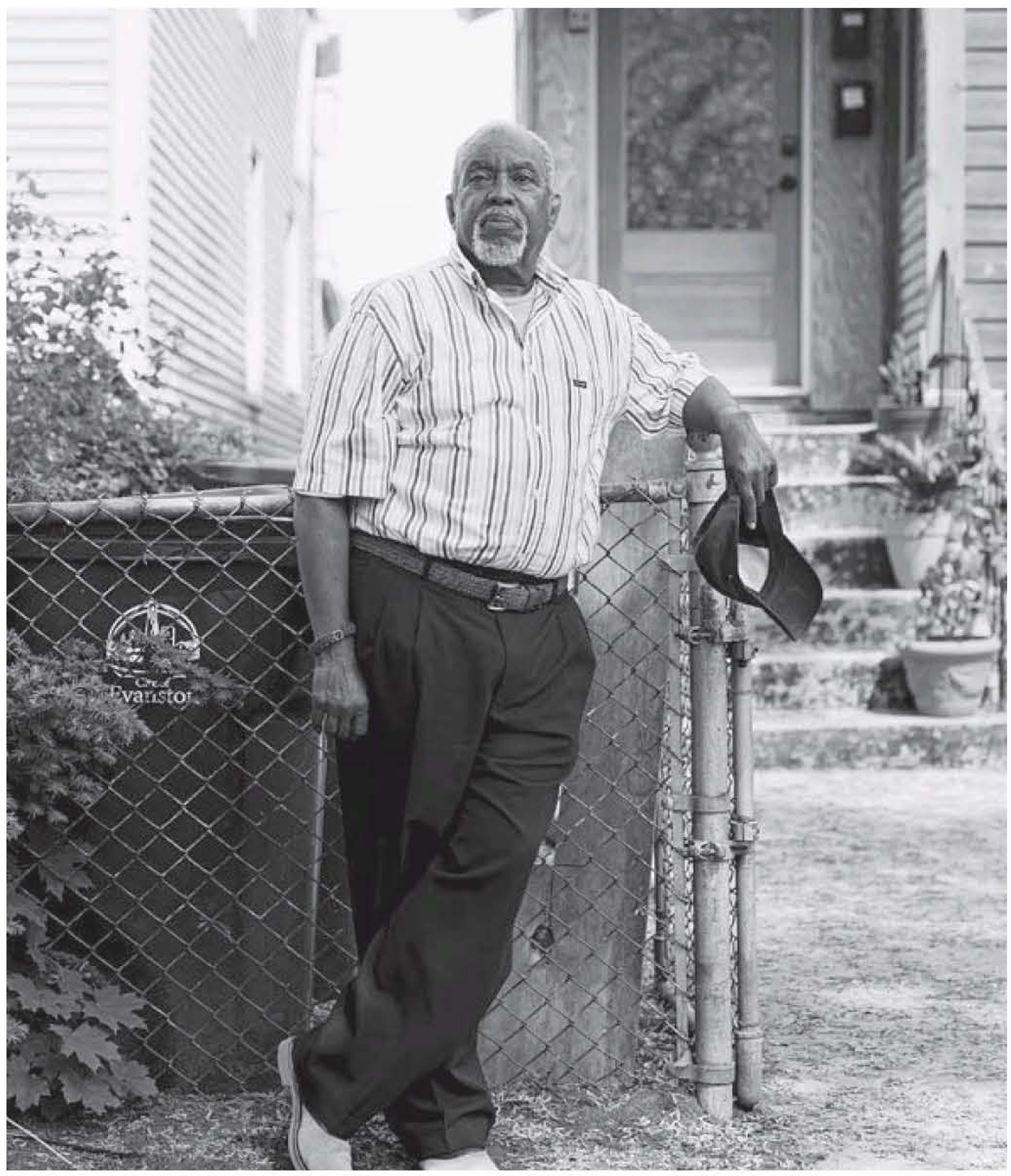
to its Black residents, a million questions remain—
even be called reparations

Some of the residents eligible for the Illinois city's reparations program. From left to right: Tosha Wilson, Colette Allen, Roger Allen, Joyce Hill, Steven Burns, Carlis Sutton, Jermey McCray, and Bennett Johnson. Allen is holding a photo of her mother, Eleanor, who was born in Evanston in 1927. The family had fled South Carolina after the lynching of Eleanor's grandfather.

Lucious Sutton disconnected the water line, the gas line, and the sewer line for the home he'd built on Bauer Place on the northwestern edge of Evanston. He and his brothers removed the appliances and the furniture. They secured the windows. Then he watched as men he didn't know—maybe they worked for the city, maybe for a property developer—jacked up the wooden house, set it onto a truck, and drove it a mile-and-a-half to the neighborhood the city had deemed more suitable for Black families. A sheriff stood by.

It was May 1929, five months before the onset of the Great Depression. Evanston, just north of Chicago on the shore of Lake Michigan, even then thought itself the ideal American town, with fine homes, a university, and a certain class. The city's population had grown by tens of thousands in a decade, so that by the time Lucious and his wife, Minerva, were removed from their property, 63,000 people lived there, almost 5,000 of them Black. Homebuilding was lucrative, and the rules of segregation—some coded, some official—were well established. A 1921 ordinance allowed the city to limit where Black residents could live by rezoning residential blocks into commercial ones; racial covenants kept them away from other neighborhoods. More rules and restrictions were to come.

Bauer Place was prime real estate. It was near a new elementary school and lush woods, and at least one developer could imagine some grand brick homes in the area. "There was only one problem," says Carlis Sutton, a grandson of Lucious and Minerva. "They were afraid that Whites would not pay that much for a house in such close proximity to Black people." Carlis says his family had a deed to the property. Nonetheless, the developer gave Lucious a choice: We can tear down your house or move it to the Fifth Ward. The six other Black families on the block—the Thompsons, Fraziers, Logans, Smiths, Hunts,



Carlis Sutton

and Collinses—had to leave too. The developer demolished the homes of those who were renting and paid the $130 permit fee to transport the others. The families had no recourse, no city agency to appeal to, no hope that the matter could be sorted out in the courts quickly or at all.

During that decade about 300 other families were also required to move their homes. The permits didn't list the owners' race, and it wasn't the reason for every relocation, says Morris Robinson, founder of the Shorefront Legacy Center, which studies the history of the local Black community. When Black homes were moved, though, it was to the Fifth Ward. Among them was the home where Carlis now lives.

The losses for the Suttons began to accumulate soon after they settled in the Fifth Ward. Their new neighborhood was bounded by a sanitary canal to the west and north, train tracks to the east. The lots were smaller than those on Bauer Place. Not all the streets were paved; not every new resident had running water at first. Newspapers called the area "undesirable."

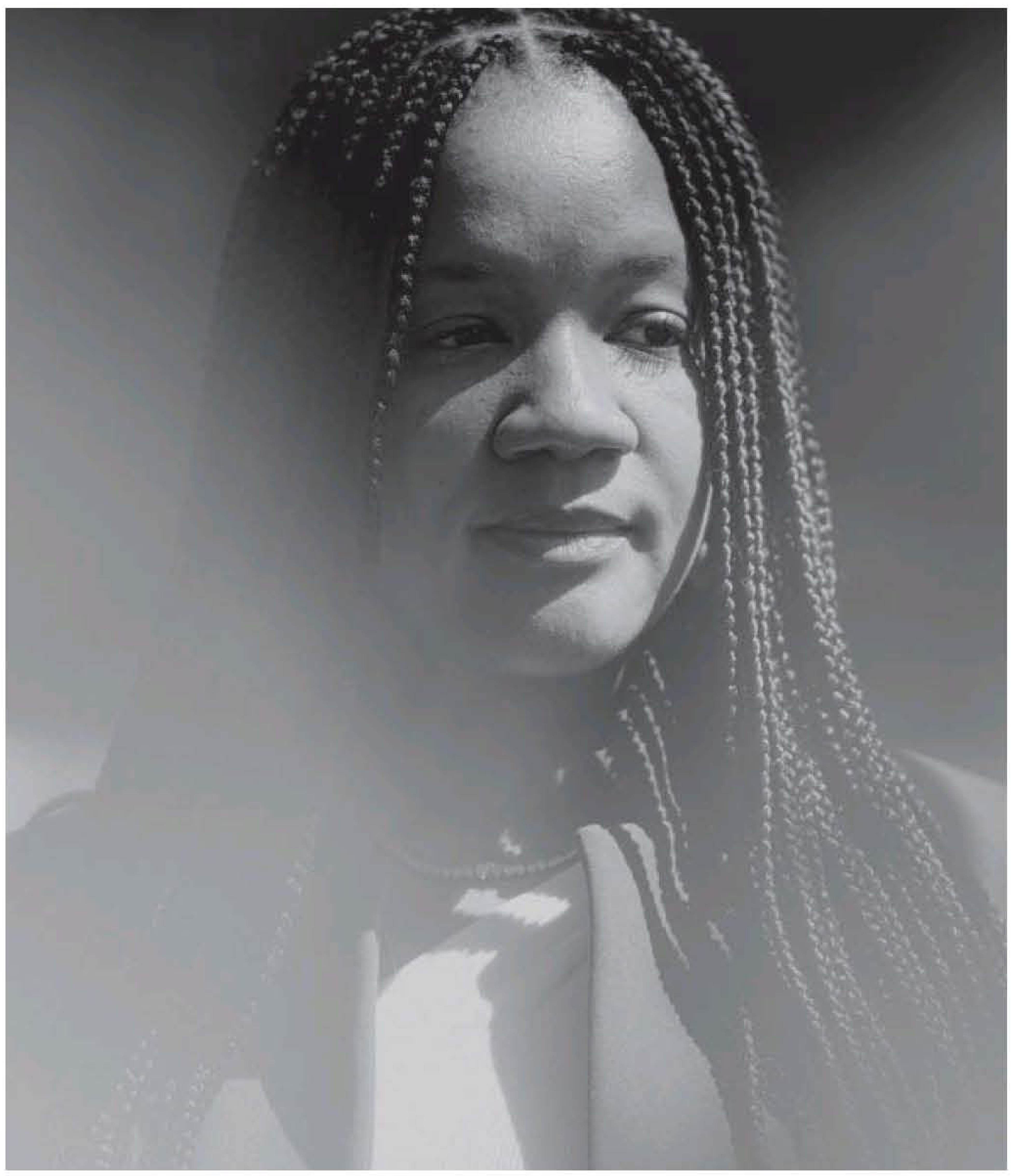
Sutton says his grandfather had come from Tennessee in his teens and by the 1920s owned a successful plastering business. He had three employees and two cars. But after the family had to relocate, he started drinking and gambling and cheating on his wife. "To be disgraced like that in front of your family was a hard thing for him," Sutton says. "It was emasculating." The Depression made everyone's life more difficult. Minerva divorced Lucious, took a job as a live-in maid for a White family in the nearby town of Wilmette and had to send her sons to stay with relatives. Sutton thinks about that loss of stability, the economic precarity that followed, the narrowing prospects for his own father, and the impossibility of a full accounting. And he thinks about 2931 Bauer. It's a parking lot for a church, has been for years. Just to the side is an elm tree his grandparents planted. "If the house still sat where my grandfather put it, it would be worth $500,000," he says. Sitting where it does in the Fifth Ward, the house sold four years ago for $152,000.

"I'd like to pursue policy actions as radical as the racial policies and actions that got us to this point"

Sutton has been calculating his family's losses in these specific, often painful ways because Evanston is the first city in the U.S. to attempt to redress such harm. It's begun a $10 million, 10-year local reparations program to pay down its debt to Black residents, starting with housing. Sutton, a retired teacher and longtime activist, is one of four residents recently appointed to the City Council's new reparations committee to help figure out the details.

Sutton's great-grandfather had been eligible for the 40 acres and the mule that the federal government promised the formerly enslaved after the Civil War. Sutton's grandfather was building his business when Callie House, a Black woman born into slavery, led the first national movement for reparations and was imprisoned for nearly a year. A century later, the pandemic has laid bare the country's inequities, and the protests after the murder of George Floyd have started a racial reckoning. In April the U.S. House of Representatives agreed to discuss the possibility of establishing a commission to study reparations, more than three decades after the proposal was first introduced. President Joe Biden called the resolution, H.R. 40, a good idea. But full reparations from the federal government—an apology for slavery and the harm done afterward, compensation in some form—probably won't be coming anytime soon.

Cities across the country and the state of California are starting to make a case for local reparations. They would have to be more limited but could come sooner. Evanston is relatively small and relatively wealthy, with some 75,000 people living in eight square miles. About 16% of the city's residents are Black, and some of the families, like the Suttons, have lived there for more than a hundred years. Evanston had set up an Equity and Empowerment Commission in 2018 and apologized for its history of discrimination. It's not a surprise that it was the first to agree to pay reparations.



Robin Rue Simmons

But Evanston's ambitions have collided with the program's particulars, especially since the City Council voted in late March to begin paying out the first $400,000 to a select few applicants in the coming months. Some Black residents wonder about the ways and the means. They worry about institutions that might benefit and people who won't. They think the program is too modest. These reactions are probably inevitable. Restitution is complex and emotional, and at the local level it will never be enough. Sutton says he knows people have complaints and concerns and ideas of how to do better. He does too. He also says he's encouraging residents to apply anyway.

Robin Rue Simmons was born and raised in Evanston. She's 45, fourth-generation, and has been a real estate broker, bookstore owner, and nonprofit executive. She started a construction company. Now she owns and manages affordable housing and commercial property in her hometown. In February 2019 she was representing the Fifth Ward on the City Council—one of nine aldermen, as they're called—when she sent an email to the Equity and Empowerment Commission. The subject was reparations, but the subject line was "Black Equality Policy." She wasn't sure how receptive everyone would be otherwise. She began the message: "Because 'reparations' makes people uncomfortable."

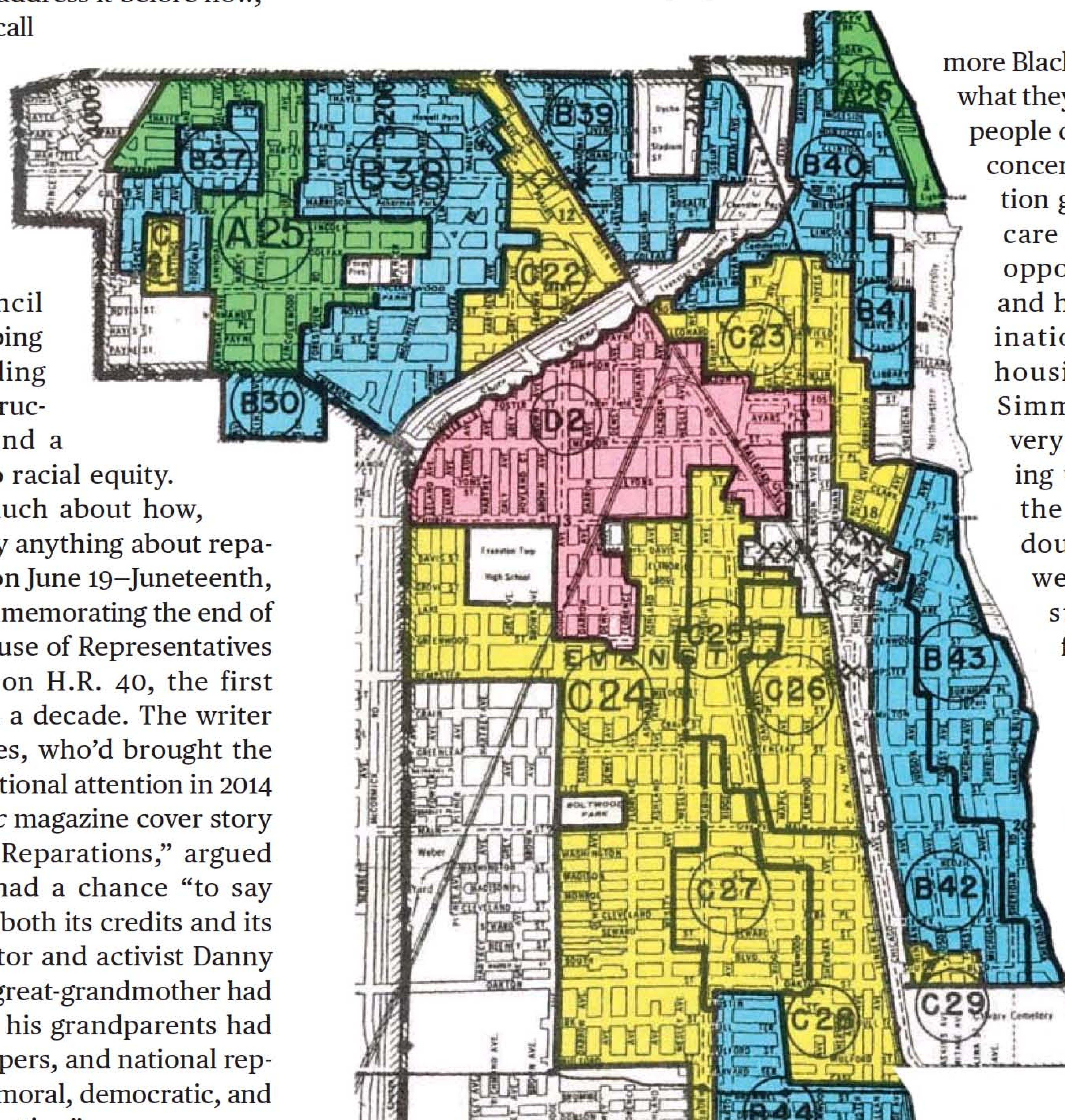
She thanked the members—a mix of city officials and community advocates—for their work and said it was time to do more. "I'd like to pursue policy actions as radical as the racial policies and actions that got us to this point," she wrote. Later, she pointed out that there was a $46,000 difference in median household income between Black and White Evanston. A 13-year difference in life expectancy. An achievement gap between Black and White high school students that couldn't be explained by income differences alone. ▶

◀ She was right about the sensitivity around a certain word, at least initially. “A few people said, ‘Call it anything but reparations, and you have my full support,’ ” she says. But she wanted to have those uncomfortable conversations. “Let’s not call it anything else to make you feel better about your role in it or our inability to address it before now,” she says. “Let’s call it what it is.” That spring the commission put reparations on the agenda.

That June, the City Council passed a sweeping resolution calling for the end of structural racism and a commitment to racial equity. It didn’t say much about how, and it didn’t say anything about reparations. Then, on June 19—Juneteenth, the holiday commemorating the end of slavery—the House of Representatives held hearings on H.R. 40, the first such session in a decade. The writer Ta-Nehisi Coates, who’d brought the issue back to national attention in 2014 with his *Atlantic* magazine cover story “The Case for Reparations,” argued that America had a chance “to say that a nation is both its credits and its debits.” The actor and activist Danny Glover said his great-grandmother had been enslaved, his grandparents had been sharecroppers, and national reparations was “a moral, democratic, and economic imperative.”

William Darity, a professor of public policy at Duke University who studies the economics of reparations, told the *New York Times* he’d never been more optimistic about the prospect of comprehensive reparations. Darity and others argue that reparations should, at the least, close the racial wealth gap, which has persisted for generations so that now White families typically are seven times wealthier than Black families. Reparations on that scale, hundreds of thousands of dollars for each eligible African American, would cost trillions of dollars for all. That can come only from the federal government.

A Homeowners Loan Corp. map of Evanston from 1940, prepared for mortgage lenders. The Sutton family home was in the green-shaded area in the northwest. Green means an A grade—the safest place to lend. The Sutton house was moved in 1929 to the area shaded red, which was graded D. Getting fair mortgages there was difficult.



MAPPING INEQUALITY: REDLINING IN NEW DEAL AMERICA PROJECT

Rue Simmons was thinking about what reparations could look like for a city. She saw the big promise of national reparations and the smaller possibilities of local redress, but she didn’t imagine a conflict between the two.

Evanston’s Equity and Empowerment Commission hosted two community meetings that July, hoping to hear from more Black residents about what they wanted. Lots of people came with lots of concerns about education gaps and health-care inequities and opportunity divides and housing discrimination. Especially housing, says Rue Simmons: “It was very clear that housing was the area of the most tremendous damage, that wealth had been stripped away from us by the city’s practices and policies.”

In the 1920s and 1930s, more than 1,400 homes were built in the part of town where the Suttons and other Black families had lived, and according to historian Andrew Wiese, none were sold to Black families. Real estate agents steered them away, and no banks would give them a mortgage anyway. By 1940, 84% of Evanston’s Black residents lived in the Fifth Ward, and the White residents, many immigrants, had mostly moved out. That year the Home Owners Loan Corp., a federal agency, created hundreds of city maps showing the risk to lenders of approving mortgages in different neighborhoods. On the agency’s map of Evanston, the community that included what was once Bauer Place was deemed homogeneous and desirable. It received an A, and on the map it was shaded green. The Fifth Ward was determined to have detrimental influences and an undesirable population. It got a grade of D and was shaded red. That made mortgages hard to come by. When Carlis Sutton's grandmother wanted to buy a home for them all in the Fifth Ward in 1950, she had to ask her White employer to talk to the bank. (After they moved in, Carlis climbed to the roof and yelled, "My house! My house!")

If someone couldn't get a mortgage, they might end up with a contract loan. They'd have to put down a lot of money for a house, then make monthly installments at high interest rates. They didn't get the title until the house was completely paid for. They never got equity, and they could be evicted any time they missed a payment.

Rose Cannon's family was ensnared in this system. Her mother was a maid and a cook; her father worked for the gas company. They moved into a big home just beyond the southern edge of the Fifth Ward in the early 1960s. When her mother began having health problems and couldn't work as much, they had trouble making their payments. They weren't evicted, not exactly, but they had to move to a smaller home in the Fifth Ward. Cannon says the lender transferred the contract. The monthly payments were smaller and manageable, but her parents were embarrassed. "It's hard for me to talk about it, because I was kind of ashamed that my parents never had any power in any of the houses that they owned," she says. "My mom was ashamed of it too." In the late 1970s, when Cannon worked for the federal government and her husband was a teacher, they managed to turn her parents' contract loan into a mortgage. It wasn't easy, she says. "It's like we were in slavery and the master decided to release us."

Stories like these, plus research commissioned by the city detailing its role in housing discrimination, helped clarify matters. Evanston would offer reparations for these injustices first. They were egregious, their damage was lasting, and the city was responsible. Now the city needed the money to pay for it. This is where the broad conversation about reparations comes up hard against reality. In this respect, Evanston got a little lucky. Or so it seemed.

Illinois was about to legalize recreational marijuana. Cities would be able to collect a local sales tax—new revenue, so far unclaimed in Evanston. Black people had been disproportionately hurt by prohibition; in Evanston, 71% of those arrested for selling weed were Black. Legalization was supposed to provide some measure of social justice. It made sense to the City Council to fund reparations with the tax money. The council estimated that the 3% sales tax would bring in about $1 million a year. They'd set aside the first $10 million for reparations.

> "We want cash payments. I want reparations like any Black person"

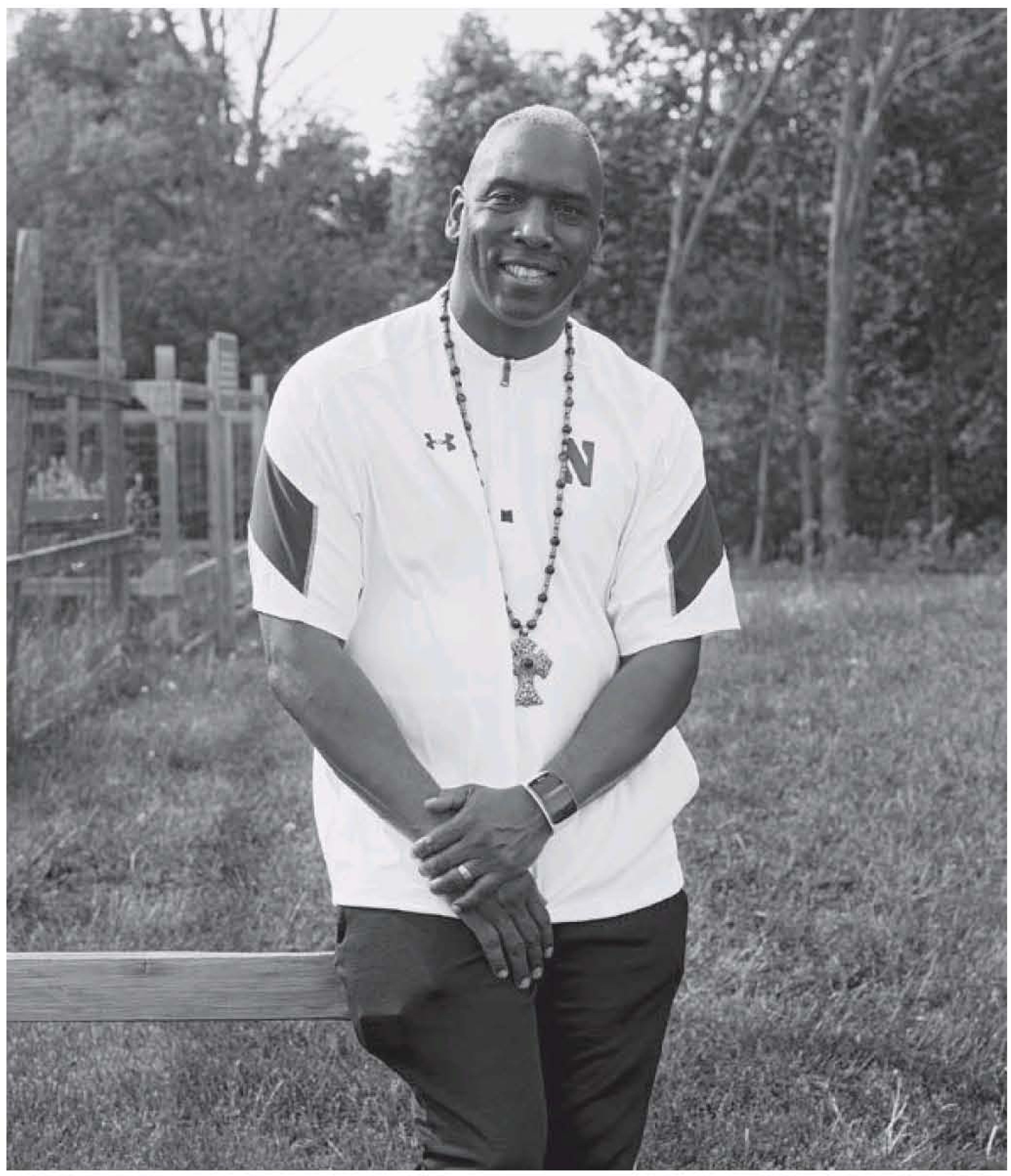
Resolution 126-R-19 to create a reparations fund went before the council on Nov. 25, 2019. Who would be eligible? How would the money be distributed? What other debts did Evanston owe? The resolution didn't say. The details would be worked out later. (The loose terms bothered one of the six White aldermen, Thomas Suffredin, and he was the only representative to vote no.) The moment was symbolic and historic, but in the drab council chambers, the reaction was subdued. The mayor at the time, Steve Hagerty, congratulated everyone, and then they carried on. "I remember just wanting to jump and scream and celebrate, and it was business as usual," Rue Simmons says. About two weeks later, she did get to celebrate when Danny Glover and other reparations advocates came to Evanston for a town hall meeting. One of them, Ron Daniels, says: "It was one of the most powerful experiences I can remember in my lifetime." Then it was back to work on all those details.

When Evanston's only dispensary, Zen Leaf, began selling recreational pot at the start of 2020, there was a line down the street. During the pandemic, the state deemed dispensaries essential businesses, but the city wasn't allowed to collect taxes until July. Rue Simmons and the two colleagues working with her on the reparations program decided to recommend starting with the $400,000 the council expected to have by year's end. The idea had momentum, and they didn't want to slow it. There were also local elections coming in the spring.

They settled on grants to help qualified Black residents buy homes, fix them up, or stay in them. Then they had to determine who was qualified. The priority is any Black resident of Evanston from 1919 to 1969, the year after the federal government passed the Fair Housing Act, then any of their direct descendants. And then anyone who moved to the city after that and can show that they've faced discrimination.

And the big question: How much? They decided on grants of $25,000—not a lot of money in Evanston, where the average home sells for many multiples of that. The $400,000 covers just 16 people to start with. That's a tough number, another reality check. There are other restrictions: The residents won't get the cash directly. The city says that would likely require them to pay state and federal taxes on it. Instead, the money will go to the financial institution providing a new mortgage or holding an existing one or to the closing agent handling a down payment. It could go to a contractor making repairs on the recipient's home or to Cook County to pay property taxes. Rue Simmons says she and her colleagues want residents to be able to work with local Black-owned businesses and banks that have a history of fair lending. ▶

◀ The council planned another crucial vote for late March, on whether to begin distributing that first $400,000 for what's now called the Evanston Local Reparations Restorative Housing Program. Just a few weeks before, a group had emerged on Facebook called Evanston Rejects Racist Reparations. Until then, there had been some questions and concerns about the program, but no organized opposition. The founders are Black residents of Evanston. Cannon is one of them. The group wanted the council to delay the start of the program until after the election. They said the program was too small. It shouldn't require recipients to work with banks and other financial institutions that have discriminated against Black residents. It shouldn't even be called reparations.


Kevin Brown

At the March 22 City Council meeting, held virtually, so many people had something to say that the mayor limited them to a minute each. The first speakers were the Duke professor Darity and Kirsten Mullen, co-authors of the 2020 book *From Here to Equality: Reparations for Black Americans in the Twenty-First Century*. Darity said the program would do little about the equity gap in housing. Mullen challenged the premise. "There are some admirable efforts by municipalities to atone for their own race-based policies," Mullen said. "However, it is unfortunate when those acts of atonement are confused with reparations."

Cannon said that because she now rents an apartment and at age 73 doesn't want to take on a mortgage, she wouldn't benefit, even though she'd qualify. "We want cash payments," she said. "I want reparations like any Black person." Kevin Brown, another founder of the Facebook group, said: "The city of Evanston should not willingly mislead our country.... We support the housing program, but we don't support calling it reparations."

Many others were eager for the program to begin. Kamm Howard, a reparations activist who'd been advising the city, compared the 16 Evanston families that would receive the grants to the nine students in Little Rock who integrated the schools there: "This can open the door for others." Lots of residents said they were proud of their city, that the program was a good start, and a long time coming. Carlis Sutton was among them.

Cicely Fleming, one of the council's three Black members, had already announced her decision to vote against the resolution. She supported the housing program but opposed calling it reparations. "I think reparations is somewhat of a sacred term," she says. To her it means the big promise—the trillions, not these millions. "We take these crumbs and hope that we're going to get more crumbs later, instead of just saying, 'You know what? We deserve a whole piece of cake.' "

The measure to begin the program passed, with Suffredin in favor and only Fleming against it. The vote was one of Rue Simmons's last; she'd decided not to seek reelection so she could work as a full-time advocate for local reparations and H.R. 40.

A month afterward, enthusiasm for the program had grown, and some critiques had sharpened. New groups were forming. The council had established its reparations committee, comprising four community members, Rue Simmons and Sutton among them, and three Black aldermen. It will administer the program. An independent community group, the Reparations Stakeholder Authority of Evanston, was coming together. Evanston's Black residents were talking, planning, watching.

On a windy day in April, at the Dollop Coffee and Hoosier Mama Pie Company on the southern edge of Evanston, Brown describes how he arrived in the city in the 1980s to attend Northwestern University on a football scholarship, married a woman whose family had lived in the city for four generations, stayed, left, worked as a school administrator and policy consultant, and returned. In 2019 he was very publicly fired as Evanston's community services manager over what he says was a misunderstanding. He also says he left in good standing with the Black community he served.

Brown says it wasn't until earlier this year that some people realized the city was going ahead with reparations. There had been regular public meetings, opportunities to comment, but they'd almost all occurred while the city was locked down, people were struggling, and no one was socializing much.

Then there's the $10 million. It had seemed a smart idea to use the marijuana sales tax to pay for reparations. It's such a convenient, tidy model that other communities might copy it. That's the problem, Brown says. "I kind of call it reparations on the cheap. There's no pain involved. I think it would be a different dynamic if reparations became an element of the city budget—of the core city budget—and the city government was saying, 'We're going to allocate a hundred million dollars over this period of time to fund the reparations budget.' " The city's annual budget, for reference, is about $300 million. "This is just not costing anyone anything. So they're OK."

Rose Cannon

Percy Berger, 72, a former banker and private equity investor and the owner of a home in Evanston's Lake Shore Historical District, calls the $10 million inconsequential, arbitrary. A national reparations program would have to calculate African Americans' economic losses: The lost wages from almost a century of forced labor after America's independence; or the loss of land, the 40 acres and the mule promised to those formerly enslaved after emancipation. Plus interest. But how, Berger wants to know, were the losses calculated in Evanston? "No one looked at it systematically," he says. "And if they did and came up with that number it would be even more insulting."

Outside the Fleetwood-Jourdain Community Center in the Fifth Ward, Herb Stevens says the housing grants are too restrictive. At the Church Street Barber Shop, Vicky Gaines says she'd prefer cash. Bennett Johnson, a 92-year-old local civil rights activist, would like the city to invest the $10 million and use the proceeds to set up community trust funds. Cannon, from Evanston Rejects Racist Reparations, would like an outside group, with no ties to Evanston, to administer the program; she says there's too much mistrust of local leaders. Darity, the professor and author, continues to argue in op-eds and on Twitter that any local effort detracts and distracts from the struggle for full reparations.

This is an argument about what's possible and what's necessary and how far America will go. It's happening in Evanston, and it will happen elsewhere. "Black folk have to raise their voices and say what reparations are," Rue Simmons says. Some of the pushback she expected; some of it, she says, is personal and political. There will be plenty more discussion in Evanston about the remaining $9.6 million. The council's resolution states it should be spent not only on housing but also on economic development and educational initiatives. Everyone hopes the $10 million is just a start and that 10 years won't be the end.

That's where the Reparations Stakeholder Authority comes in. Two of Rue Simmons's informal advisers are helping set it up: Morris Robinson, whose Shorefront Legacy Center provided much of the documentation of Evanston's housing discrimination; and Michael Nabors, the pastor at Evanston's Second Baptist Church and president of the local NAACP chapter. The group will raise money for reparations programs beyond the City Council's scope and operate independently of it.

This summer, Black residents of Evanston will be able to apply for the $25,000 housing grants. The recipients will be picked randomly from among the eligible groups. Sutton says he's decided to apply. He also hopes he can keep his position on the committee determining for the first time what local reparations will look like. If he's one of the 16 chosen, he'd use the money to jack up his hundred-year-old house and replace the foundation. B

For more on Evanston's experiment with reparations, listen to Bloomberg's podcast The Pay Check.


Climate change is at the center of every-thing.
Bloomberg Green is at the center of solving it.
Bloomberg Green
Solutions for a changing climate.
Founding Partner
JLL
Premier Partners
gm
standard chartered
Scan the code or visit bloomberg.com/green to learn more.

A free diver swims through a kelp forest off the coast of South Africa

Adventure Time!

THE NEXT SEVEN WONDERS OF THE WORLD

If you're Indiana Jonesin' to explore the world again, look no further than these crowd-free destinations, each as awe-inspiring as the Pyramids of Giza or Machu Picchu. *By Brandon Presser*

May 31, 2021

Edited by
Nikki Ekstein

Businessweek.com

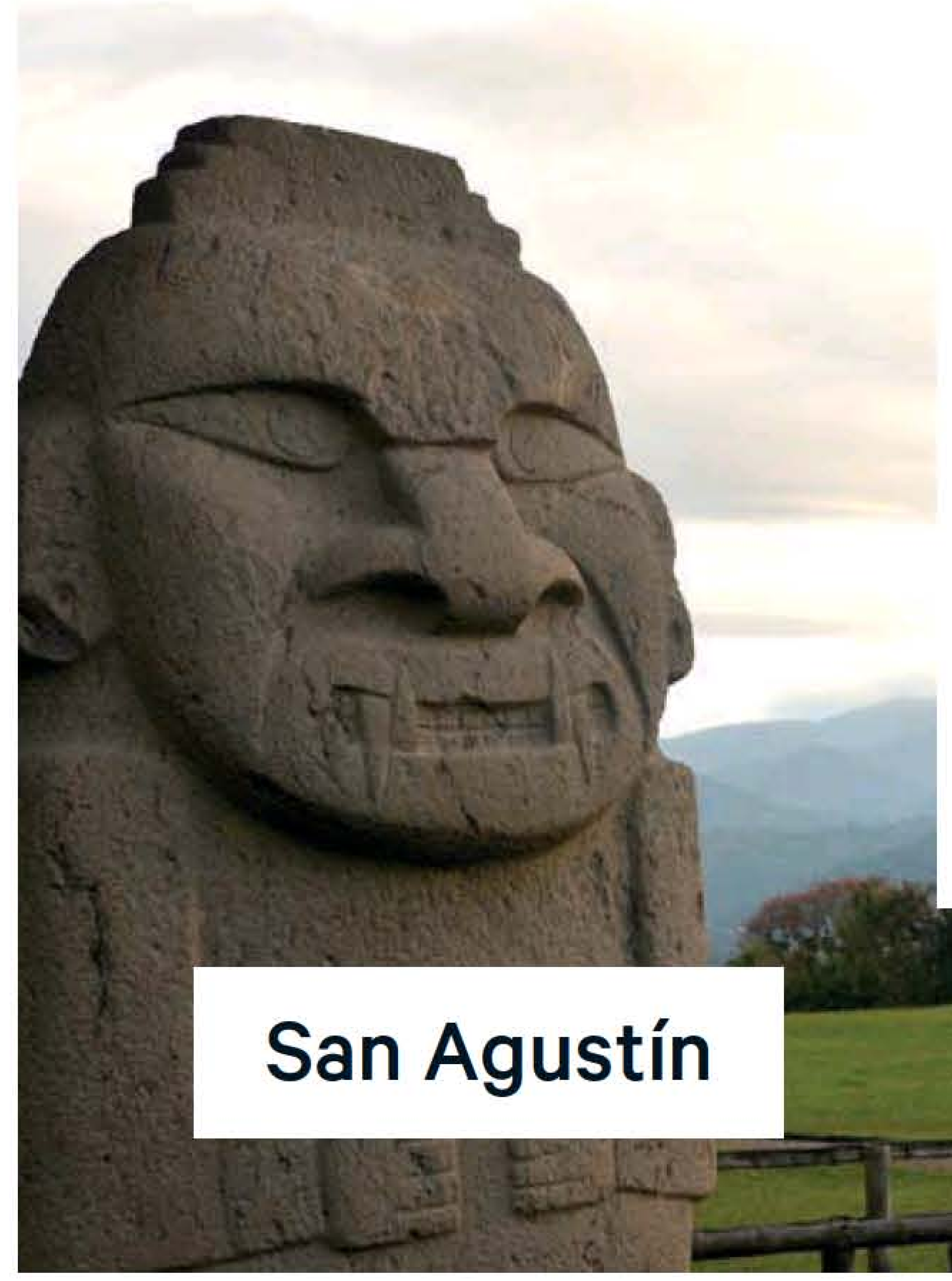
The Seven Wonders of the World were the original bucket list—the places every Socratic disciple wanted to visit. As we prepare for a post-pandemic reality, those with a thirst for adventure should go by a new list. These marvels include archaeological and natural treasures spanning far wider than the ancient Greek world and catering to all types of modern explorers.

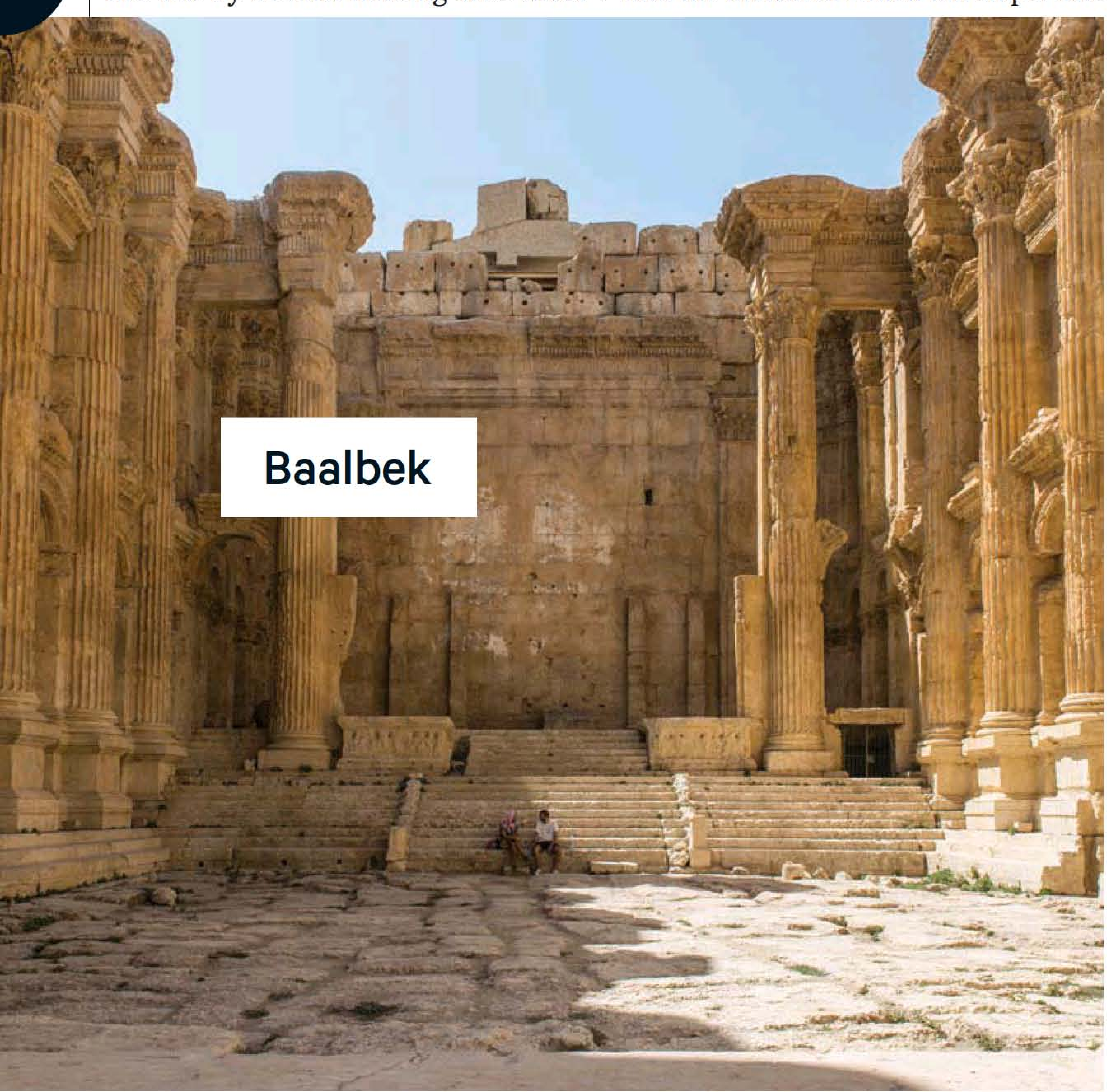
KELP FORESTS, SOUTH AFRICA

Recognized as the prominent backdrop of the Academy Award-winning documentary *My Octopus Teacher*, the kelp forests 10 miles south of Cape Town form a shallow underwater jungle more than twice as wide as the Grand Canyon—and a home to millions of creatures. The mammoth vines thrive where Atlantic tides give way to cold Antarctic currents; a phenomenon called upwelling, where two ocean layers slosh together, is key to their growth. Multiday group trips are led by record-holding free diver Hanli Prinsloo, co-founder of the local outfitter I Am Water Ocean Travel. On tank-free descents, she'll point out kaleidoscopic critters such as spiky-finned rockfish and pearl-colored hottentots. Over sundowners at a private villa near penguin-filled Boulders Beach, Prinsloo will explain how, via photosynthesis, the seaweed captures gases from the atmosphere, making it a powerful agent against climate change.

TOP END ROCK ART, AUSTRALIA

The Aboriginal communities of Australia go back millennia. For proof, look no further than the continent's so-called Top End, the northernmost tip of the Northern Territory, where a swath of sparsely populated orange-hued land roughly the size of Portugal contains a constellation of elaborate rock paintings, some more than 60,000 years old. Sites around Kakadu National Park and the sacred Mount Borradaile detail in bright ochers and reds prehistoric sea creatures, ferociously fanged snakes, and the arrival of Dutch tall ships. The most dazzling tableaux are best accessed using off-road vehicles and are accompanied by an Aboriginal elder. That can be arranged on five-night trips from Darwin by Venture North Safaris, whose guides, including descendants of the original artists, set up glamping sites along the way.





ANTEQUERA DOLMENS, SPAIN

Like a Spanish Stonehenge, the three megalithic mounds around the Andalusian city of Antequera—70 miles from Córdoba—offer an enigmatic window into a society of farmers that thrived in the Guadalhorce Valley during the Neolithic era and Copper Age. The formations, believed to be burial chambers, resemble giant caves with stone pillars and flat roofs. Each boulder weighs as much as 180 tons, dwarfing Stonehenge's 40-ton slabs. Travelers with Made for Spain & Portugal can couple their visit to the tombs with tapas tasting at the sustainable Santo Domingo gastronomy academy in nearby Archidona. Stay at La Bobadilla, a Royal Hideaway Hotel; its 63 rooms have Mudejar windows with views onto surrounding olive groves.

BAALBEK, LEBANON

If it weren't for years of civil strife in their home country, the ancient Roman ruins of Baalbek would form

PREVIOUS PAGE: PHOTOGRAPH BY PETER MARSHALL. THIS SPREAD, BAALBEK: DAI, OA, I. WAGNER. COLOMBIA: COURTESY PROCOLOMBIA. SRI LANKA: JAY TINDALL/REMOTE LANDS INC. CANADA: COLIN FIELD

a holy travel trinity with the Parthenon and Colosseum. The 2,000-year-old, 65-foot-tall ruins—situated 50 miles east of Beirut—mark the far eastern expanses of the empire. Originally created to honor Jupiter and Bacchus, Baalbek is the largest temple compound of its kind, making it more like a city complex than a single site. Red Savannah leads private tours, often starting and ending at the Hotel Palmyra, which has hosted the Shah of Iran and Nina Simone, as well as other cultural royalty since opening its doors in 1874.

NAHANNI, CANADA

More than 850 miles north of Vancouver as the crow flies, the Maryland-size realm of Nahanni National Park Reserve is home to some of North America's most incredible geological formations. Here, the great spirit water of Nailicho (Virginia Falls) tumbles down vertiginous rocks for more than 300 feet. It's twice the height of Niagara Falls—but receives fewer than 1,500 visitors each year, compared with Niagara's 9.5 million. Paddling remains the best way to see the park's glacier-carved canyons, towering granite spires, and isolated lakes, all of it in the sacred homeland of the Dene people. Go with Canadian River Expeditions, which organizes safari-style canoe trips; for a week, travelers gain the exclusive company of a geologist and First Nations guide and are followed by a "camp boat" that sets up tents with private chefs and hot showers.

SAN AGUSTIN, COLOMBIA

The moai of Easter Island are the closest comparison to the roughly 500 megalithic statues that stand guard around the mountain hamlet of San Agustín. Erected about 2,000 years ago and abandoned in the 1300s, the figures are believed to be burial markings. Latin America outfitter Miraviva recommends spending two days here to best appreciate the expressive carvings, a trip that requires a 400-mile drive from Bogotá. Stay at Monasterio San Agustín, a coffee farm turned boutique hotel, and pair the experience with a visit to Salto de Bordones, which at 1,312 feet is second only to Iguazú as the continent's highest waterfall.

SIGIRIYA, SRI LANKA

An ancient palace hewed into an ethereal rock mound at the behest of King Kashyapa in the fifth century A.D., Sigiriya is the perfect amalgam of human-made treasure and natural wonder. Nicknamed Lion Rock—a reference to the paws sculpted into the base of the 660-foot-tall stone—it includes elaborate cisterns and gardens, frescoed caves, and a winding stairway to the crowning citadel. Currently it's doable as a daytrip from Colombo, 100 miles southwest. Asia specialist Remote Lands offers a tour that begins with flashlights before dawn, so you can climb the roughly 1,200 steps to catch the sunrise at the top. But the opening of Resplendent Dambulla—whose luxe "tree pod" suites, connected by canopy walkways, are under construction—will cement the area's status as a destination unto itself. Ⓑ

The New Home on the Range

A quest to rescue America's dude ranches, one city slicker at a time. *By Jen Murphy*

On horseback at Zapata Ranch in Colorado

COURTESY RANCHLANDS

Cinco, my gray-and-white speckled quarter horse, lets out a loud whinny as he trots faster and faster into the sagebrush-dotted landscape. It's all reminiscent of a John Ford movie set: the herd of bison roaming lazily in the distance, the stealth coyote that darts between patches of yellow-tinged brush, the wide-open terrain with no designated trails.

Leading me is wrangler Lauren O'Toole and her mare, Campbell. It's spring, which means the cows have just given birth. O'Toole tells me to keep the moms and calves together by gently nudging my horse alongside them, then effortlessly uses her rope to catch the legs of one of the young. She dismounts, gently flips and unropes the bucking animal, and holds it down while administering vaccines and tagging its ear. The entire process takes two minutes. This is life on a working ranch, and I'm here to become versed in all its rugged glory.

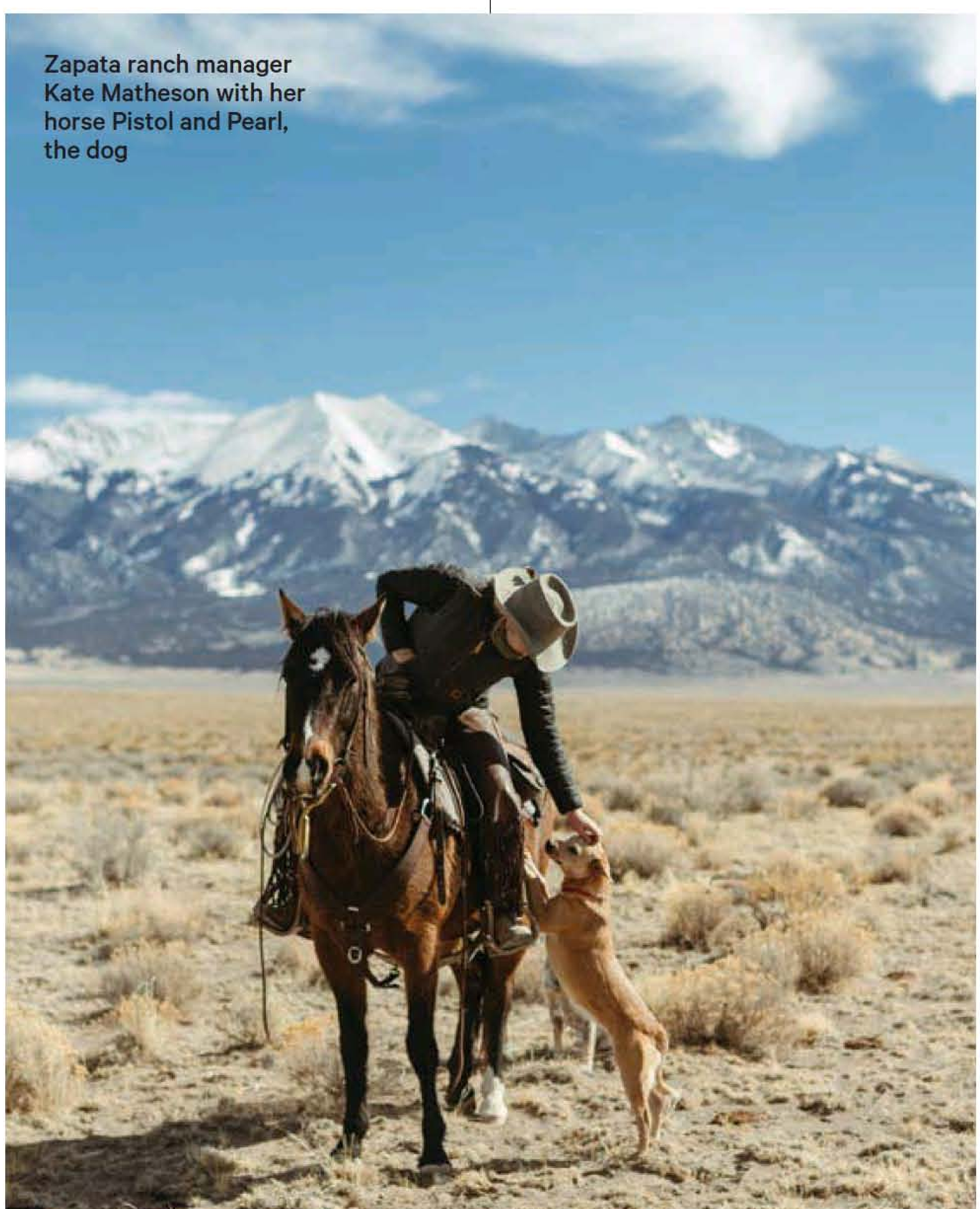
The untamed, 103,000-acre Zapata Ranch, on the eastern edge of Colorado's San Luis Valley, may accept tourists like me, but its revenue still comes primarily from raising cattle, not doling out spa treatments. Hospitality here is more about education than entertainment, though the multicourse meals showcasing the ranch's beef might convince you otherwise. It's one of three so-called guest ranches across the American heartland run by Ranchlands, a company trying to revolutionize the business by harnessing Americans' appetite for adventure tourism.

Since 2013, U.S. ranchers have suffered an almost 50% drop in net farm income, largely the result of corporate farming, urbanization, trade wars, and climate change. In the past 30 years, the country has lost 31 million acres of agricultural land. Gone with it are some of the last vestiges of a traditional American lifestyle—one that helps conserve the country's grasslands and all the species that call them home. Ranchlands is trying to change that. It leases and manages land from private ranch owners, state governments, and, in the case of Zapata, the Nature Conservancy, adding tourism experiences that center on fieldwork.

The company's founder, Duke Phillips III, has the gruff Wild West looks of Sam Elliott but will also recite poems by Pablo Neruda. A third-generation rancher, he was never fazed by the backbreaking work of maintaining vast tracts for grazing. He was, however, stymied by the economics.

In 1999, after assuming management of the 87,000-acre Chico Basin Ranch near Colorado Springs, Phillips began inviting artists out to paint the shortgrass and sand-sage prairie, eager to stage art exhibits and make commissions on their work. Despite a subzero snowstorm, 500 people came to his first show in Denver. "That showed me there was a real interest in the culture around ranching and the American West," he says. Offering overnights was the next logical step; astonishingly, city folks were eager to roll up their sleeves and dispel myths propped up by the ever-growing urban-rural divide.

"There is a major misconception that ranchers are mining the land, when really we're stewards of the land," says Phillips's daughter, Tess Leach, who oversees the company's hospitality arm. "Without healthy soil, we don't have healthy cattle." Without healthy soil you also get erosion, fertilizer runoff, polluted waterways, and fewer pollinators. That's why the World Wildlife Foundation and other environmental groups say ranching is a vital part of America's future.



Zapata ranch manager Kate Matheson with her horse Pistol and Pearl, the dog

Today guests can live the cowboy life at Chico Basin, performing all manner of day-to-day tasks such as branding cattle, conducting pregnancy checks, weaning calves, breaking ice in water tanks, and repairing fences. They retire, saddle-sore, to May Camp, an historic adobe building with two unfussy but comfortable bedrooms. It's not as fancy or as famous as the five-star Ranch at Rock Creek in Montana, but the intimate and highly private Chico has hosted the heads of the London Stock Exchange and the Rothschild Foundation, who both opted to spend downtime there. Leach says it's the authentic working experience that seals the deal.

The income from stays at Ranchlands properties, which cost roughly $2,000 a week, help the company manage as many as 8,000 heads of livestock on almost 400,000 acres of land. The company made $4.2 million from its cattle business and an additional $1.3 million on its leather-making and hospitality ventures in 2020, a year in which tourism was largely shut down.

Its only real competitor is Explore Ranches, established in Texas in 2018. Less focused on cattle than luxury hospitality, it has so far handpicked 20 working ranches for their upscale accommodations and landscapes worthy of national parks. It sets up excursions, handles insurance liability, arranges private chefs, and does the marketing—all for a 20% commission. Its crown jewel is Ted Turner's 550,000-acre Vermejo in New Mexico, where midcentury modern ranch houses can command $18,000 a night.

Explore co-founder Allison Ryan sees demand growing—bookings spiked ninefold in 2020—and expects to have 30 hotels in the collection by 2022. Her family home, Withers Ranch in West Texas, was among Explore's first properties. "You have 100,000 acres of solitude here," she says. "People are craving that more than ever."

I can relate. During my three days at Zapata, I see more bison than people. Under O'Toole's tutelage, I work my horse in a round pen and graduate from trot to gallop. Riding across the prairie, I ogle so many animals—elk, porcupine, red-tailed hawks—I feel as if I'm on safari in the U.S.

Later this year, Phillips is planning a membership-based platform aimed at conservationists; for annual donations of $500 to $15,000, it will offer discounts on ranch stays and exclusive access to cultural events. The proceeds will offset the cost of his first independently owned ranch, Paint Rock Canyon, with 92 rooms on 75,000 acres in Wyoming. Like the other properties, hands-on ranch work will be the draw, along with painting, writing, and music workshops rooted in ranch culture and history.

At Zapata, I don't miss the cowboy kitsch of barn dances or cattle croquet or roping fake steer. I don't miss cowboys, either; most of the wranglers happen to be women. The romance of ranch life, it turns out, isn't a guy with a lasso. It's driving a pickup truck to feed horses sliced apples as the sun sets against the vast pasture. That's what I'm doing when I realize that ranchers don't just love the work—they love the land. And thanks to them, more of us can learn to love it, too.

The New European Tour

Forget buses, cars, and trains. This summer explore these traditionally languid vacation spots using two wheels—and work up a sweat at the same time. *By James Jung*

LAKE COMO, ITALY

The punishing Colma di Sormano is part of a 42-mile loop that begins just beyond the terrazzo-floored lobby of the Hotel Villa Flori on the lake's southeastern shore. The dizzying climb, with 24% pitches, features prominently in the annual Giro di Lombardia race, so tackle it with a rider from ComoLagoBike, whose lead guide is the lauded ex-pro Alberto Elli.

Stay Most of the 53 rooms at Flori—a 19th century wedding gift from a nobleman to his daughter—have lake views from private balconies. But the vistas are even better from the rooftop spa and the cedar-flanked garden, where you can carbo-load on Belgian waffles for breakfast.

Treat yourself The chilled Japanese whisky with jasmine tea at the hotel Vista Palazzo's Infinity Bar is a highlight on a globally inspired menu. It's all but guaranteed to dull any pain lingering in your legs.

MALLORCA, SPAIN

The spectacular, 6-mile Sa Calobra—where Sir Bradley Wiggins trained before winning the 2012 Tour de France—has more switchbacks than the notoriously difficult Alpe d'Huez.

Stay The capital city of Palma has as many excellent bike shops as it does cafes and tapas bars, but the bougainvillea-covered La Residencia—a Belmond hotel with its stone architecture, terraced pools, and rugged backdrop—puts guests in the heart of the island's best riding.

Treat yourself Tack another 20 miles onto your ride by scaling the Coll de Soller. Ca'n Topa, a restaurant perched at the summit, is where local riders gather for double ristrettos and orange-infused cake.

GORDES, FRANCE

High above the lavender fields of the Luberon Valley looms Mont Ventoux, one of the kingmaking climbs in the Tour de France. Known locally as "the Giant of Provence," it has three roads leading to the top; taking the 13-mile, 5,000-foot ascent from Bédoin will earn you the most bragging rights.

Stay With whitewashed houses and cobblestone streets, hilltop Gordes is one of Provence's prettiest towns. It's home to Airelles Gordes La Bastide, an 18th century cliffside residence-turned-retreat with antique-appointed guest rooms and a 17,000-square-foot Sisley spa.

Treat yourself Grégory Mirer, a Parisian transplant, conjures simple but spectacular dishes at the Michelin-starred Hotel les Bories & Spa—think leg of lamb with candied eggplant and fresh herbs from his garden.

KOTOR, MONTENEGRO

The panoramas get increasingly dramatic as you wind up Kotor Serpentine, a one-lane road that slithers along the slopes in a tight series of 25 hairpins as it gains almost 3,000 feet of elevation.

Stay The One&Only Portonovi recently opened on the breathtaking Bay of Kotor, where rugged mountains crash into a sapphire shore. Roam the resort's 60 seaside acres, hit its five pools, or take in all the Mediterranean splendor from its floor-to-ceiling windows.

Treat yourself Whether you continue riding to Lovcen National Park, which has a mausoleum atop the area's tallest massif, or turn around for a white-knuckle descent, plan a pit stop at the mountainside restaurant Nevjesta Jadrana. Its *Njeguski prsut*—Montenegrin prosciutto—is smoked with beechwood and owes its unique salinity to the sea breezes that waft through the alpine air.

TINOS, GREECE

Thanks to its vast network of dirt roads, wind-strafed Tinos is best explored by gravel bike. Take the 6-mile path up Mount Tsiknias, which claims steep ramps and a craggy peak that reliably rises out of the low cloud cover.

Stay In-the-know Athenians unplug on this charming and not-so-touristy island 15 minutes north of Mykonos. Sleep at the strikingly minimal Infinity View Tinos, where many of the 16 suites, piled like sugar cubes above the coast, afford views of the Aegean from the privacy of your own plunge pool.

Treat yourself Head to boulder-strewn Livada Beach for a brisk dip in the island's clearest waters. There the fuss-free boardwalk taverna Nikos Darmis serves a protein-restoring *froutalia* omelet with wild artichoke, an heirloom delicacy grown in the island's mineral-rich soil.

PHOTO ILLUSTRATION BY BEN LEWIS GILES; PHOTOS: GETTY IMAGES (2). HOUSTON: DENNIS MINTY. HARRISON: KHIEM TANG. ALL OTHERS: COURTESY SUBJECTS

Why We Explore

Four inductees to the inaugural Explorer's Club 50, a list of the world's most cutting-edge field scientists, share memories of their greatest adventures. *Interviews by Nikki Ekstein*

MARGARET O'LEARY AMSLER

The marine biologist and krill researcher has gone on 30 expeditions to Antarctica and conducted more than 500 frigid scuba dives.

The high point in my polar marine explorations coincides with the lowest point in my life—exploring Antarctica via submersible 1,300 feet below the sea. There, we were engulfed in a dense school of krill. Their thick swarm created a blizzard with zero visibility beyond our plexiglass bubble. The submersible's navigation and communication systems became jammed, leaving us basically dead in the water. Humpback whales were feeding just above us, and we joked about the possibility of becoming a modern day Jonah. As a krill biologist at heart, it was a thrill to experience their astronomical abundance so very up close and personal.

CALLIE BROADDUS

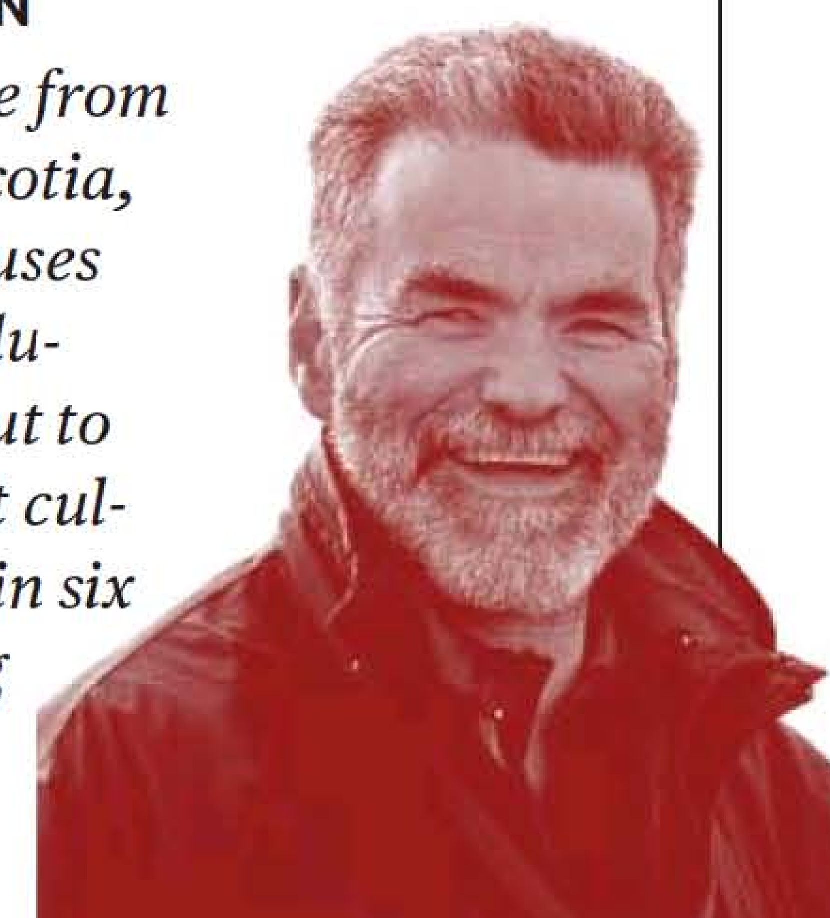
The conservationist led activists under the age of 26 to create the world's first fully youth-funded nature reserve, in Ecuador's Chocó Cloud Forest.

Three years ago, I traveled to South Africa as the photographer on a Rainforest Trust conservation expedition. We got underwater with great white sharks, searched for critically endangered geometric tortoises with tracker dogs, and saw all the "big five" African megafauna. But the most exciting thing was photographing a plant. It was a variety of cycad, which coexisted with dinosaurs—and this was the last individual of its species. Hundreds of millions of years had tapered down to one single organism, wedged in the crevice of a remote cliff wall. I flew my drone around it, awestruck at the plant's fossil history, my good fortune to be witnessing it, and the urgency of protecting other species from befalling the same fate.

K. DAVID HARRISON

As a linguist, he records the last speakers of the world's most endangered languages, such as yak-herding tribes in Siberia.

Living with nomads in the high Altai Mountains of far western Mongolia, I was treated like family, which meant I had to make myself useful in return. Each day I collected yak manure to burn in the fire, used to prepare tea and mutton stew. When we migrated to new pastures, everything the family possessed got loaded onto six borrowed camels; I walked along one of them, leading it by the rope connected to its nose-peg. At each mountain pass, we made offerings of food to the local spirits so we could go safely on our way. The legends they shared with me—about yaks, camels, and those ever-present spirits—have been passed down orally for generations.



JOHN HOUSTON

A Yale graduate from remote Nova Scotia, the filmmaker uses his childhood fluency in Inuktitut to document Inuit culture, resulting in six award-winning films about indigenous communities.

In 2001, I launched a search for the Inuit undersea female deity Nuliajuk (often referred to as Sedna). The quest—which resulted in my second film, *Nuliajuk: Mother of the Sea Beasts*—led me to the community of Kugaaruk on the Boothia Peninsula in the Central Canadian Arctic. I was trying to interview 102-year-old Neeveeovak Marqniq, one of the last Inuit women to be facially tattooed in the old way. I had prepared about 17 questions, which I offered her in Inuktitut. She was unimpressed. Grumpy, even. I suppose when you reach 102, you don't suffer fools. In the tense silence, I remember throwing a query—a prayer?—out to the cosmos, hoping for one fitting question. I waited. Eventually, something came. It didn't make any sense to me, but what did I know? "Pray tell, do you have a means of making undersea creatures come closer to you?" I asked. "Yes," she replied, "I do. I will sing you a song. I have not heard it sung for over 70 years, or used it myself for over 60, so parts of it may be rusty. ..." Marqniq died at the age of 105. We recorded her magic spell, a time capsule from the ancient world of shamanism, intact, on rich, archival Super 16mm film and faithful digital audio. That was a rare privilege. Ⓑ

Capoeira practice at the UXUA Casa Hotel & Spa in Trancoso, Brazil

Trips Worth Fighting For

Resorts around the world are using martial arts to give an authentic taste of local culture

By Jennifer Flowers

I'd spent three intense years training in *jeet kune do*—an expression of martial arts Bruce Lee developed—before finally making it to Leung Ting Gym in Hong Kong's neon-lit Yau Ma Tei neighborhood. Among fruit and jade markets, a narrow staircase leads up to this living piece of history. It's named for one of the last disciples of Grandmaster Ip Man, one of Lee's most influential teachers, who helped popularize a 300-year-old kung fu style called *wing chun*.

Leung Ting Gym doesn't normally allow visitors or drop-in students, so it's a treat that my concierge at the Rosewood Hong Kong has brought me this far. Through a small window on a mustard-colored door, he and I watch in awe as three students perform the circular and linear hand motions of *chi sau*. Cantonese for "sticky hands," it's a calm, fluid way to diffuse the energy of an attacking opponent, a centuries-old lesson in grace under pressure.

Peering in, I think about wing chun's founder, a Buddhist nun named Ng Mui from China's legendary Shaolin Temple. Her fighting system tailored for smaller people has emboldened me as a 5-foot-2 Asian-American woman.

When I started training, I thought it would just be something to practice at home. But as I learned at Leung Ting Gym, martial arts in their original context are a compelling portal into other cultures, each movement intertwined with heritage and philosophy. In France there's savate, a 19th century kicking art that evolved from Parisian street fighting but has the elegance of ballet. The highly efficient *krav maga* used by the Israeli military was developed by Jews in 1930s Czechoslovakia to defend themselves against violence. Filipino martial arts is a beautiful but deadly practice that had to masquerade as a cultural dance after Spanish colonists banned it in the Philippines; now it's recognized as a national treasure.

Several forward-thinking resorts today are harnessing the martial arts industry—which racks up an estimated $4 billion in the U.S. each year—as a way to meet travelers' demands for authentic adventure experiences. An invitation into a master's private world can feel like the kind of genuine insider hospitality that many travelers seek; it's as culturally enriching as museums, theater, or food.

At the recently opened One&Only Desaru Coast, a resort on the tropical southern tip of Malaysia, guests can privately study the fundamentals of *silat*, a Southeast Asian fighting style practiced to the beat of single-headed *kompang* hand drums. The teacher is Muhammad Muiz, who holds the elusive master title with the country's National Silat Federation. A 45-minute lesson costs $60 per person, the same as a private session with a tennis pro at the resort, but with the added dimension of showcasing Malaysian culture.

In Thailand the eight-month-old Capella Bangkok provides a similar service. When the pandemic subsides, the resort will be the only place in the city to take a private lesson with former muay thai champion Parinya Kiatbusaba, better known as Kru Toom. For $145 she'll teach you the secrets behind using shins, knees, elbows, and fists as "eight limbs" for fluid combat in the resort's tree-shaded courtyard by the Chao Phraya River. With the help of a translator, she'll also offer some historical context for muay thai, derived from centuries of tactics used in the ancient Siamese kingdom, and share her personal journey becoming one of the world's few transgender boxers.

The UXUA Casa Hotel & Spa in Trancoso, Brazil, pays allegiance to capoeira, an acrobatic regional dance created by enslaved West Africans in the 16th century. The resort, co-founded by Bob Shevlin and Wilbert Das, ex-creative director of fashion label Diesel SpA, opened in 2009 with a capoeira program for underprivileged kids at a local school—many of whom now teach at an academy that raises money by offering $60-an-hour private lessons to guests.

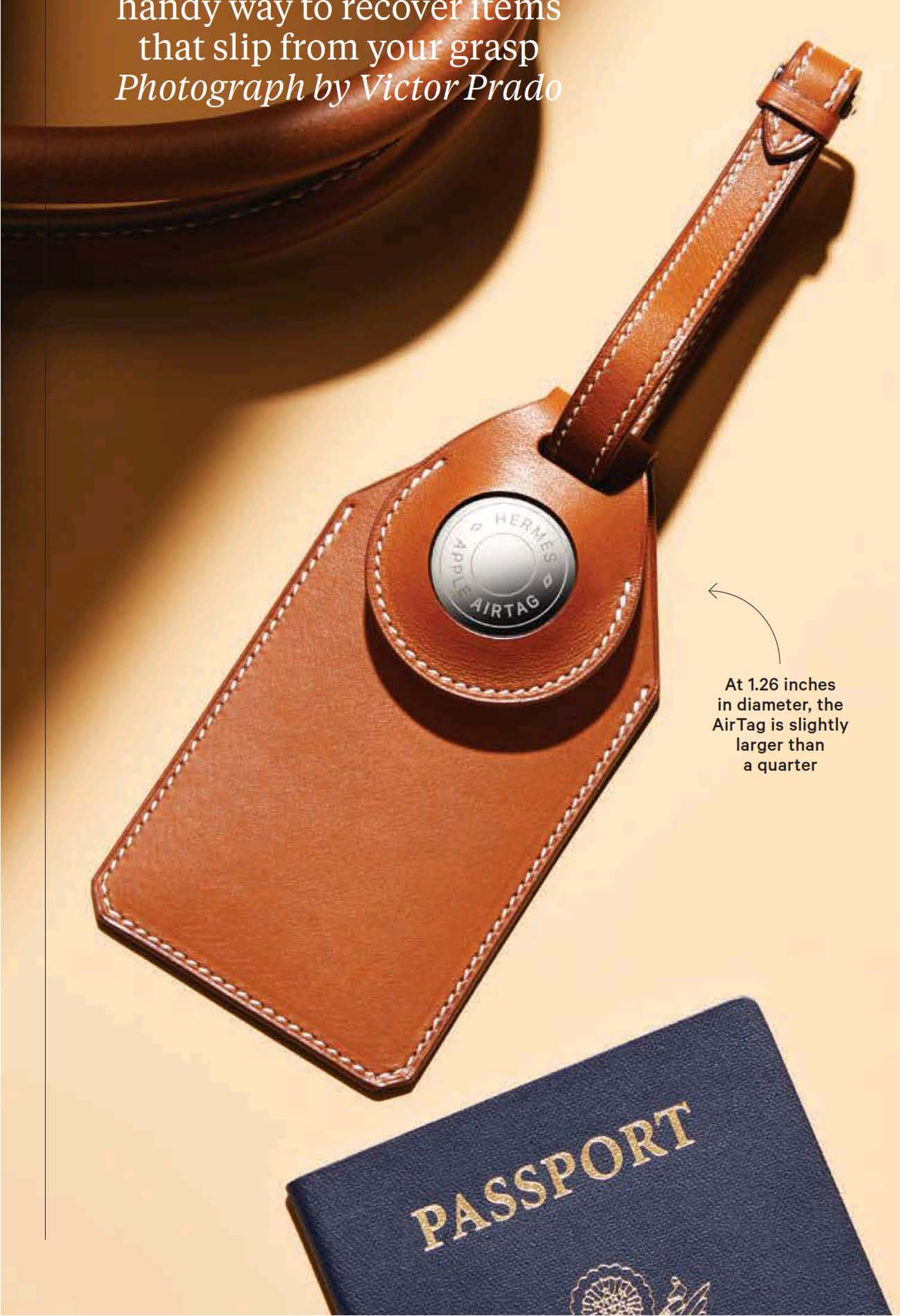
While I watch the class at Leung Ting Gym, my concierge improvises in Cantonese, hoping to broker access on my behalf. Eventually the door opens. The space is so minuscule, only I can enter—and just for a few minutes. I take in the elegant Chinese calligraphy on the walls, the soft-spoken direction from the *sifu*, or teacher, and the shuffling of the students' feet.

I fixate on the wooden *mook jong* practice dummy in the corner, a replica of which sits in my own school back in Brooklyn. It's an emblem of a tradition that's crossed many generations, and the sight of it here, thousands of miles from New York, reminds me that these students and I share a rare and refined language. I've never felt so at home. B

COURTESY UXUA

Say Goodbye To Lost Luggage

Apple's AirTag is a truly handy way to recover items that slip from your grasp
Photograph by Victor Prado



At 1.26 inches in diameter, the AirTag is slightly larger than a quarter

When Apple Inc. premiered its iPhone in 2007, it wasn't inventing the cellular phone or even the smartphone. But the company revolutionized communication with a product that's since been improved by leaps and bounds. Likewise, with its AirTag location tracker (starting at $29), the $2 trillion tech giant hasn't created a category; it's rethought an existing item to outpace its competitors in convenience and attractiveness. Nestled into an Hermès leather key ring ($349) or luggage tag ($449, as shown), the circular metal disk becomes a stylish bangle that's startlingly useful in its simplicity and ability to reconnect lost or stolen objects, such as a suitcase, a golf bag, or even a car.

THE COMPETITION

• The Tile locator (starting at $25) was the early front-runner in the tracking game. The small square sends signals via Bluetooth to a network of fellow users when lost. Unlike AirTags, Tiles come with a hole or adhesive to make it easier to affix to a ring, phone, or bag.

• Bluetooth works only within short distances, so the Americaloc GL300 GPS Tracker MXW leverages GPS to be globally findable. Some may balk at the $110 price and $25 monthly fee.

• Like the Tile, the Cube Shadow relies on its patrons to help expand the range of Bluetooth—though it's a smaller community. Slim enough for a wallet, it has a battery that can be recharged instead of replaced.

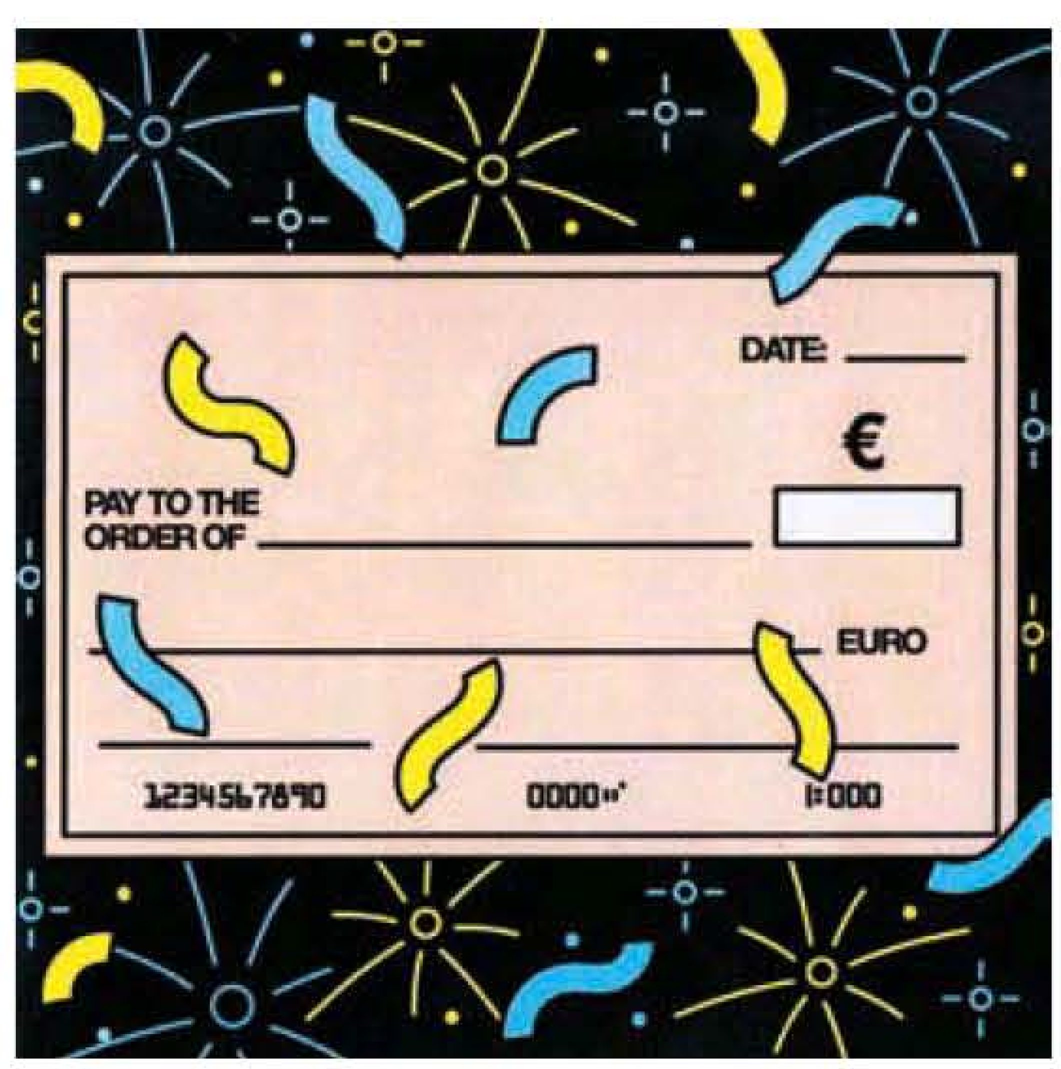
THE CASE

The vast global power of almost 1 billion iPhone owners is the AirTag's secret weapon: It relays its location by sending anonymized Bluetooth signals to nearby Apple devices that have enabled the Find My network. This is a huge improvement over rivals such as Tile. If you have an iPhone 11 or 12, the AirTag can use the phone's accelerometer and gyroscope to share its precise whereabouts when it's in your home or immediately nearby—helpful when it's on a ring of keys. Engraving the AirTag with initials or an emoji is free, as is the ability to command Siri to make a sound while you're searching (though the Tile's sound is louder). Setup is a snap for a first-time user, and the lithium battery is easy to replace. In our tests, the device proved findable in cluttered apartments and on international vacations, down to the inch. Buy a pack of four and attach them to your treasures—then wait to see what advancements come in the next few years. *From $29; apple.com*

Getting the SPAC Party Started in Europe

By Alex Webb

By now we all know just how U.S. investors went crazy for SPACs at the turn of the year, pumping $90 billion into the special purpose acquisition companies from December through February alone.



Blank-check companies raise money from investors in an initial public offering and then merge with a company that itself is looking to go public. The targets get a wad of cash while avoiding the rigmarole of their own IPO. The method allowed a slew of companies to soar to multibillion-dollar valuations even though they had no revenue, from Richard Branson's space tourism company Virgin Galactic Holdings Inc. to electric truck maker Nikola Corp.

The U.S. Securities and Exchange Commission damped the frenzy with a series of announcements in March that warned about celebrity-endorsed SPACs (Shaq, A-Rod, and Jay-Z had all joined the party), noting that VIP involvement in a SPAC doesn't mean it's a wise investment. The deluge of low-quality SPACs and their subsequent poor stock market performance didn't help, and investment in blank-check companies tumbled 89% that month from February to $4.2 billion.

So the main financial beneficiaries of SPACs–the sponsors who create them–are looking elsewhere to continue the craze. Top of the list is Europe, where the number of new SPACs accelerated from February to April, and there's no sign of growth there abating.

Sponsors will need to proceed cautiously. Because they typically get 20% of the shares in the new venture, they stand to profit without having to worry too much about whether the target company is, well, any good. And the last thing sponsors want is for European regulators to spoil the fun before it even gets going.

That's why a SPAC that listed in Amsterdam on May 14 is particularly interesting. Hedosophia European Growth is led by Ian Osborne, a London-based investor who's already teamed up with Chamath Palihapitiya, the prominent SPAC champion, on a handful of U.S. offerings–many of which have proved to be less-than-knockout successes. Hedosophia is taking a different path from that of its U.S. cousins by giving more protection to investors and less generous terms to its sponsors. Backers will receive their full share allocation only if the company meets ambitious stock price targets, for instance. In the U.S., they usually receive them irrespective of the company's performance.

The hope is to make investors expect higher standards for SPAC listings in Europe than have been the case in the U.S. There's self-interest at play here: The terms might make it harder for sponsors who are just out to make a quick buck with little regard for the company's subsequent success. In turn, that could prevent a new bubble and keep regulators off the SPAC market's back. There would still be a party; it might just be a little more staid and respectable than the one that just fizzled in the U.S. Ⓑ *—Webb is the European tech columnist for Bloomberg Opinion*

ILLUSTRATION BY GEORGE WYLESOL

Bloomberg Businessweek (USPS 080 900) May 31, 2021 (ISSN 0007-7135) S Issue no. 4701 Published weekly, except one week in February, April, May, June, July, August, September, October and November by Bloomberg L.P. Periodicals postage paid at New York, N.Y., and at additional mailing offices. Executive, Editorial, Circulation, and Advertising Offices: Bloomberg Businessweek, 731 Lexington Avenue, New York, NY 10022. POSTMASTER: Send address changes to Bloomberg Businessweek, P.O. Box 37528, Boone, IA 50037-0528. Canada Post Publication Mail Agreement Number 41989020. Return undeliverable Canadian addresses to DHL Global Mail, 355 Admiral Blvd., Unit 4, Mississauga, ON L5T 2N1. Email: contactus@bloombergsupport.com. QST#1008327064. Registered for GST as Bloomberg L.P. GST #12829 9898 RT0001. Single Copy Sales: Call 800 298-9867 or email: busweek@nrmsinc.com. Educational Permissions: Copyright Clearance Center at info@copyright.com. Printed in the U.S.A. CPPAP NUMBER 0414N68830