

# Bloomberg Businessweek

July 26, 2021

the builder,

the border,

and the  
\$30 million  
boondoggle

*Trump wanted a wall. One man gave him 3 miles—and would like to get paid 40*

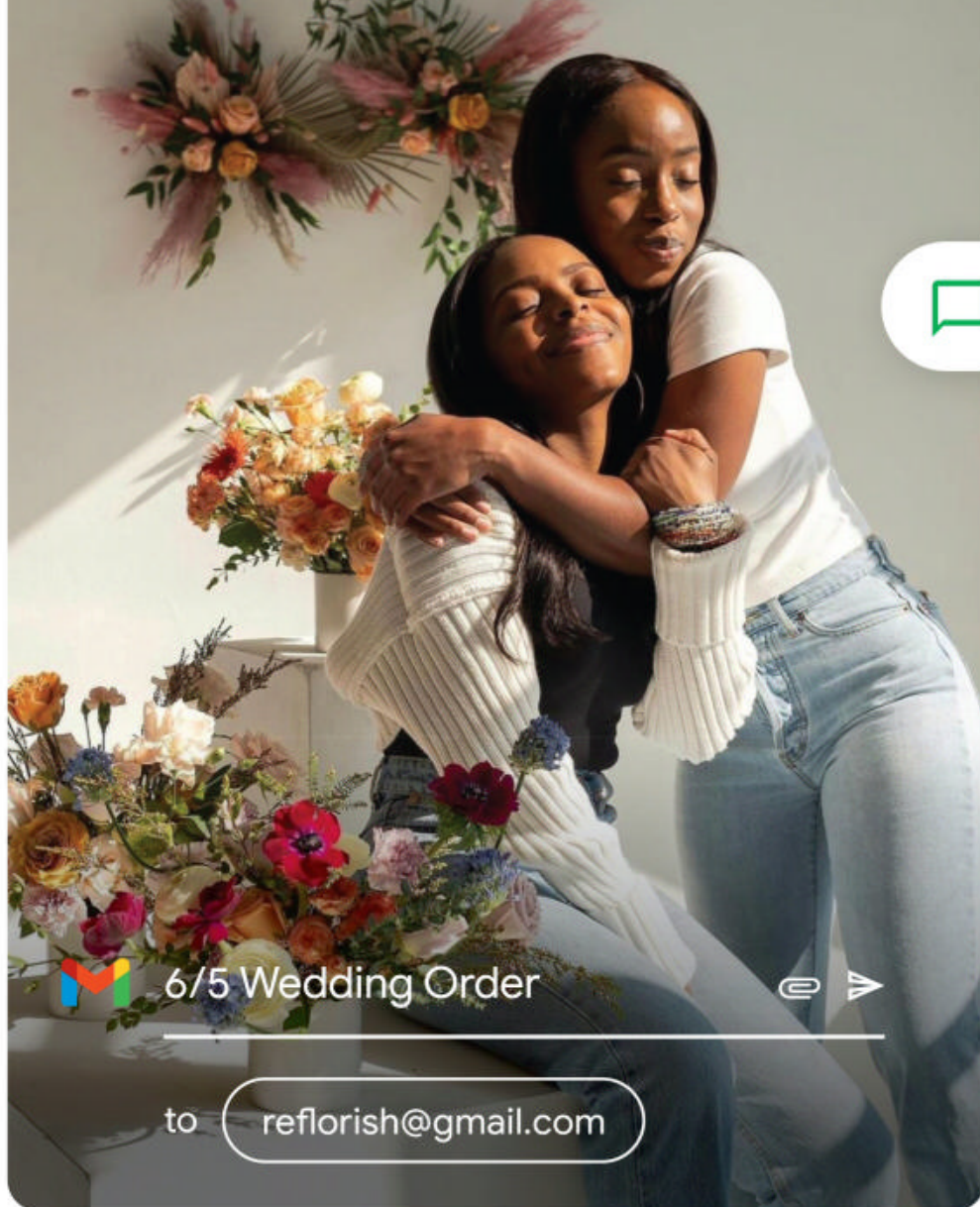


# How **sweetgreen** puts sustainability on the menu



Item	Quantity	Date
Cabbage	43000 lbs	8/3-7 <span>John</span>
Red Onion	36000 lbs	8/9
Quinoa	2100 dry gal <span>Kim</span>	8/10
Beets	30000 lbs	8/23





New chat

Rugie Jalloh  
How're they looking?



4 9

# is how Reflorish keeps business

growing  34 

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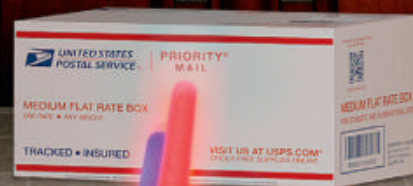




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◀ Dead butterflies at the monarch biosphere sanctuary in Michoacán, Mexico, in March 2020

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■ COVER TRAIL

How the cover gets made

1

"This week we've got a doozy of a story about a guy Trump inspired to build 3 miles of border wall, more or less on spec."

"Savvy!"

"It's kind of a disaster, actually. The wall is incomplete, and he wants to get paid, so he's trying to sell it."

"Oh! Maybe it's a smart investment? Do you know where it's listed—Craigslist or Facebook Marketplace?"

"I don't know much about the market for incomplete border walls."

"Well, let's get into it! I'll create a flyer..."

2



"Hmm. So, considering the escalating immigration crisis and the human-rights implications..."

"Oh, right. I feel a little icky now."

"Yeah. More American-saga tension, less flippancy."

"Always with the rational thinking."



Cover: Photograph by Lowy + Lacar for Bloomberg Businessweek



How to Contact Bloomberg Businessweek

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● Coronavirus cases have topped 192 million worldwide, and more than

**4.1m**

have died. Meanwhile, more than 3.7 billion vaccine doses have been given. In the U.K., the prime minister, health minister, finance minister, and now the leader of the opposition are all isolating after testing positive for or being exposed to the virus.

● **“I totally resent that, and if anyone is lying here, Senator, it is you.”**

The White House's chief medical adviser, Anthony Fauci, responding to Senator Rand Paul at a July 20 hearing. The Kentucky Republican had alleged that the National Institutes of Health funded research in China that may have created the coronavirus.



● Haiti swore in 71-year-old neurosurgeon Ariel Henry

as its new prime minister, as the troubled Caribbean nation tries to emerge from the political chaos created by the murder of President Jovenel Moise earlier this month.



● Tom Barrack Jr., a top fundraiser for Donald Trump, was arrested on July 20, charged with illegally lobbying for the United Arab Emirates in the U.S.

Barrack, who's also charged with obstruction of justice and making multiple false statements, will plead not guilty, his lawyer said.

● The father and son who helped smuggle former Nissan CEO Carlos Ghosn out of Japan in 2019 were sentenced to prison by a Tokyo court on July 19. Michael Taylor, 60, received two years; Peter, 28, was given 20 months.

● Robinhood Markets is seeking a valuation of **\$35b** in its IPO. The company behind the free trading app is expected to make its Nasdaq debut on July 29.



● Pedro Castillo was declared Peru's next president.

A rural union activist with no national political experience, Castillo has said he'll focus on education and health, as well as raising corporate taxes and reining in big companies.



● China evacuated about 100,000 people after catastrophic floods (left) swept through Zhengzhou, a city of more than 10 million. In western Germany (right), residents continue to clean up after the worst floods in memory washed away houses there, killing more than 100. Scientists say the extreme weather, like the wildfires in North America and Siberia, is partly caused by climate change.

● Johnson & Johnson and three opioid distributors have agreed to pay **\$26b** to settle more than 3,000 lawsuits by states, counties, and cities blaming them for mishandling the painkillers. More than 500,000 Americans have died in the resulting public-health crisis.

● Jonathan Kanter will head the U.S. Justice Department's antitrust division. The appointment of the outspoken Google opponent is another sign that the Biden administration is preparing a broad crackdown on large technology companies.



# When Cajoling Isn't Enough, Vaccine Mandates Work

In much of America, vaccine hesitancy has turned into vaccine defiance. Several states have banned or are considering banning demands by businesses that people show proof of vaccination. Tennessee—where only 38% of adults are fully inoculated and the Covid-19 caseload is growing fast—has gone so far as to cancel public schools' efforts to encourage eligible children to get their shots (including flu shots). For good measure, the state fired its medical director for vaccine programs.

These actions make it harder to protect the public from Covid even as the highly infectious delta variant spreads. States should instead be issuing their own vaccine passports and requiring health-care workers to be immunized, as President Emmanuel Macron has done in France. President Joe Biden should go beyond cajoling the vaccine-hesitant and call on hospitals and nursing homes across the U.S. to insist that employees get their shots.

The health-care industry is the best place to start issuing vaccine mandates. Several hospital systems have already imposed them—and proved they work. The Houston Methodist system, the first to act, retained all but 153 of its 26,000 employees as it pushed its vaccination rate from 85% to 100%. (About 600 staffers were allowed medical or religious exemptions.) A lawsuit brought by employees wanting to work unvaccinated failed.

The Equal Employment Opportunity Commission has confirmed that employers have the authority to require their workers to be vaccinated—even though Covid vaccines have only emergency-use approval from the Food and Drug Administration. As the FDA works on granting full approval by the end of summer, hospitals and nursing homes should move ahead with mandates, as epidemiologists and infectious disease doctors have urged.

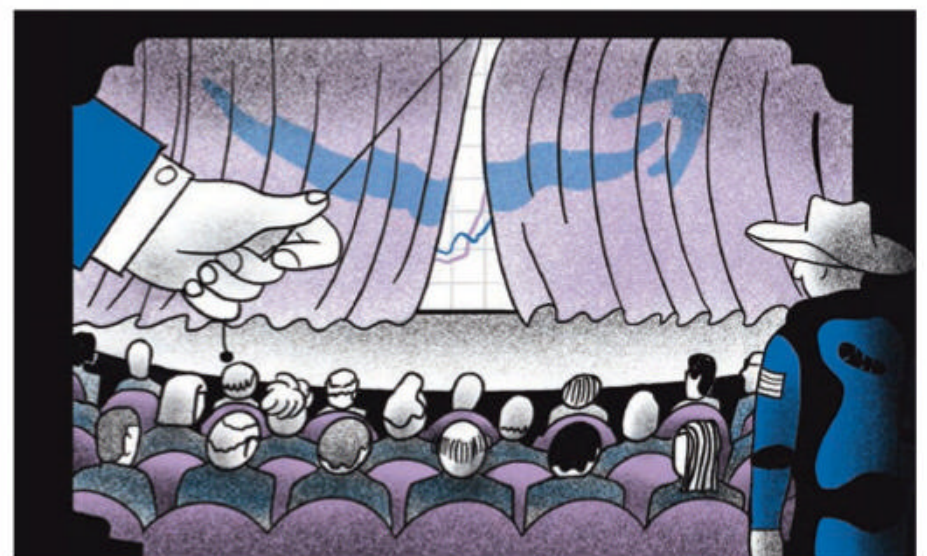
Many colleges and universities are also demanding that students, faculty, and staff be vaccinated. On July 19 a federal judge upheld Indiana University's mandate. Some banks are requiring employees to disclose their vaccination status. Morgan Stanley has told its workers to get their shots or stay home. It makes sense for companies of all kinds to allow only vaccinated employees to work alongside others.

The U.S. has made impressive progress toward defeating Covid. Although not quite 60% of adults are fully vaccinated, almost 80% of those over 65 are. So even as the delta variant spreads, the most vulnerable are well-protected. Because Covid tends to be less severe in younger adults and children, rising caseloads pose less risk than before of

overwhelming hospitals. Even so, cases are climbing (up 70% since mid-July), along with hospital admissions and deaths (up 36% and 26%, respectively). The surge is occurring almost entirely among the unvaccinated. As Rochelle Walensky, director of the Centers for Disease Control and Prevention, said on July 16, this is becoming “a pandemic of the unvaccinated.”

To discourage people from getting their shots is unconscionable. But it's no longer good enough to simply call on the vaccine-hesitant to protect themselves and others. America's sizable population of vaccine skeptics has been shrinking, but it's been too gradual for the good of public health. Mandates can help persuade many people on the fence to get their shots. Hospitals, schools, and businesses are within their rights to insist on vaccinations—and ought to be doing just that. **B** For more commentary, go to [bloomberg.com/opinion](https://www.bloomberg.com/opinion)

## ■ AGENDA



### ► Sky-High Ambitions

Amazon.com reports second-quarter earnings on July 29, the first time the online retailer presents numbers under new CEO Andrew Jassy. Founder Jeff Bezos, meanwhile, is basking in the success of his July 20 spaceflight.

► French luxury conglomerate LVMH releases earnings on July 26, buoyed by the return of Chinese shoppers to Louis Vuitton and Dior boutiques.

► Apple's earnings on July 27 should show continued demand for upgraded gadgets such as the Apple Watch and AirPods earphones. But the iPhone remains the biggest profit engine.

► The Federal Reserve sets interest rates on July 28 amid calls to tame growing inflation. Some economists worry that a slowdown remains the bigger risk for now.

► Some of Europe's biggest economies will provide snapshots of their recovery when France, Germany, and Spain come out with second-quarter GDP figures on July 30.

► A moratorium on evictions established last year by the Centers for Disease Control and Prevention expires at the end of the month. About 6 million U.S. households will be put at risk.

► Zomato, a food delivery startup from India, plans to begin trading on the Bombay Stock Exchange on July 27. It's the country's largest IPO in more than a year.



# REMARKS



Space Is Bigger Than Billionaires

● The orbital economy goes way beyond the ambitions of Jeff Bezos, Richard Branson, and Elon Musk

● By Ashlee Vance

Richard Branson has been to space. Jeff Bezos just visited, too. Rich people have done this sort of thing before, but Branson and Bezos didn't just pay for a ticket—they paid for the space-ships. Individuals, if they're wealthy enough, are no longer beholden to a government craft when they want to leave the planet for a little while.

These two voyages have generated an awful lot of takes. Some have celebrated the engineering and persistence required to fly a bunch of humans into space and bring





them back safely, or the wonder of pushing the boundaries of possibility. Mostly, though, they've proved an irresistible occasion to vent frustrations about billionaires doing billionaire things instead of focusing their resources on the pandemic, or climate change, or any of the other rolling crises here on Earth. People are dying. The planet is broken. Maybe these guys, and fellow billionaire space enthusiast Elon Musk, ought to tuck their space phalluses away and focus on some of our more immediate concerns.

A couple of decades ago, when the three men's respective space companies were just getting started, they were taken as evidence that these nouveau riche types were dreaming too big. Now, notwithstanding some legitimate arguments about effective tax rates and who makes public policy, it's the critics who are thinking too small. The billionaire joyrides into space are just the brightest, shiniest objects in a much larger field.

After decades of false starts, Earth's orbit and points beyond are being commercialized at incredible speed by dozens of private companies. The willingness of Branson and Bezos to go up in their own spacecraft amounts to little more than an endorsement that their vessels are finally safe enough for them to try, and, more pointedly, that space is open for business. Other people will keep going there, possibly by the thousands, along with tens of thousands of machines designed to further commodify the heavens. What happens up above us will be one of the most important economic and technological stories of the next decade, whether or not Musk ever settles Mars.

Here are just a few of the less remarked-on recent stories out of the private space industry. First was the stock market debut of a company called Astra Space Inc., which, backed by venture capitalists, built a viable orbital rocket in just a few years. Its goal is to fly satellites into orbit every single day. Shortly after Astra went public at a value of \$2.1 billion, satellite maker Planet Labs Inc.—which uses hundreds of eyes in the sky to photograph the Earth's entire landmass daily—announced its plans to do the same, at a value of \$2.8 billion. Firefly Aerospace Inc. has a rocket on a California pad awaiting clearance to launch. OneWeb and Musk's SpaceX are both regularly launching satellites meant to blanket the planet in high-speed internet access. Rocket Lab, in the previously spacecraft-free country of New Zealand, is planning missions to the moon and Venus.

The SPAC frenzy has been particularly kind to the private space industry, including some of the companies named above. Easier access to public markets through a special purpose acquisition company has helped draw billions of dollars from excited investors to an industry once dependent on governments with vague military objectives or expansive views of public works. Partly as a result, the number of satellites orbiting the Earth is projected to rise from about 3,400 to anywhere between 50,000 and 100,000 in the next decade or so—and that's even if these companies just fulfill the orders they've received so far.

It seems likely the estimates will slide a bit, given that those kinds of numbers would require rockets to blast off one after another from bustling private spaceports all over the globe on an extremely frequent basis. But whatever the precise timing, the message will remain unchanged: Private space is here. This month's space tourism race is just escape-velocity window dressing on a much bigger, more transformative set of changes. The results of these shifts will be unpredictable, except that ego and greed will most likely ►



◀ be as present as ever. Nonetheless, the evidence on the non-ground suggests we should consider the possibility that this emerging industry might turn out all right.

To understand just how far private space has come and where the real action is, look at Decker Eveleth, who, until several weeks ago, was an anonymous senior at Reed College in Portland, Ore. (A health issue set his graduation back a few months.) Eveleth is a typical college student, except that, for funsies, he scours satellite imagery in search of weapon stockpiles and other military infrastructure. Last month he spotted what look pretty clearly like more than 100 intercontinental ballistic missile silos sitting in a desert in northern China, lending credence to rumors that the nation is building nuclear weapons in large numbers.

Eveleth heard the rumors from his mentor, Jeffrey Lewis, an expert in nuclear arms control who specializes in this kind of citizen reconnaissance, commonly known as open source intelligence. In May, Lewis asked the young man to see what he could find. Based on a previous discovery, Eveleth knew that the Chinese military had sometimes excavated a site to build silos, then covered them with inflatable structures similar to the small white domes used for indoor sports. (Lewis calls them “bouncy houses of death.”) Eveleth went looking for more domes. “I had to make a series of assumptions,” he says. “I assumed it would be in northern China, because there’s been lots of activity there. I also assumed it would be on nice, flat areas with high-quality ground.”

The undergrad searched satellite images spanning thousands of miles of Chinese desert. Until very recently, hardly any such images would exist for this territory. Conventional imaging satellites are costly and generally need to be pointed with precision at discrete areas of high interest. Planet Labs’ much smaller, cheaper models, aimed at global coverage, have now taken years’ worth of pictures of the area Eveleth wanted. He created a gridded map and worked through it for more than a month until he spotted a collection of about 120 domes in one spot. Then he sorted the images from that area by date to see a play-by-play of the site’s clearing and construction. “We knew that it was a big deal,” he says.

Early on June 27, Eveleth and Lewis asked Planet Labs to take some higher-resolution photos of the site. The company’s engineers reoriented the relevant satellites using radio signals from earthbound stations, and barely 24 hours later, the pair could see much clearer shots of the domes, as well as trenches for communication cables leading out from what appeared to be underground operations facilities. In early July, Lewis took Eveleth’s discovery to the press. The U.S. Department of State called the news “concerning.” Chinese state media said the site was just a wind farm under construction, but images from another satellite startup, Capella Space Corp., undermined that explanation. Capella’s systems, based on a special type of radar, appeared to show liquid runoff coming out of the domes and a series of metallic structures typically used to house weapons.

It’s tough to overstate what a major leap forward these private eyes represent. When the U.S. went space-looking for Soviet weapons of mass destruction in the late 1950s, it had to use rockets to carry bulky satellites into orbit, where they took photos and dropped their film canisters back to Earth to be, rather incredibly, caught in midair by planes. Crazier still, this sometimes worked. The effort took a decade of trial and error by top U.S. scientists and companies, then teams of hundreds to eyeball the top-secret photos. Eveleth just poked around on his laptop in his spare time, and anyone else could do the same. “It used to be that the government had satellites and we didn’t,” says Lewis. “Now they have slightly better satellites. OK, that’s nice for you, but it doesn’t really matter.”

The arguments against thinking about space at all right now tend to center on the apparent frivolity of orbital tourism. The *Los Angeles Times* summed up this line of reasoning with the headline for a column by the talented writer Michael Hiltzik: “The Bezos-Branson-Musk space race is a huge waste of money and scientifically useless.” Hiltzik went on to dismiss the recent wave of advances as mere thrill-seeking and distractions. Setting aside the fact that people spend many billions of dollars every year watching sports and playing video games, examples like Eveleth’s are a good reminder that technological advances aren’t always A-to-B propositions, and that there remains value in pure science for its own sake, even if the future dividends are unknown.

Besides looking for signs of nuclear proliferation, customers are using Planet Labs’ network of satellites to track crop health, factory emissions, and rainforest loss. (Creepier uses of private satellite networks, of course, bear further scrutiny.) The satellite internet services from OneWeb and SpaceX have the potential to serve billions of people who can’t get broadband access another way. The success of the company Rocket Lab, created by a guy without a college degree who taught himself the needed engineering in a shed, also speaks to the potential democratizing effects of private space enterprises. The zero-G rich people are a relatively small part of this larger picture.

Of course, space-based enterprises still seem like highly risky propositions, with gobs of profit far from guaranteed. Even though companies such as SpaceX, Rocket Lab, and Planet Labs are valued at billions of dollars, they have yet to show they can turn a profit in orbit as smoothly as the more flywheel-esque ventures on Earth. Space, as everyone in the industry likes to say, is hard. But the newish bevy of space companies, including those run by prominent moguls, are trying to figure it out, and the potential rewards are much greater than the occasional rush of adrenaline.

Humans never cease to amaze when their imaginations and ingenuity are given fresh fields on which to play and explore. To trample on the suborbital jaunts or literal moonshots is to miss the point of the exercises. Yes, we face big problems. But these problems won’t be solved by people turning inward to rue our collective plight. We’ll have a much better chance when people are looking up with wonder, asking, “What’s next?” **B**



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1

BUSINESS

12

# When Product Placement Is the **Real Star**



● Goods featured in TV shows and films capture the attention of viewers who ignore ads

Hiram Lodge, the manipulative crime lord who targets the fictional town of Riverdale, sits back in his office chair. After plotting his latest scheme with a cohort over submarine sandwiches, he takes a bite of a Doritos chip, holding the bag in clear view of the camera while looking away pensively.

Frito-Lay, which got the snack on the CW Network's teen drama *Riverdale* with the help

of the No. 1 product placement company BEN, hopes audiences noticed enough to crave their own bag of Doritos, but not so much that they became annoyed. That's the delicate balance companies strike when using product placement, which is becoming an even more popular form of advertising thanks to factors including increasingly sophisticated data collection and the rise of streaming and mobile video.

Linear television, the old-school version of programming in which viewers have to be on their sofas at a scheduled time, is becoming an activity of the past, reducing promotional opportunities for brands. Meanwhile, more people are



tuning in to Netflix or other streaming services that eschew conventional ads. “If I’m starting to cobble together my viewing experience as a series of streaming services, I potentially don’t get exposed to traditional television advertising anymore,” says David Schweidel, a marketing professor at Emory University. “So product placement becomes the way of cutting down the cost associated with production when you don’t have advertising to support you.”

To do that, product placement is morphing into a more tech-focused and targeted business that can mesh nicely with the data-driven strategies that have proved so successful for digital marketing companies such as Facebook Inc. and Google. While advertisers still try to weave their products into the fabric of a film or TV show’s plot, a lot more is happening behind the scenes to guarantee those marketing dollars will turn into a sale.

For one, entertainment consumers are naturally separating themselves into smaller, like-minded groups. Twentieth century viewers tuned in en masse to a few evening network TV programs, meaning ad placements were largely a game of reaching an enormous number of people while hoping to resonate with a few. But 21st century viewers often let a Netflix or TikTok algorithm suggest what to watch next, meaning advertising opportunities can be smaller-scale but reach a more-tailored audience.

Advancing technology also helps. BEN has developed, through artificial intelligence and machine learning, the ability to fairly accurately determine which new TV shows will become hits. The team communicates that to Frito-Lay and other companies looking to gain visibility for their brands or products via Hollywood. The company, owned by Microsoft Inc. founder Bill Gates, also plans to partner with data company 605, which captures information from set-top boxes and smart TVs.

With that information in hand, a company like BEN has new digitally enabled flexibility. People watching the exact same scene of the same show may be advertised different products, depending on who and where they are. Hiram Lodge was eating a bag of Doritos, but it’s possible to digitally swap that bag with Ruffles, if that brand better caters to the personal taste of the viewer.

“If you’re able to navigate the content, and you have the technology to be able to figure out to prioritize and predict how to best target your audience, you can literally have the impact of a Super Bowl ad every week,” says Ricky Ray Butler, the chief executive officer of BEN. “There’s seriously that much content that is out there.”

Product placement could benefit from another

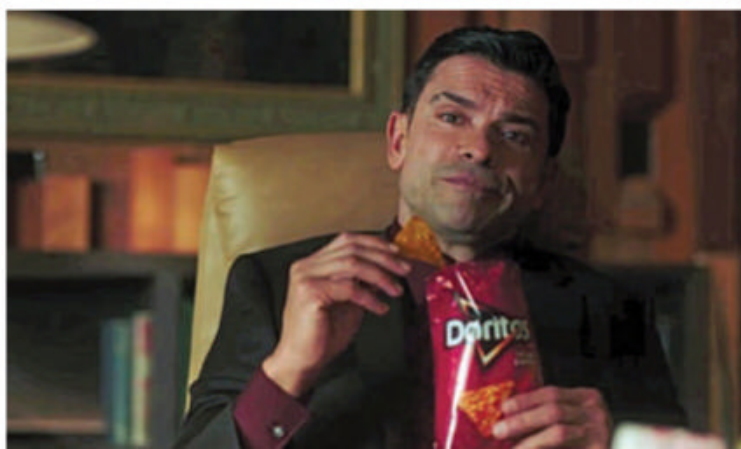
challenge in the advertising world: consumer pushback against hypertargeted online ads. Just as viewers are increasingly intolerant of having a TV show interrupted for ad breaks—and willing to pay for ad-free versions of streaming services—they’re also growing weary of feeling dogged for weeks by digital ads associated with things they search for on platforms like Google and Facebook. Apple Inc. has started to limit such hyperfocused advertising, and others may follow suit, offering product placement yet another opportunity to break ground.

“Consumers are getting wise to it, and that’s why, I think, Apple was the first one” to crack down, says Allen Adamson, co-founder of marketing company Metaforce. “Product placement can be more natural, and part of what marketers are searching for is authenticity.”

Global product placement spending is projected to rise 13.8%, to \$23.3 billion, in 2021 from a year earlier. During the same period, overall marketing spending is expected to rise only 5.9%, to \$1.35 trillion, according to data from researcher PQ Media.

The more the technique is used, the more marketers are able to determine whether the messaging worked. In a 2019 study, Schweidel and Indiana University professor Beth Fossen found they could track product placement in TV shows with an uptick in social media chatter and web traffic to the companies. BEN studies what consumer opinions of brands are after they’ve been exposed to product placement, but is trying to sift through huge amounts of data to get more precise readings. BEN is also working to measure how the practice stimulates retail foot traffic and ultimately in-store purchases.

“So long as we continue to see positive returns ►



▼ 2020 movies with the most product placement value\*

<i>Bad Boys for Life</i>	\$90m
<i>Spenser Confidential</i>	85
<i>The Gentlemen</i>	69
<i>Wonder Woman 1984</i>	59
<i>Tenet</i>	53
<i>Extraction</i>	48
<i>The Wrong Missy</i>	33
<i>The Old Guard</i>	33
<i>Sonic the Hedgehog</i>	33
<i>Project Power</i>	32

◀ BEN’s placements have included Cheetos snacks in singer Lizzo’s *Good as Hell* music video and Doritos chips on the *Riverdale* TV series



◀ from paid product placement, and consumer behavior continues to pivot toward media consumption in ad-free/ad-light environments, I would anticipate more investment will follow,” James Clarke, a senior director of media strategy at Frito-Lay North America, said in an email.

Still, more data-driven hypertargeting of product placement could stoke the same kind of consumer pushback that online digital ads have received. CEO Butler is aware the practice could cause some discomfort, especially when it’s bankrolled by Gates, one of the 10 richest people on Earth. But

he says that the complex data his company uses to help marketers is all about explaining how groups—rather than individuals—react, while conceding that his focus is on ensuring his company’s product placements turn into sales.

“It’s the next frontier of advertising,” Butler says. “Because of all this data, you can get way more impact and guarantees that people are actually seeing the content you’re in.” —*Kelly Gilblom*

**THE BOTTOM LINE** Product placement spending is projected to reach \$23.3 billion this year. It could grow even more as marketers look for ways to reach consumers who pay for ad-free streaming.



● Butler

## Grounding China’s Personal Shoppers

● A government shift and Covid travel restrictions have stalled *daigou* who buy goods overseas for Chinese consumers

Vivian Li, a stay-at-home mother in Shenzhen, used to make weekly trips abroad, leaving her husband in charge of their toddler and traveling to Hong Kong or Tokyo with two empty suitcases. She would fill them with Lancôme eye creams, Pola shampoos, Louis Vuitton handbags, and other products that in China were either much pricier or simply unavailable—sometimes clearing out the store shelves for items that internet celebrities had recommended. Then she would return home and send the goods via express delivery to clients who’d hired her to shop for them. Working as a personal shopper, or *daigou*, was a lucrative job for Li, 28, who could make more than 30,000 yuan (\$4,626) a month from her travels.

This army of gray-market surrogate shoppers has long been a feature of China’s retail sector, serving consumers who crave items that aren’t available locally or are sometimes significantly more expensive in the country. Despite the government’s best efforts to kill off the *daigou* trade through stricter customs checks and eased taxation rules for legitimate cross-border e-commerce channels, it grew to \$40 billion in revenue in 2019, according to the consultancy Proresearch in Beijing.

Then came Covid-19. China slammed its borders shut to keep out the virus, putting a halt to most overseas travel—and the business of Li and other *daigou* operators. Although she places some orders through overseas partners, without Li on-site to personally vouch for the provenance of the products, many clients don’t trust the authenticity of the goods. That skepticism has led her to lose more than half her business. “Many of my *daigou* peers

have exited the market,” she says. “I just hang in there hoping the border can reopen soon, but the longer we wait, the more likely my clients have found other channels and leave forever.”

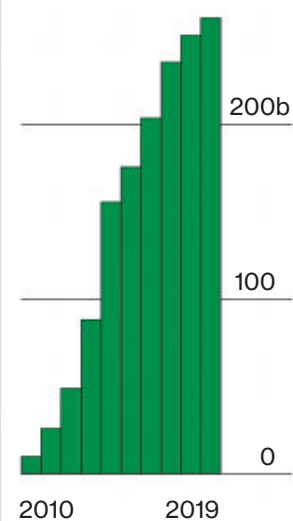
The collapse of *daigou* has also left businesses, whether infant formula makers or cosmetics retailers, struggling. Before the pandemic, some foreign companies grew rapidly thanks to the trade. By selling to personal shoppers and letting them handle the delivery back to China, they didn’t have to invest in building local retail operations of their own. Companies could also avoid requirements to comply with Chinese labeling and packaging laws.

“The whole *daigou* sector has dried up,” says Sage Brennan, co-founder of China Luxury Advisors, a consulting company in Los Angeles. “A lot of consumers have gotten into more legitimate cross-border e-commerce, and that becomes easier as time goes on than relying on the gray markets.”

Companies that counted on *daigou* sales are now saddled with excess inventory. “*Daigou* is unlikely to reach its heyday market size anymore even after the pandemic eases,” says Ethan Ye, a principal in Shanghai for consultants Oliver Wyman. One reason: Luxury brands that focused on expanding in China during the pandemic are putting more pressure on *daigou* rivals, says Max Peiro, chief executive officer of Re-Hub, a data analytics company in Shanghai. “More and more brands are taking active measures” against the gray-market sellers, he says. “They realize this is a situation they need to try to mitigate.”

One of the most popular *daigou* products is infant formula, and during the offshore shopping

▼ Size of China’s overseas *daigou* shopping market, in yuan





industry's peak time, from 2010 to 2019, Australia, Hong Kong, and other places restricted the number of containers individuals could purchase to prevent daigou shoppers from buying up all the supply. But A2 Milk Co. in New Zealand downgraded its forecast in May for the second time in five months, after its revenue in Australia and New Zealand fell about 30% in the second half of 2020 because of disruption to daigou channels. The share price of the company, among the largest on New Zealand's stock market, has fallen more than 60% over the past 12 months, compared with an 8% rise for the benchmark index.

The outlook for A2 and rivals Danone SA and Reckitt Benckiser Group Plc is grim as the delta variant spreads and travel curbs persist. "The longer this happens, the harder it will be for Danone, Reckitt and A2 Milk to rebuild China sales as their local customer bases shrink," Bloomberg Intelligence analysts Catherine Lim and Kevin Kim wrote in a report published on July 5.

Even before the pandemic, there were signs the business faced tougher times. Worried about lost revenue, China's government tightened customs checks and tax regulations. Chinese consumers also were gaining more options domestically, a result of the proliferation of cross-border e-commerce services and duty-free malls.

Some customers might be lost for good as travel curbs change consumer behavior. About 60% of Chinese consumers last year used cross-border e-commerce platforms, led by Tmall International and JD International, according to IResearch. Those online retailers had import sales of more than 200 billion yuan in 2020, and their sales should grow about 30% annually over the next two years, even as the pandemic eases, IResearch says.

Japanese drugstore operator Tsuruha Holdings Inc., popular among daigou customers for its beauty and personal-care products, is turning to online platforms. In September it opened a store on WeChat, the app that Tencent Holdings Ltd. owns, to deliver products directly to customers in China. At the top of every product page of its WeChat store are the Chinese words "Shipped from Overseas, Authenticity Guaranteed," because even the most price-sensitive daigou consumers worry about fake products and shoddy quality.

To discourage customers from going back to daigou, some brands are offering more services designed to build longer-term relationships with individual consumers. Japanese cosmetics maker Shiseido Co. has appointed beauty consultants to provide one-on-one services to its Chinese VIP members and to send them free product samples.

Shanghai-based Ushopal, founded in 2017, works with more than 3,000 online influencers and helps organize popup stores to promote items such as perfume from Juliette Has a Gun and lipstick by Suqqu. Customers placing orders via Ushopal's cross-border e-commerce platform can get delivery in four hours from its Shanghai-area warehouse.

For luxury brands in Europe, daigou hindered efforts to build relationships with customers; the buyers purchased in bulk for clients, so the brands couldn't identify them. "It's all about knowing the local client now and establishing a long-term relationship," says Jonathan Siboni, CEO of data intelligence firm Luxurysight in Paris. "It's more than just a one-off handbag sale."

Some brands have raised prices in Europe to narrow the advantage over the prices of their goods in China, undercutting one of the main reasons the



daigou started in the first place. "You don't buy with daigou when you only have a price differential of 15% to 20%," Siboni says. "There was a rationale if the differential was 50%, but that's no longer the case."

Still, Li and other daigou say they expect at least some customers will return. A Japanese beauty retailer Li works with is getting ready, opening several warehouses in China for some hot-selling products to shorten the delivery time to consumers. Li's job will be to drum up business through her social network. It won't be like the old days of overseas shopping, she says, but that's all right. "Most customers are fine to pay" the import duties, Li says. "They still can't find some of the products in domestic channels anyway." —Bruce Einhorn, Daniela Wei, and Angelina Rascoet

**THE BOTTOM LINE** Daigou shoppers, who make purchases offshore for customers in China, were a \$40 billion business. The pandemic travel halt is fueling the practice's decline.



# TECHNOLOGY

# Chasing Pirates

# Hire a Vigilante

● A scrappy company is helping creators get stolen erotic images off the internet

Dan Purcell's transformation into a content protection vigilante began several years ago, with a moment of personal reckoning. The Irish computer programmer was living in California when his girlfriend at the time persuaded him to perform live on Chaturbate, a site that hosts adult web shows. He did several webcasts with her before deciding it wasn't for him. He moved on, went back to Ireland, and never thought about it again—until 2018, when his new girlfriend angrily presented him with the videos. “It was very embarrassing,” he says, “very, very, very humiliating.”

Purcell had thought the videos would be streamed live, then disappear, but people had built programs to automatically record the webcam footage. He started a weekslong hunt for the culprits. Because he'd used his social media handle on Chaturbate—“I still want to beat myself upside the head for this”—he just searched for his own username, along with some obvious keywords. What he discovered was a sprawling online ecosystem of groups dedicated to reselling stolen adult content. And, eventually, a business opportunity.

At first alone, then with a handful of part-time employees, Purcell began hiring himself out as a sleuth and enforcer, helping adult content creators find illegal copies of their photos and videos and get them taken down. Borrowing the Irish word for justice, he named his infant company Ceartas DMCA Ltd., with DMCA referring to the Digital Millennium Copyright Act.

Purcell isn't alone. As direct-to-consumer adult content has proliferated, an industry has emerged to try to police the piracy of it, including such services as DMCA.com, Rulta.com, and TakeDownPiracy.com. They're filling a growing

void at a moment when individuals have more power to create and post their own content online, but less power to control what happens to it.

Figures like Purcell at times employ controversial methods: He says he once sifted through a 14-year-old's Xbox Live account for personal details, then used the kid's real name to pressure him into taking down stolen nudes and writing an apology letter. But his customers see him as their last, best option in an industry where tech platforms and the authorities can be slow to take action.

Ceartas in particular owes its existence to OnlyFans, a platform for creators to charge viewers for photos and videos. The company hosts a variety of people, from chefs to musicians to personal trainers, but its biggest stars are adult performers.

OnlyFans, founded in London in 2016, has seen business explode during the pandemic. Since 2019 the number of “fans” has increased more than tenfold to over 100 million, the company says. Last year, those fans paid about \$2 billion for access to photos and videos, meaning OnlyFans took in about \$400 million from its 20% cut. All told, creators on the site have made more than \$4.5 billion.

OnlyFans is now said to be in talks to raise funding at a valuation of more than \$1 billion. But the skyward trajectory of OnlyFans and the rest of adult self-publishing is hindered by digital pirates, who force performers to compete with their own content elsewhere on the web for free.

Take Joey Fisher. Since she was 19, she's worked as what the British call a “glamour model”—a genteel term for entertainment that leaves little to the imagination. Fisher, 28, lives in Wales and joined OnlyFans about two years ago. The subscription fee (\$15.40 a month for her channel) and tips from fans are generating the best income she's ever made from modeling. Plus, she's her own boss.

The one problem, she says, is the piracy. A search for Fisher online produces dozens of porn web pages promoting images and videos ripped from her OnlyFans channel. Links promising stolen





photos of her have proliferated on Reddit, and chat platform Discord servers tout access to images of her and other celebrity nudes for \$9.99.

Having her work reproduced always came with the territory. “Even when I shot for a magazine, those images would end up on porn websites or random forums,” she says. But because of Fisher’s time and investment in building her OnlyFans channel and expanding her subscriber base, the thefts bothered her that much more.

“It’s your business, so the amount of time and effort that goes into it, and it just gets ripped off and put on the internet for free, it’s really infuriating,” Fisher says. When she would manage to get a photo taken down, it would just reappear elsewhere. “It’s just constantly search it, get it taken down, repeat.”

Earlier this year, Fisher’s best friend recommended she contact Purcell, who, when he’s not pursuing adult content thieves, still works as an engineer at software company ZenDesk Inc. They talked for an hour on the phone about the software Ceartas uses to trawl the web for pirated photos and how he adds some bite to warnings he sends to site hosts by invoking the DMCA. “Dan made me aware of multiple websites I’d never heard of before,” she says. She’s now one of Ceartas’s more than 60 clients, paying about \$150 to \$230 a month.

Adult performers exist in a cultural and economic gray area. Because Apple Inc. and Google forbid erotic content apps on their platforms, OnlyFans is accessible only through a web browser, not a mobile device. Not having an app means that OnlyFans can’t build in certain protective features—like the tool Netflix Inc. uses to black out a user’s screen when a clipping service is detected. Performers’ lone recourse is often to fill out a form on the company’s site registering their grievances.

Purcell’s first big case after his own was in November 2020, when a sprawling data dump of stolen photos appeared on the servers of Discord. The database leak, which mainly contained intimate pictures of Irish women, was massive and searchable. In a statement about the incident, Discord said it took “immediate action” and “banned every user account involved.” Watching it unfold, though, Purcell saw a need for his skills.

He asked performers he knew for images—“Every third girl I know was probably on OnlyFans,” he says—and posted them to one of the Discord servers. As a contributor, he quickly gained the trust of the people running the server. Then he emailed them a warning, falsely claiming that the police were on to them. It was enough to spook ►

▲ Purcell’s software tracks down pilfered OnlyFans content



◀ the administrator, who confessed in a message to Purcell that he was a teenager and immediately took down the server. The operation took less than an hour. Purcell had found his calling.

OnlyFans, for its part, has every reason to help creators keep their private images off other sites. In a response to emailed questions, a spokesperson said the company is “firmly in the fight to protect user content.” When it pursues stolen images, the “takedown success rates are extremely high.” The takedown services are free, and the company has “invested significantly” in the team that works on them, the spokesperson said.

Yet the thefts persist, as do independent efforts to stop them. Right now, Ceartas is still a tiny operation. Purcell has been speaking with potential investors to expand his business while working out of the back of his aunt’s house, where he lives. Soon he hopes to focus on the company full time.

As his business has increased, Purcell says he’s automated a lot of the searches and takedown notices, and he only rarely uses the social engineering tricks that got him started. Recently he even hired a lawyer to go with the email address, legal@weareceartas.com, he’s long used to send out his warnings. “Any company can have a legal department,” he says. “Doesn’t mean you’re a practicing attorney.” —Amy Thomson and Drake Bennett

**THE BOTTOM LINE** Self-published adult content has exploded during the pandemic—and piracy along with it. New companies are cropping up to help performers get stolen photos taken down.

# Masters Of the Universes

● When a streaming service wants a big, Marvel-style franchise, two brothers get a call

Before Joe and Anthony Russo were dreaming up film and TV franchises, they were part of the biggest one. The brothers directed two Captain America movies and two Avengers films, installments in the Marvel Cinematic Universe, which together took in almost \$7 billion in ticket sales. Now they’re the guys

industry executives turn to when they want to create a cinematic universe of their own.

Throughout most of the history of Hollywood, franchises were born out of success. The studios ordered up sequels only after a TV show or movie became a hit. But the money-minting capabilities of Marvel, which stitches together interlocking stories across some 20 movies so far, has inspired Hollywood to rethink its approach. “The blockbuster gave way to the franchise play,” says Donna Langley, the chairman of Universal Filmed Entertainment, which has hired the Russos to make a sci-fi franchise.

Now, the surge of at-home streaming has made cohesive film worlds even more appealing. Reliable franchises can help such services as Amazon Prime Video, Disney+, HBO Max, Netflix, and Peacock retain customers who might otherwise cancel at any time.

In 2019, the head of Amazon Studios, Jennifer Salke, wanted to create a U.S.-based series that would go on to splinter into related shows, each set in a different foreign country. For help, she called the Russos, whom she’d first met two decades ago when they were directing TV sitcoms.

The Russos got to work creating an extensive document for Salke, outlining in sweeping strokes the parameters of *Citadel*, a global spy thriller. They also brought on Midnight Radio, a writing team with whom they have a close relationship, to serve as the showrunners and “creative gatekeepers”—a Russo term for the people overseeing the creation of the mythology of the universe.

Even by the elevated standards of modern TV, *Citadel* is a big swing. Amazon is spending \$165 million on the first seven episodes of the show, which will debut in 2022 and star Priyanka Chopra Jonas and Richard Madden. Before a single episode has aired, it’s already hired writers to develop spinoff series set in Brazil, France, India, Italy, and Mexico.

*Citadel* is one of a half-dozen or so universe-creation projects that the Russos’ company, AGBO, is developing. Last year, AGBO produced *Extraction*, an action flick starring Chris Hemsworth that quickly became the most-watched original movie in Netflix’s history. Afterward, the streaming giant commissioned AGBO to begin work on a series of follow-up films. For Universal, AGBO is developing both a movie and a TV series based on the comic *The Electric State*. For Amazon, in addition to *Citadel*, they’re making an adaptation of the comic *Grimjack*.

“We have a really uniquely accomplished creative team that can not only imagine but also execute at the greatest scale and scope,” says Jason Bergsman, AGBO’s chief executive officer. “Our goal is to launch new franchises that drive audience engagement for



● Joe



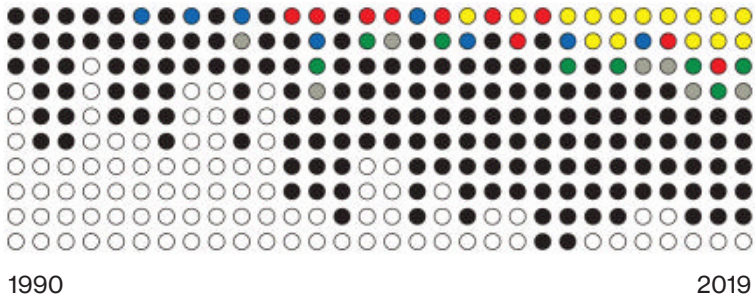
● Anthony



## Franchise Takeover

Ten highest-grossing films, international box office

- Marvel Cinematic Universe
- Harry Potter/Wizarding World
- James Bond
- Spider-Man
- Star Wars
- Other series and franchises



DATA: THE NUMBERS

years to come that extend across film and TV, as well as digital and interactive experiences.”

Born and raised in Cleveland, Joe, 50, and Anthony, 51, didn't start off as franchise-building specialists. Their first movie, *Pieces*, was a small-scale comedy that premiered in 1997 at the Slamdance Film Festival, an event created by filmmakers who were rejected from Sundance. The Russos' second project was a heist movie that led to work in TV, most notably on the comedies *Arrested Development* and *Community*. It was something of a surprise when Marvel Studios hired them to direct *Captain America: Winter Soldier*, the second film in the growing franchise, since they'd never made a movie on a similar scale.

The movie, which premiered in 2014, grossed more than \$714 million worldwide. Soon after, the

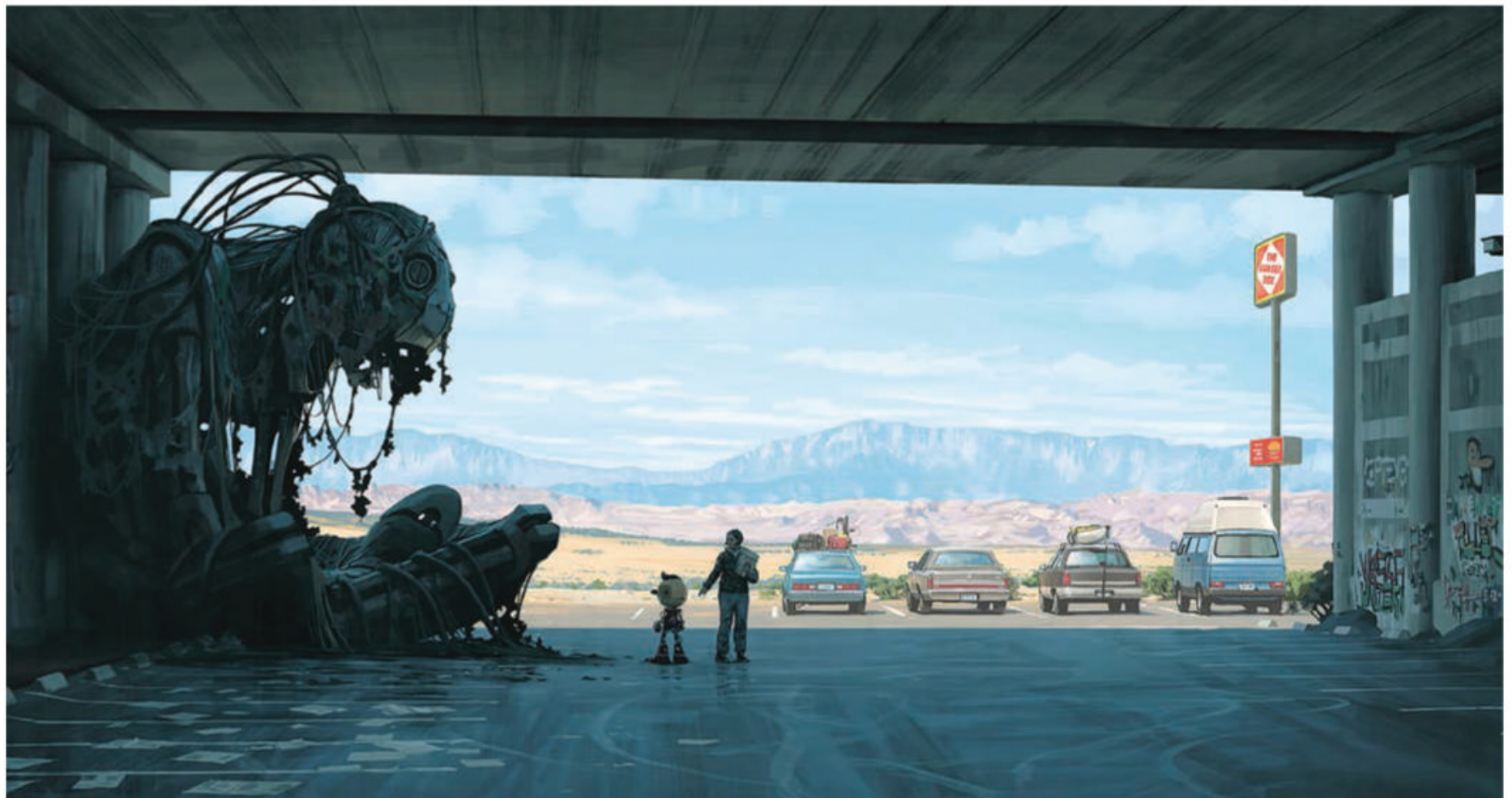
Russos formed AGBO. They picked the name by closing their eyes and pointing to a random listing in the Cleveland phone book. They recruited their sister, Angela Russo-Otstot, who now oversees creative. And they brought on Christopher Markus and Stephen McFeely, the writers of *Winter Soldier*, to join their nascent company. “I don't know many companies that have a screenwriting team as owners and as long-term committed partners,” says Bergsman.

Since its formation, AGBO has turned franchise creation into a kind of science. For each project, AGBO taps a writer to be the lead creator of the emerging world. The writer then works with AGBO's team to develop the so-called bible, a richly detailed outline of a fictional universe, including characters, settings, and plotlines that serve as the foundation of future works in the project. That in turn leads to a draft of the first script.

A couple of years ago, the Russos bought the rights to adapt popular anime series *Battle of the Planets*. They then hired *F9* screenwriter Daniel Casey to be the project's creative gatekeeper. Now he's writing the first draft of the script and sketching out a TV series that could complement and intersect with it. Meanwhile, AGBO is also using material from the bible on what could eventually become a serialized podcast. “It's super helpful to have a road map beforehand,” says Markus. “You don't have to be married to it.”

Markus and McFeely have spent most of this year working on drafts of *Electric State*, a feature ▶

▼ Universal's sci-fi franchise *Electric State* will test the Russos' vision





◀ adaptation of a narrative art book by Swedish conceptual artist Simon Stalenhag, set in an alternate version of the U.S. They're planning a companion TV show, which is supposed to premiere on the streaming service Peacock, with the hope that audiences see the *Electric State* movie in a theater, then go home and watch the spinoff streaming series.

In the meantime, the Russos are shooting *Gray Man*, one of their potential franchises for Netflix, a spy thriller about a CIA operative who is betrayed. The movie, filming this summer in Europe, is focused on the spies. But the organization lends itself to deeper exploration (and a potential TV

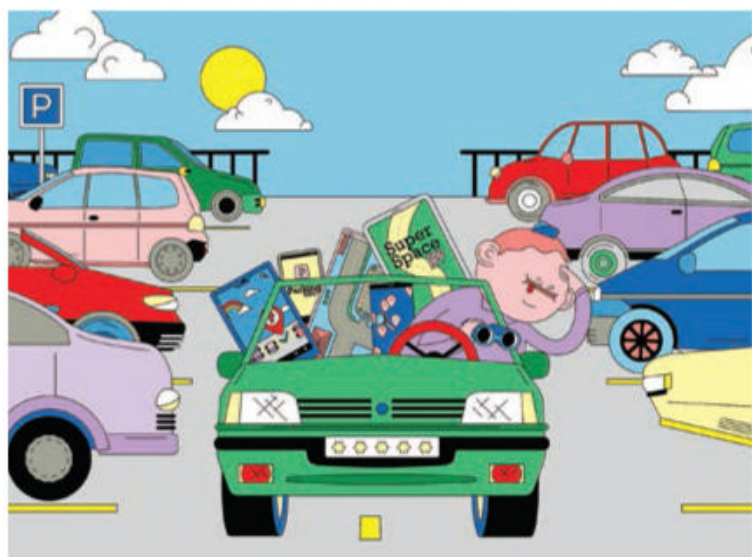
series or video game). "These aren't stories you can conceive overnight," says Joe Russo. "It takes a lot of patience and discipline."

AGBO borrows from the Marvel playbook, Russo says, but not too much. Marvel creator "Kevin Feige used to always say, 'Well, we can't make the next one until we make this one a success,'" Russo says. "But conversely, if you aren't planning for it from the start, you make a movie, the movie is successful, and you've lost momentum." —*Lucas Shaw*

**THE BOTTOM LINE** The growth of streaming services has increased media companies' appetite for franchises, and the Russo brothers are masters of the form.

# Silicon Valley Wants To Park Your Car

● Traffic is back after a pandemic hiatus, ushering in a mini gold rush for startups that help people find a parking spot



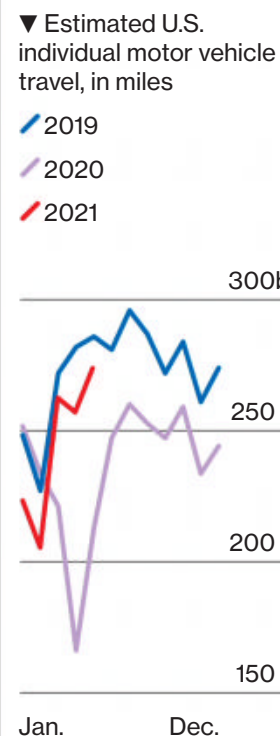
During the depths of the U.S. coronavirus pandemic, cars sat idly in driveways, city streets were deserted, onetime commuters worked from bed—and it was much, much easier to find a parking spot.

All of which was devastating news for the small cadre of tech startups dedicated to helping people find and reserve places to park. For SpotHero Inc., which makes an app that helps drivers locate parking spaces, business was down 90% in April 2020 compared with February. The company laid off half its employees. "It was a really hard time for us," Chief Executive Officer Mark Lawrence says.

Now, at last, drivers are back, and so is the

familiar American pastime of hunting for a parking spot. In the U.S., traffic was up 55% in April from a year earlier, according to the Federal Highway Administration. And although urban roads were slower to refill than their suburban counterparts, traffic in such cities as Chicago, Los Angeles, New York, and Washington, D.C., finally touched pre-pandemic levels again in June, according to Inrix, which analyzes mobility data.

The result has been a wave of new customers for SpotHero and companies like it. SpotHero bookings started to come back in January, then accelerated. "It was slowly, then suddenly," Lawrence says. Now the startup is profitable for the first time in 10 years, he says, thanks in part to a surge in car ownership spurred by people avoiding public transit. At FlashParking Inc., which makes two spot-finding apps and helps event companies and garages coordinate availability, demand is higher than it was before the pandemic in some cities. Meanwhile, SpotAngels, which uses crowd input to create maps of nearby open spaces, says monthly revenue since its previous high in February 2020 had tripled by May 2021. "It's interesting to see how dark it was, and can get," SpotHero's Lawrence says, "and then have such optimism now."





Before the pandemic, the industry was in crisis, says Eran Ben-Joseph, a professor of urban planning at the Massachusetts Institute of Technology and author of *ReThinking a Lot: The Design and Culture of Parking*. The rise of such ride-sharing services as Uber Technologies Inc. and Lyft Inc. had meant that many parking garages at stadiums and the like were forced to retrofit their spaces for other uses, such as mini-distribution centers for packages.

Post-pandemic, though, parking companies are benefiting from a renewed love of personal space. “I do think right now there’s a little bit of a psychological issue with taking public transit or taking Uber,” Ben-Joseph says. He also thinks parking apps in particular may be benefiting from the lack of desire to touch kiosk screens or hand over cash to an attendant.

Investors are ready to bet that tech-enabled parking is sticking around. SpotHero, which makes money by taking a cut of garage fees, has raised about \$120 million. Arrive, which also takes a cut of fees, raised \$68 million before it merged with FlashParking earlier this year. And SpotAngels, which brings in revenue through subscriptions, has raised \$3 million.

The nature of the competition for parking spaces has shifted post-pandemic. “Traffic is back, but it’s very different in its shape and form,” says Dan Roarty, president of the Arrive division of FlashParking. For example, demand for parking in New York now exceeds its pre-pandemic levels, but it’s spread throughout the day instead of at peak commuting times, Roarty says. Inrix found that in the U.S. people are traveling more among suburbs around cities, instead of from the suburbs to downtown—indicating that remote work is still having an impact on traffic patterns.

People are also ordering more items online, leaving a larger share of shopping trips and food runs to delivery drivers. That’s led Arrive and FlashParking to work on a service to find delivery drivers a spot in a garage where they can park the car, use the restroom, and charge their vehicle during breaks. Demand for those amenities is “at a scale that was unheard of because of Covid,” says Neil Golson, an executive vice president at FlashParking. Those services will be layered on top of the company’s technology that helps drivers locate spots and garages manage lots. A small patch of asphalt is just the beginning. —*Priya Anand*

**THE BOTTOM LINE** Traffic is back in the U.S. as lockdowns ease and germ-averse commuters avoid transit. The shift has boosted startups that help people find parking.

# BW Talks

# Gregory Hayes

Raytheon merged with United Technologies to create a \$123 billion aerospace and defense behemoth just as the pandemic was grounding flights. The chief executive officer thinks travel will never be the same. —*Carol Massar*



- Hayes is a trained accountant who spent more than two decades at United Technologies
- During his tenure there, he spun off divisions to focus on aerospace
- The 2020 merger that created Raytheon Technologies Corp. was one of the largest the industry had ever seen

How does the economic growth trajectory look to you over the next six to 12 months?

Great. We have two businesses: a commercial aerospace business which was just devastated last year, down 50%. And then we have a very, very big defense business. Both of those businesses are going to experience growth in the next 12 months, in the next two or three years.

What do you anticipate for business travel?

We’re starting to see it pick up. But certainly business travel is forever changed, because of Zoom. Our own view is you probably don’t see a full recovery in business travel until 2024, 2025. I hope we’re wrong.

The deal between Raytheon and United Technologies was enormous. What did you learn?

We had an aerospace and defense business at UTC, which was about \$45 billion, merging with a \$25 billion

business focused primarily on defense. Interestingly, what we found was that the cultures weren’t all that different.

What technological breakthrough will have the biggest impact on the defense industry?

It could be hypersonic weapons. We’ve talked about stealth for the last 30 years, but speed trumps stealth when you’re talking about something that can go up to Mach 20, which is about 17,000 miles an hour. The ability to defend against hypersonics is the huge market.

What do you think of the billionaires going into space?

I think what they have done with the commercialization of space transport is phenomenal. Space tourism will be a niche market for a long time at \$250,000 a ride, for maybe 10 or 15 years, which is about my planning horizon. Then I’ll be too old to worry about it.

● Interviews are edited for clarity and length. Listen to *Bloomberg Businessweek With Carol Massar and Tim Stenovec*, weekdays from 2 p.m. to 5 p.m. ET on Bloomberg Radio.



## ● Two visions of recovery—one bright, one darker—rule the markets this summer

Perhaps, in retrospect, it was foolish to ever think of the world in black-and-white terms during the age of Covid-19. Yet that's the trap so many of us fell into, whether corner-suite executives planning a workforce's return, decision-makers in government, or investors trying to get in front of wherever the markets decide to go next.

The scintillating vision of the dark era of Covid lockdowns quickly giving way to a bright, vaccinated future was simply too enticing to resist. But, at the moment, a much less satisfying reality is settling in: a sort of gray area between full recovery and the lockdown-era doldrums as the virus stages a fresh assault on the unvaccinated and its relentless mutations raise questions even for those who've gotten their shots.

Consider the mixed messages in the past couple of weeks as the midway point approaches for a summer heralded as the start of a new Roaring 20s, at least in the U.S. and much of Europe. Britain celebrated the easing of Covid restrictions on July 19 in what was branded "Freedom Day." But its prime minister was locked up in quarantine, and U.S. officials issued a stern warning for Americans to stay away from the U.K. because the virus was raging there again. Los Angeles reinstated indoor mask mandates, but New York declined to do the same. As "back to school" signs began popping up at stores, Apple Inc. postponed its deadline for employees to return to the office. In Tokyo the current buzz is about which Olympic athletes have caught the virus instead of which ones will wear the most medals.

For those who trust the supposed wisdom of crowds in the financial markets, the picture is foggy.

Benchmark indexes took a dip in the middle of July, though they got a partial rebound with a strong rally on July 20. Even before that, share prices had been slumping for companies expected to reap the biggest windfalls from a post-Covid boom, and that's not only airlines, cruise lines, and hotel companies but also banks, energy producers, and wide swaths of the small-cap market. Unprofitable companies—with stocks that are popular when the appetite for speculative, risky investments is strong—have been among the most adversely affected.

The prognosis from the bond market arguably has been even more worrying for equity investors seeking a second opinion. Early in the year, as optimism spread that vaccines would unleash bottled-up consumer savings and demand to create a prolonged expansion, investors sold off the safest of assets such as Treasuries, pushing the yield on the 10-year note up to 1.74% by the end of March. (Yields rise when prices fall.) Yet they've been returning to that haven ever since, bidding bond prices back up and dragging the yield back down closer to 1%. In general, booming bond markets are a sign of pessimism.

"Obviously the bond markets are suggesting to us that there's some weakness in growth, and that is linked to the delta variant" of the coronavirus, Katie Koch, co-head of fundamental equities at Goldman Sachs Asset Management, told Bloomberg TV on July 20. Yet to her and many of her peers, the signals corporate America is sending are more positive and stronger than the bond market's. As second-quarter earnings start trickling in—with about one-tenth of the companies in the S&P 500 reporting results so far—the early read is encouraging: More than 86% of the companies that have reported have beaten analyst estimates, and profit growth is clocking in at a breathtaking 141%, according to Bloomberg data.

Still, that growth compares to the second quarter of 2020, when Covid's grip on the economy was tightest. But to Koch and many of her peers,



# Playzone

there's no reason to give up on equities now simply because the results will probably mark the recovery's peak. Although the growth that's to follow will be less dazzling, it remains significant. S&P 500 companies are forecast to boost profits by more than 10% in both 2022 and 2023, according to analyst estimates that Bloomberg compiled.

Digging deeper into the signals coming from financial markets, there aren't yet any major warning signs to suggest that the delta variant—or whatever mutations might follow—will be enough to snuff out the recovery. Economic models based on market inputs show that the chance of another recession in the future is very slim. A model that Bloomberg strategist Cameron Crise created puts the probability of recession in the next 12 months at only 7%.

Frothy valuations do give many fundamentally minded investors reason for caution. And the gray area of the post-Covid world is engulfing the playing field when it comes to both monetary stimulus from the Federal Reserve and fiscal spending stimulus from Congress—the two forces that brought the economy and the markets back from the brink last year. The pickup in short-term inflation has been stronger than many expected, and it provides talking points to argue against further stimulus for both Fed policymakers and politicians starting mid-term election campaigns in the coming months. (How severe a threat the delta variant poses to those talking points is anyone's guess.)

Undeniably, investors' buy-the-dip instinct, honed by the experience of 2020, appears to be as alive as ever. The July 20 rebound echoed one that followed a similar episode of jitters in June. This response shouldn't be too surprising, given how much cash American consumers and businesses have socked away in the past 16 months. The personal savings rate in the U.S. averaged less than 7.5% in the five years before Covid hit. After surging to as high as 33.7% in April 2020, it's still elevated at

12.4%. Before the pandemic it hadn't been that high since the early 1980s. About \$4.5 trillion remains stowed away in money-market mutual funds, earning basically nothing. That amount has come down from its peak, but it's still about one-quarter higher than before the pandemic. An additional \$17 trillion is on deposit with commercial banks, a record amount that's 33% higher than at the same time of year in 2019.

Where will all that cash get spent? Will there be splurges on airfare and hotels and gasoline for road trips? New return-to-work business attire in a larger size to accommodate waistlines that grew a bit during the pandemic? Or will the reemerging Covid threat mean it's spent once again on sweat-pants, Amazon impulse buys, streaming services, and maybe some furniture for the home office? Will corporations put their cash toward share buybacks, acquisitions, and research and development? Or to keep the lights on in another dark period of Covid?

The closely followed strategists at JPMorgan Chase & Co., led by Marko Kolanovic, say the market has overreacted to the threat of the delta variant. They argue that the latest flare-up of the virus shouldn't lead to a return to lockdowns; although the rise in cases is alarming, vaccinations have sharply cut the threat of death from the virus. And this factor should lead to a rebound in stocks that benefit from the reopening amid continued inflation and higher bond yields.

For the nonprofessional investors, however, the sloppy summer market action provides a perfect time to reflect on the evergreen advice that diversification is the best way to avoid the discomfort which accompanies attempts to pick stocks that will beat the market. In other words: Just leave it in the index fund, and enjoy what's left of the summer.

—*Michael P. Regan*

**THE BOTTOM LINE** At the same time investors are raising doubts about the pace of reopening, they're wondering if the Fed and other policymakers will keep providing stimulus.

**“Obviously the bond markets are suggesting to us that there's some weakness in growth”**



# China Wants Stocks To Stay Home

● Hundreds of the nation's companies have listed on U.S. exchanges. That's getting harder

For two decades, Chinese tech companies have flocked to the U.S. stock market, drawn by a friendly regulatory environment and a vast pool of capital eager to invest in one of the world's fastest-growing economies. Now that trend appears to have been stopped in its tracks.

China's newly empowered cybersecurity regulator announced on July 10 that any company with data on 1 million or more users would need its approval to go public in another country. That rule would cover a wide swath of businesses and amounts to a death knell for Chinese initial public offerings in the U.S., according to longtime industry watchers. "It's unlikely there will be any U.S.-listed Chinese companies in 5 to 10 years, other than perhaps a few big ones with secondary listings," says Paul Gillis, a professor at Peking University's Guanghua School of Management in Beijing.

The clampdown was triggered by ride-hailing giant DiDi Global Inc.'s decision to push ahead with a New York listing despite objections from regulators. It's already sending shock waves through markets: A gauge of U.S.-traded Chinese stocks has dropped about 30% from its recent high. For investors in companies that have yet to list, there's growing uncertainty over when they'll be able to exit their investments via public markets. Wall Street banks are bracing for lucrative underwriting fees to dry up, and Hong Kong is set to benefit as Chinese companies look for politically safer venues closer to home.

It's hard to overstate the importance U.S. markets have held for Chinese companies. Since 1999 more than 400 of them, including most of the country's technology industry, have picked U.S. exchanges for their primary listings, raising more than \$100 billion. Chinese companies listed in the U.S. are valued at \$2 trillion. Most trade as American depositary receipts (ADRs)—surrogate securities that allow investors to hold overseas shares.

Website operator China.com Corp. in Hong Kong began the trend when it went public on the Nasdaq during the dot-com bubble. The stock, with the

ticker CHINA, surged 236% on its debut, enriching founders and backers and showing Chinese internet companies a pathway to foreign capital. All they needed was to find a way around the Communist Party's strict regulatory controls.

Unlike companies in Hong Kong, where a *laissez-faire* approach to business meant there were few rules on company fundraising, mainland-based private enterprises faced much higher hurdles. Foreign ownership in many sectors, especially the sensitive internet industry, was restricted, and an overseas listing required approval from China's State Council, or cabinet.





To get around these obstacles, a compromise was found in the shape of a variable interest entity, a complex corporate structure used by most Chinese ADRs including DiDi and Alibaba Group Holding Ltd. Under a VIE, Chinese companies are turned into foreign companies with shares that overseas investors can buy. Legally shaky and hard to understand, this solution nonetheless proved acceptable to U.S. investors, Wall Street, and the Communist Party alike.

Back in China, the government was taking steps to modernize its domestic stock market, which reopened in 1990, 40 years after shutting down following the Communist revolution. In 2009 the country introduced the Nasdaq-style ChiNext board in Shenzhen. Under Xi Jinping, who became president in 2013, access to the outside world was greatly increased, including exchange trading links with Hong Kong that allowed foreign investors to buy mainland equities directly.

In 2019, Shanghai opened a new stock venue called Star board; it minimized red tape, allowed unprofitable companies to list onshore for the first time, and got rid of a cap on first-day price moves. It also scrapped an unwritten valuation ceiling that forced companies to sell their shares at no more than 23 times earnings.

The goal was to enable Chinese tech companies to list successfully at home and be less reliant on U.S. capital. This need became all the more pressing as tensions between China and the U.S. increased during the latter part of former President Donald Trump's administration. Trump introduced tough new rules that mean Chinese companies may be kicked off exchanges in a few years' time if they refuse to hand over financial information to U.S. regulators.

Secondary listings in Hong Kong picked up, but Chinese companies still preferred New York, where it takes weeks rather than months to process an IPO application. China's strict capital controls meant domestic exchanges couldn't compete with New York's liquidity and far higher valuations for tech companies. Chinese companies have raised \$13 billion through first-time share sales in the U.S. this year alone. But after DiDi's contentious IPO on June 30, it appears the Communist Party decided it had had enough.

"The death of ADRs was inevitable," says Fraser Howie, co-author of *Red Capitalism: The Fragile Financial Foundation of China's Extraordinary Rise*. "What's interesting is the mold and template that's achieving that result. It's coming from a mindset of control and clamping down on business. That's very different from a mindset

of reform and building markets domestically."

China's move to regulate overseas IPOs coincides with stricter controls on the country's tech companies, many of which have near-monopolies in their fields and vast pools of user data. The campaign to rein in big tech companies has accelerated in recent months as Xi seeks to limit the influence of the billionaires who control them.

What happens next for Chinese companies already listed in the U.S. depends largely on what China does with VIEs. Banning them outright would be unlikely, as it would force companies to delist from foreign exchanges, unwind that structure, and then relist—a costly process that could take years. The updated regulations are expected to be ready in a month or two, people familiar with the matter have said.

Hong Kong, with its open markets and dollar-pegged currency, is increasingly looking like a viable alternative. For one thing, China plans to exempt Hong Kong IPOs from first seeking the approval of the country's cybersecurity regulator, Bloomberg News reported on July 16. If there's a forced U.S. delisting, companies that have already sold shares in Hong Kong—such as Alibaba and JD.com Inc.—can migrate their primary listing to the city. The delisted U.S. receipts, which can still trade off-exchange, won't be worthless because they represent an economic interest in the company, and holders should be able to convert them into Hong Kong-listed stock.

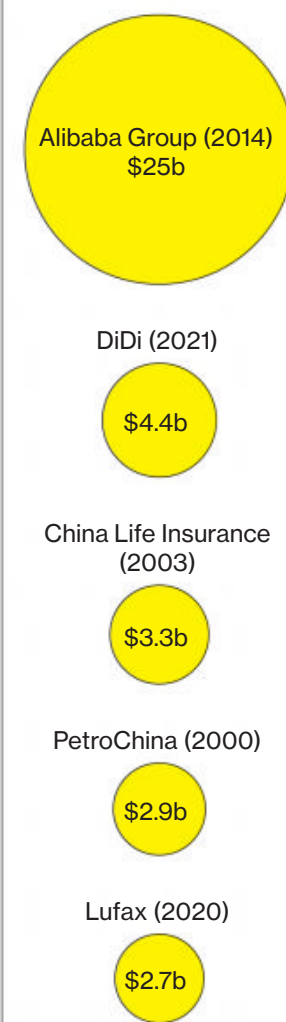
But the outlook for Hong Kong's role as a global financial center is uncertain in the wake of the Biden administration's warning over doing business in the city. An index of Chinese shares in Hong Kong fell 1.9% on July 19, taking its loss since a January peak to about 19%.

Either way, it seems as if the two-decade era that saw China's most successful and powerful private companies list in the U.S. is coming to a close. The message from China is clear: The Communist Party will have the final say on pretty much everything, including IPOs. "It's really important to own companies that are aligned with the direction of the Chinese government," says Tom Masi, co-portfolio manager of GW&K Investment Management's emerging wealth strategy fund, which has half its money invested in Chinese stocks. "I would not be financing companies that are going to circumvent anything that the Chinese government wants to accomplish."

—Richard Frost and Sofia Horta e Costa

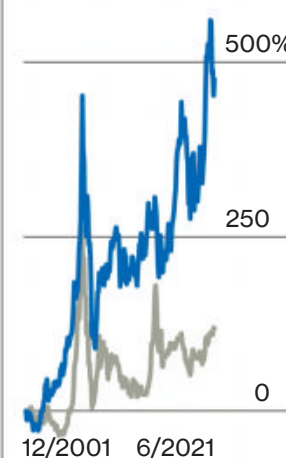
**THE BOTTOM LINE** Chinese tech companies got around restrictive listing rules by marketing their shares on U.S. venues instead. But policymakers want more control now.

▼ Money raised in largest Chinese IPOs in the U.S. since 2000



▼ Change in index since 12/31/2001

- S&P/BNY Mellon China Select ADR
- Shanghai Composite







## Are We Living in an MMT World?

● Not yet, say architects of the once-fringe school of economic thought

In the pandemic, the U.S. government has spent money on a scale not seen since World War II—without worrying too much about how it would pay the bills. That looked to some people like the triumph of Modern Monetary Theory.

A newish school of thought that wants to rehabilitate budget deficits—and get policymakers thinking more boldly about what they could achieve with public money—MMT burst out of obscurity a few years ago. It’s now regularly name-checked by top officials and big-name academics, though disapprovingly more often than not. Yet when those same people set out their own ideas about the economy, they often sound a bit more MMTish than they used to. Wall Street, meanwhile, has put out plenty of reports arguing that governments are practicing some form of MMT, for better or (usually) worse.

The MMT economists themselves dismiss much of this talk because it’s based on a caricature version that reduces their body of work to a simple

prescription: Print lots of money and spend it. They say MMT is really a window on how the economy works, rather than a checklist of ways to rev it up. In some areas, they see policy shifting in their direction—and think they deserve credit. In others, they admit to making limited headway.

We asked some leading MMT theorists to review their progress in winning the world over. The examples below are all from the U.S., but similar debates are playing out elsewhere.

### ● SLAYING THE DEFICIT BOOGEYMAN

The U.S. federal budget shortfall came in at around 15% of gross domestic product in the fiscal year ended Sept. 30—the most since 1945, by a wide margin. It’s unlikely to be much smaller this year. The headline measure of the national debt has accelerated past 100% of GDP, another postwar record.

Fear of soaring deficits was a key reason the U.S. skimped on stimulus in the wake of the 2008 financial crisis. This time it’s proved less of a deterrent, and the economy is bouncing back much faster as a result. MMTers see that as an important win. “It’s appropriate for some credit to be given to those of us who have been working so hard to help lawmakers get over some of



the anxieties about large deficits and increases in the debt that held them back during the Obama years,” says Stephanie Kelton, a professor of economics at Stony Brook University in New York and the author of *The Deficit Myth*.

Because countries such as the U.S. that issue their own money and have stable currencies don’t face the kind of bookkeeping constraints that hold back households or businesses, MMT argues, debt-to-GDP isn’t a particularly important metric: The real constraint on government spending is when there are shortages of essential resources, be it labor or lumber, that impede the economy. In such a scenario, there’s a risk that fiscal stimulus pushes up prices.

Some say that’s happening now. President Joe Biden’s spending plans didn’t stop with pandemic relief, and his administration is promoting a \$4 trillion investment in infrastructure and social programs. But with inflation running higher than anticipated, lawmakers are raising objections, a reminder that the deficit boogeyman is still alive.

Scott Fullwiler, an MMT economist and professor at the University of Missouri at Kansas City, says the Covid-19 crisis has shot down one common argument against deficit spending (used by Democrats to oppose former President Donald Trump’s tax cuts): that it risks leaving the government short of funds, so that “in the next crisis you might not be able to respond.”

Nevertheless, he expects mainstream economics will characterize the aggressive use of fiscal policy in the pandemic as a “special case”—indispensable in emergencies but inappropriate in normal times. “It’s sort of two steps forward, one step back,” Fullwiler says.

There was some evidence for that in Federal Reserve Chair Jerome Powell’s July 15 testimony to Congress. Although Powell endorsed deficit

spending during the Covid crisis, he told lawmakers it’s not sustainable in the long run because “the laws of gravity have not been repealed.”

● HOW TO SPEND ...

The U.S. has steered its economy in recent decades mainly via monetary policy: The Fed tweaks interest rates to cool or stimulate demand. MMT argues that fiscal policy is a better tool.

One objection is that adjusting spending or taxes is unwieldy compared with rapid-response decisions at the Fed. Congress can spend months arguing over spending plans, like it did after the initial virus relief in March 2020, and is usually unwilling to raise taxes.

MMT economists, along with others, say one way around this is to design mechanisms that inject or withdraw money automatically based on the state of the economy—without lawmakers having to take a vote. In academic jargon they’re called automatic stabilizers.

Fullwiler says Congress passed up an opportunity to permanently beef up programs such as unemployment insurance, relying instead on one-time payments or enhanced benefits that came with an arbitrary cutoff date. “We ended up having to keep going back to Republicans vs. Democrats, and we didn’t get anywhere at times, and that hurt a lot of people,” he says.

For MMT the ultimate stabilizer is for the government to act as employer of last resort, offering a job to anyone who wants one. Although the idea was in vogue among some leading Democrats a few years ago, it’s now largely disappeared from public debate. That’s a setback for MMTers, who say the policy could’ve proved its worth during the Covid recession, which saw unemployment surge to its highest level since the Great Depression.

“The jobs guarantee would make a lot more sense than ramping up jobless benefits and paying airlines \$300,000 per job,” or mailing checks to households that didn’t need the money, says Randall Wray, a senior scholar at the Levy Economics Institute in New York and co-author of the first MMT textbook. “Even if in the beginning you couldn’t put the people to work because of safety concerns, you at least would be targeting the spending” to people who were out of work.

● ... AND HOW TO PAY FOR IT

MMT’s take on taxes is one of the most controversial aspects of the theory. It boils down to the notion that governments don’t need to raise revenue to pay for their spending, though MMT allows that taxes may be useful for other purposes such ▶



● Fullwiler

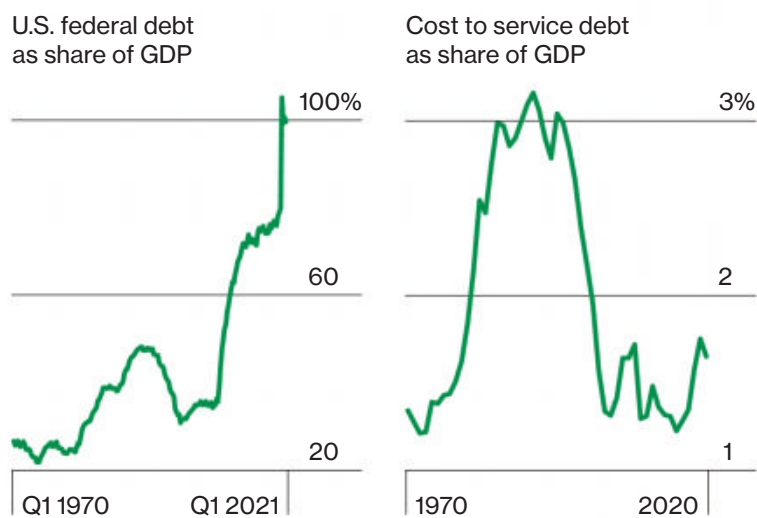


● Kelton



● Wray

A Higher Tolerance for Debt



DATA: OFFICE OF MANAGEMENT AND BUDGET



◀ as cooling demand (and therefore inflation), redistributing income, or discouraging undesirable behaviors, like smoking and use of fossil fuels.

In the heat of the Covid crisis, it sometimes looked like U.S. policymakers had bought into this conception. “During the first round of stimulus, no one was talking about pay-fors because the thinking was that there was so much slack in the economy,” Wray says.

But that didn’t last long. The Biden administration is seeking to raise taxes on high-income households and corporations to pay for some of its policy priorities, including enhanced child benefits. “They’re not approaching this next round of spending the way any of us would approach it,” Kelton says. “They’re just matching dollar for dollar.”

Most MMT economists lean left politically and favor measures to make the U.S. less unequal. But they don’t think it’s good economics to make expanded child care or cleaner energy contingent on Congress approving tax hikes.

#### ● MANAGING INFLATION

With U.S. consumer prices surging at the fastest pace in more than a decade as the economy reopens, fear of inflation is already widespread. More government spending, as advocated by MMT, would just make things worse in the view of critics.

MMTers counter that multiple branches of government should be engaged in managing inflation, not just the Fed with its blunt instrument of interest rates. That includes Congress, which should draw up its plans for spending and taxes with an eye to price pressures rather than balancing the books, in MMT’s view. Kelton says there’s still a “gaping amount of daylight” between that approach to budgeting and how it’s done now.

A holistic anti-inflation strategy could include all kinds of other measures, too, from government interventions to ease supply bottlenecks—such as the lack of semiconductors that’s pushing up auto prices right now—to using regulation and other tools to promote competition in sectors where companies are deemed to have too much pricing power. The Biden administration has taken steps in this direction in recent months. “The solution to the supply chain problems is not to raise interest rates,” says Fullwiler. “The solution to inflation is going to depend on where the inflation is coming from.”

#### ● NOT THERE YET

Even if much of the pandemic response has been in line with MMT thinking, and there’s less alarm about deficits and debt nowadays, Kelton says few have embraced the theory’s core claim: that

“governments that issue their own currency never have to borrow it from anyone in order to spend. And if they choose to issue bonds, they can always choose the interest rate that they are willing to pay.”

She describes that intellectual leap as “the last mile to MMT” and says few economists and policymakers so far have been willing to take it. “They’re not there,” she says. “They will not go there.” —Ben Holland, Katia Dmitrieva, and Matthew Boesler

THE BOTTOM LINE MMT economists say they deserve credit for reeducating policymakers on the danger of deficits, but admit they haven’t made as much headway on taxes and inflation.

## The Covid Learning Gap

- The pandemic is reversing hard-won progress in keeping Latin America’s children in school

Judith Caballero Cruz has lost two close family members to Covid-19 this year. Now she fears the pandemic could take away something else: her children’s future.

For the mother of two in Mexico City, the academic year that just finished was an unrelenting struggle, as it was for families all over the world. Parents and children have had it especially tough in Latin America, which recorded the longest school closures of any region. By mid-June only eight countries—mostly small

▼ Mondragón





Caribbean islands—had managed to fully reopen their schools.

With schools in the Mexican capital mostly shuttered since Covid arrived, Caballero had to fight to keep her 14- and 8-year-old boys engaged in remote learning. She relied on her mobile phone package to keep them connected with online classes—until the responsibility for making funeral arrangements for her father and stepfather, and comforting fellow mourners, swallowed up all her monthly data.

She tried internet cafes, but social distancing restrictions meant she couldn't accompany either child inside. At her father's house, she tuned in to the television channels where lessons were broadcast, but she had to toggle between channels so both kids could keep up. Eventually, she shelled out for a package deal for two TVs and an internet connection at her own home. Together they cost about 850 pesos (\$42) a month, a big chunk of the money she and her husband make selling secondhand clothes and electronics in street markets.

Although Caballero's kids now have the means to stay on top of their studies, they lack motivation, she says: "The school environment has a big impact on them. They have a greater desire to study there, when they see other kids doing their work."

Worldwide, more than 800 million children have had their education disrupted by the pandemic this year, according to Unesco. In Latin America about 100 million are still affected by closures. As students fall behind, there's a risk that economies will do the same. The World Bank estimates the interruption of schooling could translate into \$1.7 trillion in lost future income.

Teachers often chafe at the idea that education should be measured in earnings. But Mexican educators such as Luis Martín Espino Méndez understand and share the concern underlying such statistics: that their students will drop out, with repercussions that will last the rest of their lives.

Espino says the public school in Mexico City where he teaches history lost touch with about 40% of its students. Several of his own pupils told him they were ditching classes to go work as a mechanic, salesman, or food vendor.

It's a problem across Latin America, which had succeeded in reducing the prevalence of child labor in the years before the Covid crisis. Now that trend has likely gone into reverse: According to the International Labour Organization, the number of school-age children who are working could rise by 9 million by the end of 2022. In Mexico, authorities estimate that 1.8 million students failed to return for the 2020-21 school year because of financial hardship or pandemic-related reasons.

Those who stuck it out had to adjust to a new learning style. Espino and other teachers in areas with internet connections supplemented televised classes with their own lessons, delivered via videoconferencing platforms. Kids turned in homework using WhatsApp or Facebook, or by hand-delivering their notebooks.

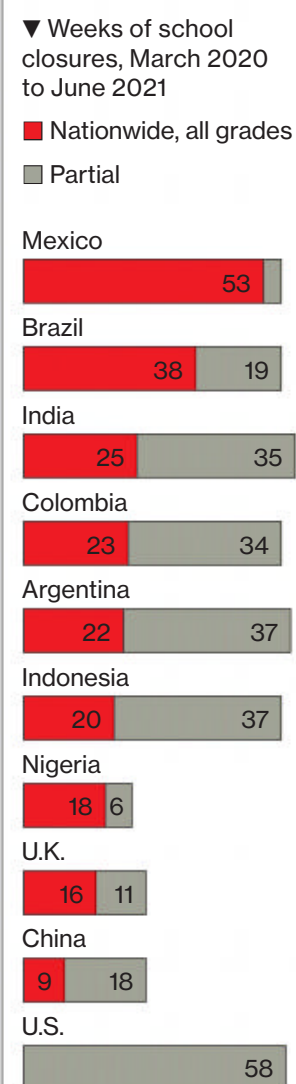
Grading posed its own challenges. About half of the students at Espino's school who weren't in regular contact with their teachers were awarded a pass after doing makeup exams. The rest will get a chance to catch up during a remedial period at the start of the next academic year, part of a national plan to prevent students from failing. Espino says the process has made him worry that students could come to see their education as merely a quest to obtain a piece of paper. "We have to think about the kinds of citizens we are forming, the type of people we are forming, and what we are teaching them," he says. "We don't want just a generation of automatons."

While international studies have suggested that schools aren't major sites of contagion, it's hard for countries in Latin America to make classrooms safe. For starters, they're overcrowded: An Inter-American Development Bank study found that class sizes across the region would have to be cut as much as 40% to achieve proper social distancing. And the pace of vaccine rollouts in Mexico and elsewhere in the region is lagging those in wealthier countries. That's why many teachers in Mexico City voted not to return to school in June, when authorities said public-health conditions had improved enough to make it feasible. Other states resumed classes only to suspend them again when case counts went back up.

Last month the government announced that the 2021-22 school year will be 10 days longer than usual, at 200 days, to try to make up for the material not covered last year. According to a national teachers union, Covid-19 has claimed the lives of at least 2,000 educators, which will make catching up more difficult.

Fifteen-year-old Eduardo Mondragón Salgado has barely left his Mexico City home since the pandemic started, because he's asthmatic. His mother wants him back in school only when he's vaccinated, and there's no telling when that will happen. Mondragón misses after-school soccer games: "I used to go hang out with my friends, and that would make me calmer," he says. But he insists he's gearing up to return to school in August. "I just want to keep going, in school and in life." —*Maya Averbuch, with María Eloísa Capurro*

**"We have to think about the kinds of citizens we are forming.... We don't want just a generation of automatons"**



**THE BOTTOM LINE** About 100 million children in Latin America have been impacted by lengthy school closures this year, raising concerns that the region will fall further behind economically.



# One Nation, Packing Heat



## ● Permitless-carry gun laws spread to more U.S. states

The high-profile legal troubles of the National Rifle Association may suggest a powerful organization on the ropes, but in statehouses, the pro-gun movement it helms is racking up victories. New laws are giving millions of Americans increasingly unfettered access to firearms even as gun violence rises across the country.

So far this year, five states—Iowa, Montana, Tennessee, Texas, and Utah—have passed permitless-carry laws, bringing the total number of states with such laws to 21. These statutes typically eliminate the need to complete training and obtain a license before carrying a concealed firearm in public, making it easier to carry a gun around than to cut hair or drive a car.

Texas became the latest state to go permitless in June when Governor Greg Abbott, NRA boss Wayne

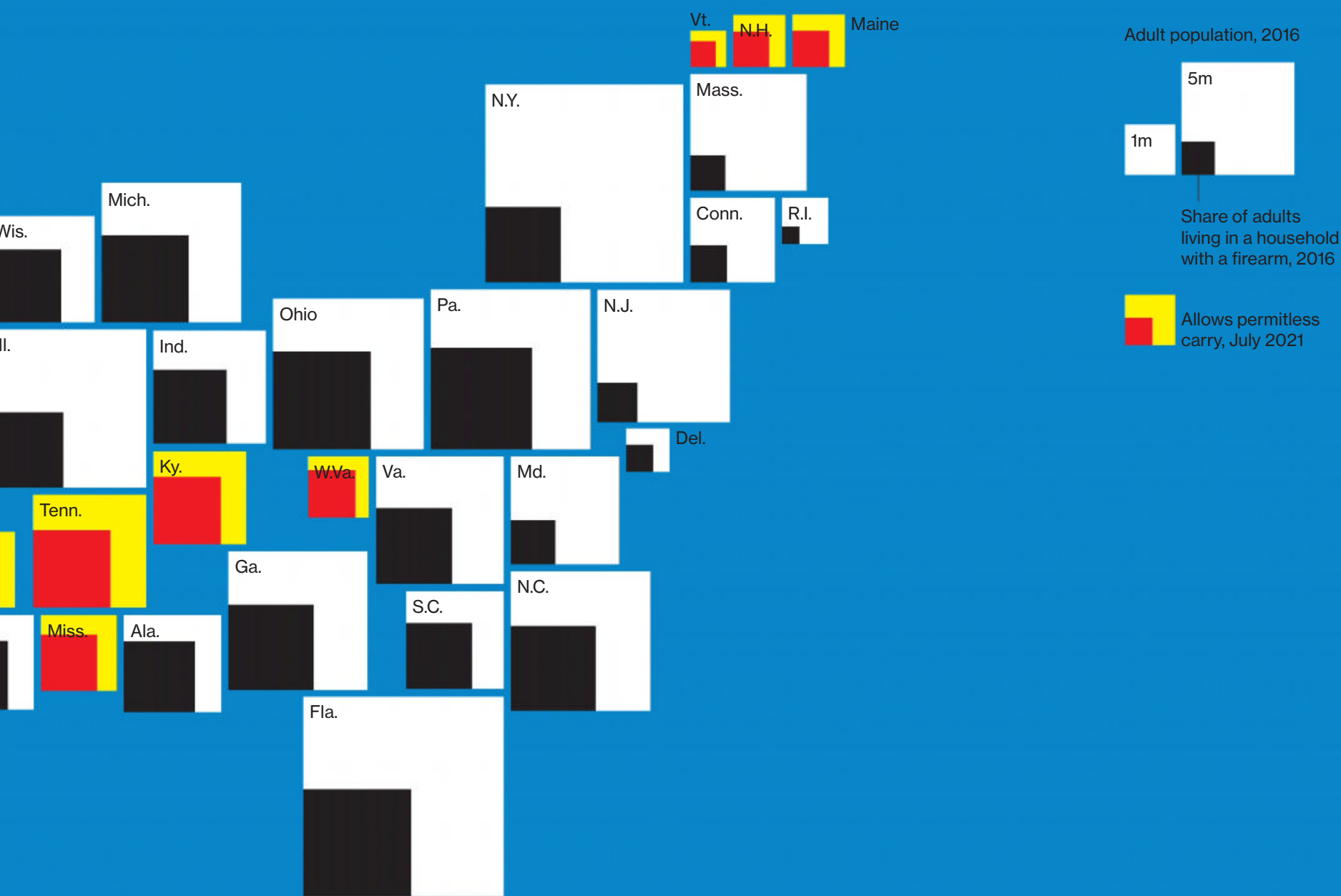
LaPierre, and others gathered at the Alamo for a bill signing. “Government is coming to take your guns,” Abbott warned. “Texas will not let that happen.”

The permitless-carry movement sweeping red states has been “an NRA effort through and through,” says spokeswoman Amy Hunter. “We’ve been in it since the beginning and have worked very hard state by state.”

Kris Brown, president of Brady, a gun control group, believes that eliminating permit requirements will make public places more dangerous and says the NRA is promoting “a dystopian universe where the only rational thing to do is have a gun on you all the time.”

For the NRA, the state wins come at a time when its very existence is in doubt. Its revenue and program spending were down last year, and a federal judge rejected its bid to go through bankruptcy reorganization as part of a complex plan to move its charter to Texas. That’s left the group to defend itself against a fraud lawsuit in New York, where the nonprofit is chartered, and where Attorney





\*NORTH DAKOTA ALLOWS PERMITLESS CONCEALED CARRY FOR RESIDENTS ONLY. DATA: RAND CORP.; U.S. CENSUS BUREAU; U.S. CONCEALED CARRY ASSOCIATION

General Letitia James is pushing to dissolve it.

But all that is a distant tempest to many of the NRA's reported 5 million rank-and-file members, including those in Kansas' Air Capital Gun Club. A few dozen of them assembled for breakfast at Spear's Restaurant & Pie Shop in Wichita one Saturday in July and ran through an agenda that included marksmanship contest results, club finances, and a request from the Shriners to hold an event at their firing range. Asked by a reporter what he made of the NRA's legal battles, a member responded with a puzzled shrug.

Kansas, a rural state with some of the nation's most lenient gun laws, offers a glimpse of where the country may be headed. It allows citizens to own fully automatic weapons, if they're licensed, and in 2015 it passed a "constitutional carry" law eliminating permit requirements for concealed weapons.

Doug Gatewood runs a shop in Galena that displays a shotgun owned by Clyde Barrow (of Bonnie and Clyde fame). He sells firearms and ammo, as well as saddles and tools, and says his customers

have multiple reasons for supporting permitless carry. "There's a feeling that there's a constitutional right to have a firearm and there shouldn't be a financial burden attached to it," says Gatewood. Also, "if you have a concealed-carry permit, it's on a list that you have a gun," which some would resent.

In Kansas, as in much of the nation, gun policy is shaped by local custom. Dennis McKinney, a former Democratic state treasurer who's a farmer near Greensburg, says pretty much everyone in his part of the state owns a gun. "It's the culture," he says. "I've jokingly told people from urban areas, if a deputy stops you around here and you don't have a firearm, he'll issue a citation."

After the 2012 Sandy Hook school massacre in Connecticut, the NRA touted the idea that the best defense against a bad guy with a gun is a good guy with a gun. Several states went along, Kansas among them, says Jo Ella Hoyer, a Democratic state legislator and gun control advocate. A gun owner herself, Hoyer fought successfully in 2017 to stop the expansion of concealed-carry rights ►

**"There's a feeling that there's a constitutional right to have a firearm and there shouldn't be a financial burden attached to it"**



◀ to public hospitals and mental health facilities. (Hoye is a former state chapter leader of Moms Demand Action for Gun Sense in America, a group funded by Michael Bloomberg, the owner of *Bloomberg Businessweek's* parent company.) This month, Kansas granted concealed-carry rights to 18-year-olds, though those under 21 still must undergo training and obtain permits.

Despite its relaxed gun laws, Kansas' per capita firearms mortality rate is about average for the U.S., Centers for Disease Control and Prevention data show. Some research has found that permitless carry is associated with an increase in violent crime, though a 2020 Rand Corp. analysis found the evidence is "limited" at best and mostly inconclusive. The U.S. has a much higher rate of violent gun deaths than many other rich countries.

Kansas Attorney General Derek Schmidt, a Republican, says permitless carry "has been positive for liberty with no downside to public safety."

"States that have already enacted it are being looked at, and the sky did not fall," says Phillip Journey, an NRA board member and Kansas state court judge. "Simple possession does not create violence. The issues in our society are far more complex than that."

But Hoye says guns are the "common denominator" in homicides and domestic violence cases. She's backing bills that would require courts to confiscate firearms from certain people convicted of crimes and ban their use within 2 miles of schools. It's unclear whether the state's Republican-led legislature will go along.

Adam Winkler, a professor at the UCLA School of Law, sees a stalemate between the millions of Americans convinced that gun control is the way to reduce violence and the millions who believe the opposite: "Not only are the two sides getting further apart, but the prospects for compromise are increasingly unlikely."

That split is clear on Capitol Hill, where modest efforts like expanding federal background checks have stalled in the Senate. "The percentage of Americans, including NRA members, who support universal background checks is astounding, but you can't even get Congress to consider it," says Stanford law professor John Donohue. "That harms good gun policy."

Faced with a worrisome upturn in gun violence, President Joe Biden has turned to executive actions to clamp down on "rogue" gun dealers, provide support to local law enforcement, and invest in violence intervention programs. Blue states have been tightening their gun laws—but they may soon be forced to reverse course, depending on the outcome of a

potentially landmark U.S. Supreme Court case next year over individuals' rights to bear arms in public.

Meanwhile, many Americans are voting in favor of gun ownership with their wallets. At Wichita's Range 54, an 800-gun inventory last year was whittled down to just 25 weapons, says co-owner Ken Grommet. Firearm sales have reached a near-record pace of well over 1 million a month, according to Small Arms Analytics & Forecasting.

"We have to be realistic," says Brady's Brown. "This problem is getting worse, not better."  
—Neil Weinberg

THE BOTTOM LINE Even as the NRA fights to survive, the U.S. gun rights movement is riding a wave of success as more states nix permit requirements to carry a concealed weapon.

## China's Mass Climate Migration

● A program to relocate people in fragile regions has mixed outcomes

Xiang Yang and his wife are sitting outside their house in Ma'an village, playing with their grandson. In front of them is a steep, bare slope, all that remains of most of the village's rice fields. Landslides happen frequently in the region—one last year killed six people—but Xiang has declined a government offer to relocate.

His reluctance to move from one of the hundreds of counties in China that the government says are imperiled by natural disasters, extreme weather, or climate change shows the challenge Beijing faces in carrying out a relocation initiative, officially called "ecological migration." This effort

▼ A relocation compound in Guizhou (left); Xiang's family outside their Ma'an village home





puts China in the vanguard of expected population shifts as the climate changes.

Xiang's village is in Guizhou, a mountainous southwestern province that has China's biggest ecological migration program. Most of the terrain here is karst, a thin layer of soil covering limestone bedrock. The geology has combined with deforestation and climate change to turn as much as 7 million acres into rocky desert.

Some Chinese have embraced relocation. "It's better to move," says Li, 35, a former migrant worker who moved to the Zhengguang Migrant Settlement Complex in northeast Guizhou, where he runs a small package-delivery business (Li would give only his family name). "Now we have a hospital barely 10 minutes away, and my son goes to a school in our residential compound that provides breakfast and lunch," he says. The complex also trains migrants for jobs, paying them 40 yuan (\$6.18) a day during a monthlong course before introducing them to an employer.

Not everyone moves eagerly: Overzealous officials sometimes apply pressure. "I received a call from the village chief, who told me I had to move without giving any reason," says Chen Minglan, 54. The Guizhou Ecological Migration Bureau did not respond to a request for comment. Chen, who belongs to an ethnic minority group, stays at home at Zhengguang while her husband works far away.

More than 4,000 families have moved to the complex since 2019, yet it seems empty. Many men work in distant cities. Surveys conducted at two of Guizhou's resettlement sites by the Guizhou University of Finance & Economics showed that 79% of migrants did not have stable jobs.

China's National Rural Revitalization Bureau says ecological migration "helps to transfer rural populations to the cities and towns, to promote infrastructure construction, to expand the city scale, to strengthen urban economic vitality, and to accelerate the pace of urbanization." As the Chinese Communist Party celebrates its centenary, it claims to have lifted 100 million people out of poverty since 2012, many of them in climate-fragile regions.

But resettlement "doesn't always have great outcomes for people in terms of their economic fortunes," says Sam Geall, acting chief executive officer of the nonprofit China Dialogue. "They often end up in the informal economy after a breakdown of traditional community structures." —*Bloomberg News, with Lucille Liu and Karoline Kan*

**THE BOTTOM LINE** China's ecological migration program is accelerating urbanization, a government goal, but the shift from rural life can be hard for migrants.

# Giving

# PACs and Jan. 6

Corporate political action committees are donating to the 147 Republicans who voted against certifying President Joe Biden's win, second-quarter Federal Election Commission filings show—but less than they used to.

Those Republicans saw a 31% decline in contributions from groups including corporate PACs in the first half of this year compared with the same period in 2019.

Corporations and trade associations typically donate to a wide range of politicians who can advance their interests. Many announced they would pause giving or review their contribution policies in the wake of the Jan. 6 riot. But some have resumed giving. Others made no changes to their policies.

The PAC for the American Crystal Sugar Co. doled out \$160,000 to 31 of the objecting members. American Crystal said in January it would not base its contribution decisions on the certification vote.

The National Association of Realtors paused all donations after Jan. 6 but resumed them in April. It tied with defense contractor General Dynamics for the amount it gave to objectors.

Toyota said in June it didn't judge members of Congress "solely based on their votes on the electoral certification," but after an outcry over its giving, the company announced on July 8 that it would no longer donate to those who objected to Biden's win. —*Bill Allison*

## Who's Donating

The top business PAC donors to election objectors in Congress

● American Crystal Sugar Co.  
**\$160,000**

● General Dynamics Corp.  
**\$88,500**

● National Association of Realtors  
**\$88,500**

● Council of Insurance Agents & Brokers  
**\$87,500**

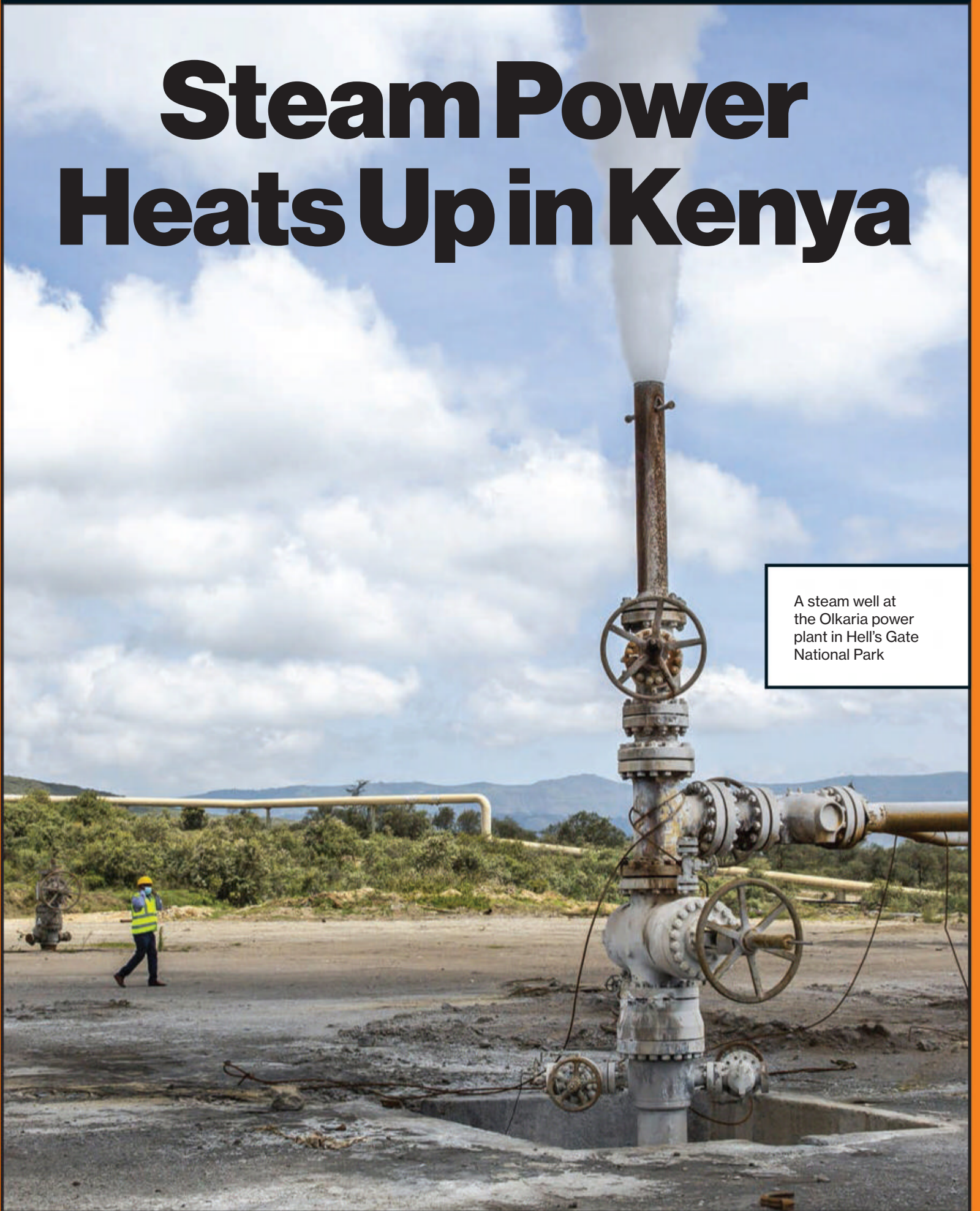
● Toyota Motor Corp.  
**\$85,500**



# Africa

## Steam Power Heats Up in Kenya

A steam well at the Olkaria power plant in Hell's Gate National Park



The world leader in geothermal electricity is starting to export its know-how





When Kenya opened the Olkaria power plant four decades ago, it was considered more research project than commercial venture. Located in Hell's Gate National Park, a barren zone of volcanic rock permeated by sulfurous gases and populated mostly by warthogs and zebras, the facility generated electricity using steam rising from deep in the ground. The untested and costly geothermal technology was at best experimental, with the first unit expected to supply power for perhaps 10,000 homes. Today, Olkaria generates more than 50 times that, and the technology is on track to become the backbone of the country's electricity grid. "Our strategy going forward is geothermal," says Rebecca Miano, chief executive officer of the state-owned Kenya Electricity Generating Co., or KenGen.

For decades, Kenya and surrounding countries focused on hydroelectric power and oil-fueled thermal stations, but lately they've awakened to the potential of their vast underground energy resources. The region sits astride the Great Rift Valley, an area where tectonic plates meet, bringing the magma at the Earth's core closer to the surface. It's one of the world's most active volcanic zones—Mount Kilimanjaro lies at its heart—with dozens of hot springs hinting at the intense heat lying just below. Kenya gets nearly half of its electricity from geothermal plants, more than any other country, according to researcher Fitch Solutions, and it's on track to increase that to almost three-fifths by 2030.

Olkaria, the continent's first geothermal power station, is fed by pipes drilled almost 2 miles into the Earth's crust. These deliver high-pressure steam as hot as 350C (662F), which is used to propel giant turbines. Over the next five years, KenGen plans to invest \$2 billion in four new plants and other upgrades at Olkaria that will almost double Kenya's geothermal capacity to more than 1.6 gigawatts—enough to power a city of 1 million. Longer term, KenGen predicts, the country has the potential to generate at least six times that.

The biggest obstacle, in Kenya and across the region, has long been the initial investment. The turbines and other equipment above ground add up to about \$3 million per megawatt, but the real expense lies below the surface. A single well can cost as much as \$6 million, and each unit typically requires multiple drilling attempts to find sufficient steam to keep the turbines spinning; for the first station at Olkaria, KenGen drilled 33 wells. Early on, geothermal "was thought of as too risky, and high upfront cost was a hindrance," says Peter Omenda, a consultant who's worked on numerous projects in the area. While technological advancements have brought down the price and made it easier to get more steam from each well, the expense of drilling remains a significant hurdle.

To help offset costs, Kenya in 2008 created the



A control room at the Olkaria plant

state-controlled Geothermal Development Co., which is intended to shoulder the investment risks associated with the technology. Similar to oil wildcatters, the GDC drills wells, and when it discovers a field that has potential, it sells the steam to KenGen or others that build the above-ground infrastructure. The GDC has raised \$746 million, mainly from international lenders such as the World Bank, to develop the Menengai Crater, a site about 60 miles north of Olkaria where three independent power producers expect to open geothermal plants in 2023, after years of delays.

Competition from other renewables, which can be faster to build and promise a more rapid return on investment, is another concern. Kenya gets about 12% of its electricity from wind and solar, up from less than 1% five years ago. Unlike those technologies, though, geothermal doesn't require a stiff breeze or sunny skies to provide a steady flow of energy. And when compared to hydropower—which Kenya is also counting on as it seeks to get to 100% renewable sources by 2030—geothermal plants aren't threatened by droughts or belligerent neighbors that might cut off the water supply. "Geothermal provides clean, non-intermittent baseload electricity that other sources of renewables cannot," says Derrick Botha, an analyst with Fitch Solutions.

For KenGen, geothermal is becoming a significant generator of revenue from outside the country. In February it won a \$6.6 million contract to drill wells in Djibouti, and in 2019 it joined with two Chinese companies on a contract to provide geothermal drilling services in Ethiopia. KenGen says it's in talks with Rwanda and the Democratic Republic of Congo as governments across Africa embrace geothermal. "It's going to be exciting to see that capacity transferred to other countries and a chance to replicate the business," says Marit Brommer, executive director of the International Geothermal Association, a group that promotes the technology. "Geothermal power will enable access to electricity for many communities at an affordable price."  
—Paul Burkhardt and David Herbling

**THE BOTTOM LINE** KenGen plans to invest \$2 billion in new plants by 2026, almost doubling its geothermal generating capacity, to more than 1.6 gigawatts—enough power to supply a city of 1 million.



Two decades of economic turmoil have starved Zimbabwe of foreign currency, at times creating fuel shortages. A controversial ethanol project, run by Green Fuel (Pvt) Ltd., is helping curb the need for imports and is providing jobs, as it steadily expands output. Activist groups say nearby farmers in Chisumbanje in the nation's southeast weren't adequately compensated for the land now used to grow sugar cane for the plant. A 2015 parliamentary committee report alleged that the facility has spewed toxic waste and that it's also increased truck traffic, leading to more fatal traffic collisions. Green Fuel, which has denied polluting waterways, didn't respond to questions about the criticisms and allegations. The venture's main backer is Billy Rautenbach, a Zimbabwean businessman who was previously on European Union and U.S. blacklists for alleged links, which he's denied, to the regime of late disgraced former President Robert Mugabe. The Agricultural and Rural Development Authority is a minority partner. —*Zinyange Auntony and Matthew Hill*





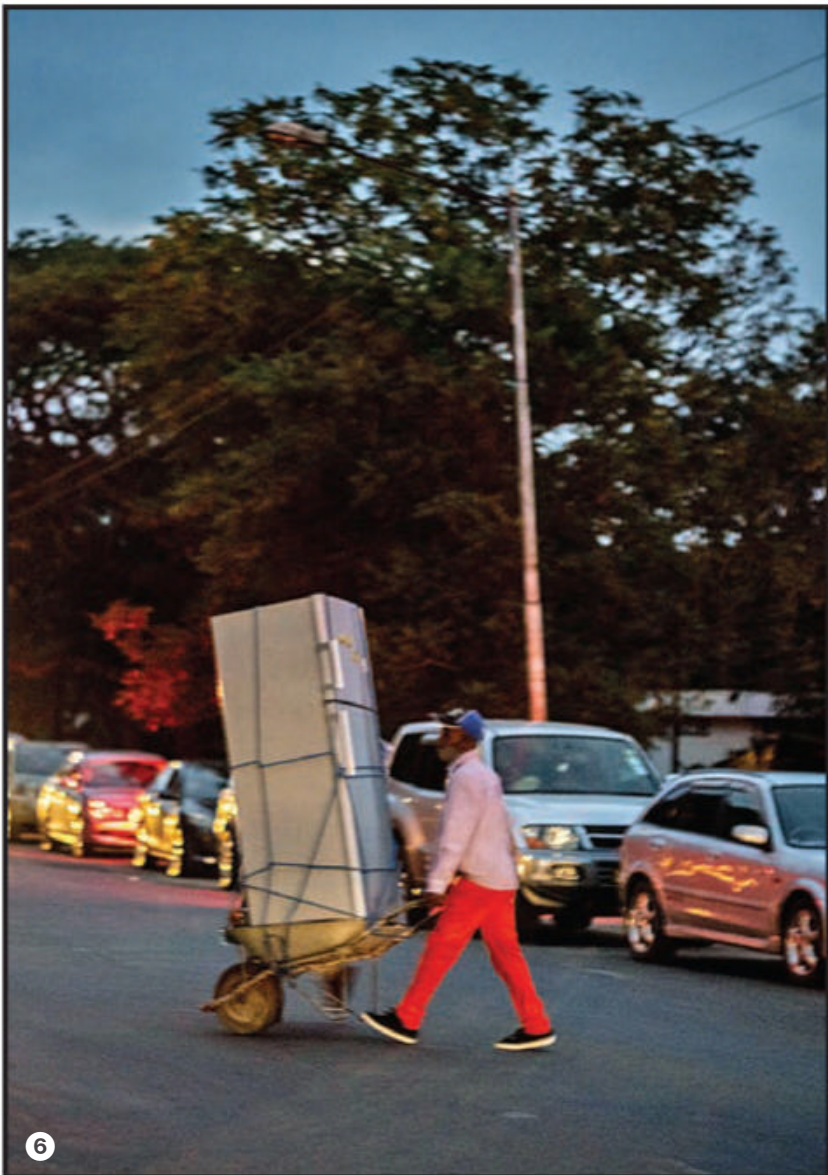


① Cane being harvested for the ethanol plant. Ethanol has long been used as a fuel extender in Zimbabwe, where the law requires that it make up at least 5% of gasoline pumped into a vehicle. ② Paul Malamba, 55, began working at Green Fuel during construction. The facility, open since 2011, has a workforce of some 3,000. ③ Green Fuel workers install community irrigation, which boosts crop yields. The company aims to expand ethanol output to 11 million liters a month. ④ The Green Fuel plant. A parliamentary committee alleged toxic effluent discharged from the plant flowed into a stream and two rivers. The company denies the allegation.





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5 A child bikes to a school near the plant. A 2015 parliamentary report pointed to 15 fatal collisions involving children and trucks transporting sugar cane. 6 Drivers queue to refuel. At the peak of the fuel crisis in 2019, protests erupted against a 130% price hike. 7 Laiza Mutandane, 61, has rights to an irrigated plot in Chisumbanje, but rents another to grow enough for the 14 children and grandchildren in her household.



# Trading With Neighbors

Covid-19 is spurring calls to implement a tariff-free zone across Africa

At the onset of the pandemic, global supply chain disruptions limited Africa's ability to respond; it struggled to access additional personal protective equipment and lifesaving ventilators. Even now, as the developed world starts to reopen after hoarding vaccines, Africa is the least inoculated region, leaving it vulnerable to new waves of infection and extended lockdowns.

The experience is bolstering the case for the continent's new free-trade pact, designed to stimulate intra-regional commerce. "What we've learned from this crisis is that we've got to accelerate Africa's industrial development so that we become more self-sufficient as a continent and enhance our productive capacity," Wamkele Mene, secretary-general of the African Continental Free Trade Area (AfCFTA), said in a speech in June.

Africa's intra-continental commerce accounts for only 14.5% of trade, compared with more than 50% in Asia and 72% in Europe, according to the African Export-Import Bank. Supermarket shelves in cities such as Luanda in Angola, and Abidjan in Ivory Coast, are lined with goods imported from the countries that colonized them: Portugal and France, respectively. The Africa-wide deal promises to reduce or eliminate 90% of internal cross-border tariffs by 2030 and cut red tape to promote investment on the continent, paving the way for a continent-wide customs union.

AfCFTA entered into force in May 2019 and took effect in January of this year, creating the world's biggest free-trade zone by area: It encompasses a combined economy of \$2.5 trillion and a market of 1.2 billion people. Eritrea, which has a largely closed economy, is the only country that hasn't signed on among the 55 that the African Union recognizes. AfCFTA has the potential to help bring 30 million people out of extreme poverty and could lead to a \$450 billion increase in the region's income by 2035, if accompanied by significant policy reforms and trade-facilitation measures, according to the World Bank. "It's quite a beacon of hope at a time when there has been global movements toward much greater levels of protectionism and nationalism," says Catherine Grant Makokera, a director at Tutwa Consulting Group in Johannesburg.

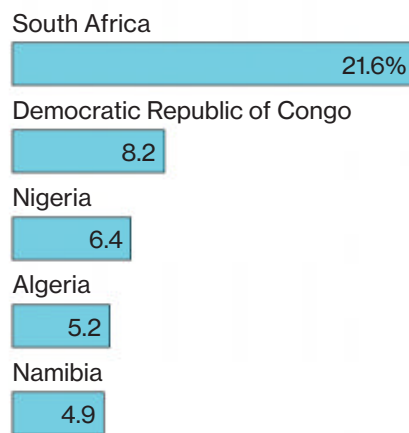
Although the spread of coronavirus has highlighted the urgency of the agreement, it's also stalled progress

on putting it to work. Trading under the new AfCFTA rules was supposed to start in July 2020, but travel restrictions delayed discussions to finalize the legal arrangements, and it's unclear when they'll be completed. The economic damage from Covid-19 could also complicate negotiations over cutting tariffs within Africa, which countries will have to do within five to 15 years, depending on the size of their economies. The sub-Saharan region suffered its first economic contraction in a quarter century in 2020, and the International Monetary Fund estimates its recovery is set to fall behind world output growth as richer countries with vaccinated populations return to normal more quickly.

Duties are an important source of revenue, and some countries burdened by high levels of debt before the pandemic are counting on relief programs to ease

## Intra-African Trade

Top countries by share of 2019 trade




the strain. "The AfCFTA is absolutely necessary for Africa; we don't have a choice," says Trudi Hartzenberg, executive director of the Tralac Trade Law Centre in Stellenbosch, South Africa. "But we have to be realistic about what the states are capable and willing to do, and that's become even more complicated and more complex with Covid-19."

It took the European Union decades to develop its regional economic and trade bloc, but Africa can't wait as long because of its high levels of unemployment, young population, and inequality, says Kuseni Dlamini, chairman of both drugmaker Aspen Pharmacare Holdings and Massmart Holdings, the South African retailer majority owned by Walmart Inc. "It is high time that Africa has got to be self-sufficient," Dlamini says. "It's got to be known and respected for being an economic partner and not a recipient of aid." —Prinesha Naidoo

**THE BOTTOM LINE** The pandemic shows why a new free-trade zone encompassing Africa's \$2.5 trillion combined economy is critical, even as the crisis delays its implementation.



# A Man and His Wall




When Donald Trump called for a big, beautiful wall,  
a guy from North Dakota named Tommy  
Fisher spent millions to build a 3-mile  
stretch along the Rio Grande. All Fisher  
needs now is for someone to buy it back

BY SIMON V.Z. WOOD

Photographs by Lowy + Lacar





**T**o get to Tommy Fisher's private border wall in Texas, I drive south from the city of McAllen, then west on Military Road, past a chunk of redundant, abandoned federal border wall, and from there onto a dirt path through a sugar cane farm down to the Rio Grande. When I arrive, Fisher is waiting, wearing a Western-style plaid shirt, wraparound sunglasses, and a mesh baseball cap featuring his company's logo. He's 51 years old, with an ursine build and a disarmingly gentle voice.

By trade a builder of more prosaic infrastructure, such as dams and freeways, Fisher greets me by launching into a baffling sermon on his wall's technical specifications. Mostly what I perceive is that we're at its very edge, meaning we could theoretically walk around it and swim 100 yards to Mexico. Across the river, near the city of Reynosa, which has lately been wracked by unusually intense cartel violence, is a park with wooden docks and straw-roofed gazebos. Beyond the park, according to Fisher, is at least one cartel stash house, where drugs or people are stowed before being smuggled to America. As I poke around, Fisher says, "Make yourself at home."

There are two private-sector border walls attempting to separate Mexico from the U.S., and Fisher Sand & Gravel Co. has built them both. The first, erected in the summer of 2019, is nestled in a mountainous half-mile stretch of New Mexico. The second—this one—is more ambitious. Completed last year, it's about a 90-minute drive from the Gulf of Mexico, under the low, heavy skies of South Texas' Rio Grande Valley. The structure is 3 miles long, hugging a severe bend in the river, and consists of roughly 15,000 18-foot-tall gray steel bollards, spaced 5 inches apart and set in a wide concrete foundation. (In this sense it's more like a fence, but for simplicity's sake I'll mainly call it a wall.) Up close, one can easily see between the bollards. From a distance they appear to be a contiguous, glinting slab of sheet metal.

Fisher continues pummeling me with information about his creation—"galvanized steel," "modified spread footing"—sounding like a proud parent, or maybe an anxious student, at a science fair. "If I only did 1,000 or 2,000 feet, everyone's going to make fun," he says. "No one can really make fun of this."

He's also invited Scott Hennen, a conservative radio host from his home state of North Dakota, to cover this late-March visit. Hennen is broadcasting live from a booth Fisher ordinarily uses to monitor security footage. It's a couple of miles away, so we drive over to meet him. An entourage of Fisher's contractors joins us for the tour.

Although Hennen's state borders Canada, not Mexico, his callers are eager to discuss the surge of Central American migration that's occurred early in the Biden era. Three days earlier, former Trump adviser Stephen Miller joined Hennen for an hourlong segment on the issue. Wearing a headset, wiry and in his mid-50s, Hennen walks in and out of the booth, monologuing. "We're gonna talk to Tommy Fisher, ►



◀ who is North Dakota-born-and-bred, which is why he was able to build 3 miles of wall in 30 days,” he says. He reads a text message from a listener about the specter of Covid-positive migrants and runs with the point, complaining that they’re being beckoned into the country while idiotic but basically innocent American spring breakers are demonized for partying.

Fisher stands awkwardly outside the booth, hands in pockets. He’s conservative, too, but Midwest-nice about it and not prone to rants. Eventually, Hennen turns to him. “We are looking at a project that you did, on your own dime,” he says. “Why did you do this?”

For ages, Fisher has dreamed of building an epic piece of infrastructure. A decade ago, Nevada hired him to construct what’s apparently the longest cathedral arch bridge in the world, but it didn’t make him a household name. When Donald Trump ran for president, promising to wall off the entire 1,954-mile southern border, Fisher sensed an opportunity. “I was like, ‘This would be really fun. This would be a project that would be remembered, like the Hoover Dam,’” he says. “Today the Hoover Dam is the cheapest electricity you can find in the U.S.—anywhere. And, you know, they took a lot of heat, too.”

In the first few years after the 2016 election, Fisher spent more than \$100,000 on lobbying in Washington and mounted a media blitz, claiming on Newsmax and Fox News that his company could build a wall faster and cheaper than anyone else, thanks to vertical integration that included doing its own land excavation and cement mixing. Fisher Sand & Gravel’s history with the government wasn’t pristine. In 2009 one of Fisher’s brothers had been sentenced to 37 months in prison for filing doctored tax returns on behalf of himself and the company, which paid \$1.1 million to the IRS as part of a plea agreement. Separately, the company has racked up close to \$1 million in fines for environmental, labor, and safety violations.

As he angled for wall contracts, Fisher quickly encountered the vagaries of the federal contracting process. A prototype he built in 2017 was rejected by the Department of Homeland Security, and the U.S. Army Corps of Engineers initially denied his bid to compete for the contracts at all. But the cable news exposure helped him draw the attention of We Build the Wall (WBTW), a nonprofit founded by Brian Kolfage, an Iraq War veteran and triple amputee, and co-led by former Trump adviser Steve Bannon. The group, which sought to crowdfund border security, attracted a mix of true believers and attention hounds, among them immigration hawk Kris Kobach, who served as its general counsel, and former baseball player Curt Schilling, who sat on its board. Blocked from erecting Trump’s official wall, Fisher became the in-house builder for the ersatz private version.

In the spring of 2019, WBTW paid him \$6.9 million to build its first barrier, the half-mile in New Mexico. Fisher used the gig to show off proprietary construction techniques, which he promoted with a drone-camera-filmed sizzle reel. By

late 2019 he’d reached an agreement with a farmer named Lance Neuhaus to buy a 45-acre strip of riverfront land near McAllen, on which he would build a second WBTW-funded structure. Partly, Neuhaus says, he sold because Fisher offered him a good price. He also thought the structure might stem what he says was a daily flow of migrants onto his farm. The wall would be built closer to the Rio Grande than any existing federal barrier.

WBTW sent Fisher an initial payment of \$1.5 million, for what he says ended up being a \$30 million job. He ordered a bunch of steel and started clearing vegetation. But the project was soon overshadowed by the group’s antics. WBTW deployed a kind of human mascot known as Foreman Mike to patrol the site in a hard hat and scout for immigrants, while Kolfage sent out increasingly aggressive tweets about the National Butterfly Center, a nearby wildlife preserve whose executive director, Marianna Treviño-Wright, vocally opposed border wall construction. Kolfage called the center a “big business” that “openly supports illegal immigration and sex trafficking of women and children.” (Treviño-Wright, for her part, says she considers WBTW a “Cambridge Analytica-style psy-op.” She has also filed suit against Kolfage for defamation. His lawyer didn’t respond to a request for comment.)

Eventually, Fisher got the sense that Bannon’s gang wasn’t necessarily committed to another wall. After he called WBTW for another payment and it never came, he kicked Foreman Mike off the site, parted ways with the organization, and started funding the project with company money. Several months later, in August 2020, the U.S. Attorney’s Office for the Southern District of New York indicted Bannon, Kolfage, and two other WBTW figures for allegedly enriching themselves with money Kolfage had assured donors—mostly ordinary cable-news-watching types—would go to wall construction. Before Trump left office, he issued a preemptive pardon that appears to have shielded Bannon from prosecution, rendering his not-guilty plea moot. Kolfage and the other co-defendants, who also pleaded not guilty, are set to go to trial in November.

Fisher wasn’t implicated—he was just building wall. But that caused trouble of its own. For one, he was sued by the National Butterfly Center, which argued his wall could end up diverting water and debris onto its land in the event of a flood. And as if the notion of a border wall drowning butterflies weren’t bad enough, he was also sued by an obscure government agency, the U.S. International Boundary and Water Commission (IBWC), which argued diverted water could end up displacing the U.S.-Mexico borderline.

Fisher contested the suits, confident that when construction was complete, the U.S. government would want to buy what he was calling the “Lamborghini” of walls. The bureaucrats may have sniffed at his earlier building proposals, but his peacocking for the White House was starting to pay off. According to the *Washington Post*, Trump and his adviser and son-in-law, Jared Kushner, had begun urging the Army Corps of Engineers and the U.S. Department of Homeland Security to give wall contracts to the guy they recognized from



“I was like, ‘This would be really fun. This would be a project that would be remembered, like the Hoover Dam’”

FISHER ON THE STRIP OF LAND BETWEEN HIS WALL AND THE RIO GRANDE



Fox News. In the last year of Trump’s term, even as federal prosecutors were hovering around WBTW, Fisher Sand & Gravel was awarded \$2.5 billion to build 135 miles’ worth of federal wall sections near Yuma and Nogales in Arizona and El Paso and Laredo in Texas. (Following a request by a Democratic congressman, the U.S. Department of Defense is conducting an audit to determine whether one of the contract awards was politically motivated; in a statement, the Army Corps of Engineers said it goes to “great lengths to ensure the integrity of our contracting process.”)

Then Joe Biden was elected president, and the odds that America would buy an unsanctioned border wall associated with an allegedly criminal enterprise helmed by Steve Bannon dropped significantly. Once in office, Biden halted construction of Trump’s wall, too, freezing the eleventh-hour building frenzy that had taken place in the runup to Inauguration Day. Fisher’s private 3-mile wall seemed destined to live on as a monument to the nativism, opportunism, and general half-assery of the Trump era.

And yet, Fisher remains eager to promote it, for one very un-ignorable reason: The border crisis isn’t going away. In June, 188,829 people were apprehended at the southern frontier, the highest monthly total in at least two decades and a roughly sixfold increase from the year before. Makeshift government shelters have overflowed, leaving migrants, many of them minors from Guatemala, El Salvador, and Honduras, living in cramped, abominable conditions during a pandemic. Throughout the spring, as U.S. Customs and Border Protection (CBP) processed the influx of children and families applying for asylum, an estimated 1,000 adults a day were slipping across the border freely, the highest number agency officials could recall.

While the drivers of the surge were long-standing problems in migrants’ home countries, many recent arrivals said they’d come now because they’d understood Biden would be more

welcoming than Trump. Despite the broad popularity of his heady domestic agenda, Biden was suddenly polling negatively on immigration and fighting the perception of even some in his own party, such as U.S. Representative Henry Cuellar of Texas, that he didn’t have control of the border. “Do not come. Do not come,” said Vice President Kamala Harris, the administration’s point person on the immigration surge, during a June visit to Guatemala. “The United States will continue to enforce our laws and secure our border.”

Republicans have pounced, crowing that Biden is pulling the plug on wall-building at exactly the wrong time. And Fisher would argue he’s pulling the plug in the wrong *place*. The Rio Grande Valley, where his 3-mile wall

sits, is by far the most highly trafficked of the nine Southwest sectors policed by CBP. Of the 79,519 unaccompanied minors the Border Patrol apprehended in the first six months of this year, 40,507 entered via the valley, up from about 3,800 in the first half of 2020. Walking the banks of the river near Fisher’s wall, I find ample evidence of recent border crossings: a Motorola flip phone, a 20-peso bill, a Winnie the Pooh towel, a small fridge that may have been used as a raft.

With the We Build the Wall trial looming, Fisher’s critics still tend to associate his fence with the group. “I think it was some racist front scheme,” says Ricky Garza, a McAllen-based attorney at the Texas Civil Rights Project, which represents landowners in border disputes with the government. Ryan Patrick, the now former U.S. Attorney for the Southern District of Texas who led the IBWC case, has publicly described Fisher’s wall as a “scam,” a “vanity project,” and “beyond vaporware.”

From this vantage point, Fisher appears to have erected two small walls nobody asked for while leveraging his connection with Bannon & Co. to build a lavish, taxpayer-funded political dog whistle. When I put this critique to him, he looks wounded. He says his procurement of federal contracts had nothing to do with his private wall. In fact, in his telling, what he’s built in Texas is superior to what Trump contracted him to do. It’s proof of concept for something that’s never quite been attempted in the U.S. And if scaled up, he argues, it would solve a problem the government hasn’t been able to crack.

Fisher concludes his interview with Hennen, and we drive back through the sugar cane farm until we reach the steel border fence I’d passed on Military Road. Hennen heads into an abandoned shed to record a Facebook Live hit. Fisher, the contractors, and I drive up for a closer look. This is Trump-era federal wall, built on a dirt levee by a rival contractor based out of Galveston, Texas. Nobody’s here; work stopped abruptly on Jan. 20, the day Biden issued ►



◀ his moratorium. The structure was supposed to be part of a 13-mile system of border barriers, but construction didn't start until 2020, and it's only a couple thousand feet long. Fisher brought me here to highlight the superiority of his product, which we can see about a mile to the south. "You're a BP agent," says Tad Dyer, Fisher's landscaping guy. "Do you want to patrol a 150-foot-wide strip? Or do you want to patrol 2,000 yards?" He's referring to the gap between wall and river. Fisher's wall is right up close. This one is nowhere near.

Federal wall in the Rio Grande Valley is largely a patchwork of rust-colored 18-foot-tall bollard fence, erected in the early Obama years, and rust-colored 30-foot-tall bollard fence, erected in the late Trump years. Sections stop and start suddenly, with gaps wherever the government couldn't build. There's no official map documenting it, and recently constructed stretches haven't shown up on Google Maps' satellite view yet. As we drive from one ghostly swath of the wall to the next, it becomes evident that its most salient feature is how little of it the federal government has managed to build.

There's a reason for this. The U.S.-Mexico border is in fact more like two borders. West of El Paso, it runs 699 miles through the deserts and mountains of New Mexico, Arizona, and California before splashing into the Pacific Ocean. Almost all of that borderland is owned by the federal government, anchored by a 60-foot-wide strip President Theodore Roosevelt secured in 1907 to patrol for smugglers. Wall-building there is legally straightforward. East of El Paso lies 1,255 miles of Texas border, spanning a number of climates and terrains, separated from Mexico by the natural barrier of the Rio Grande. Almost all of this land is privately owned, divided into countless weirdly shaped parcels: ranches, farms, backyards. (The reasons for this are rather byzantine and can be traced to the terms of the Union's 1845 annexation of Texas.) To build here, the government must either persuade landowners to lease part of their property or else seize it via eminent domain. Either way, it's hard.

Prior to the 1990s, the little fencing that existed along the U.S.-Mexico border was made out of flimsy chain-link, often serving to pen in roaming livestock. In response to increasing illegal migration by Mexican job seekers, the U.S. government in 1993 erected its first bona fide border wall, between Tijuana and San Diego County, then the busiest point of entry. Jerry-rigged out of corrugated steel helicopter landing mats used in the Vietnam and Gulf wars, it was 10 feet tall and 14 miles long.

The wall worked, in the sense that apprehensions declined significantly in San Diego. The wall also didn't work, in the sense that it funneled traffic eastward. The Clinton administration ended up building more landing-mat wall in the Arizona cities of Naco and Nogales, while deploying "human walls" of border agents elsewhere to stand sentry. The result, once again, was that migration patterns shifted to more remote crossings. In the decade that followed, according to the U.S. Government Accountability Office, immigration-related deaths doubled, as migrants succumbed to thirst and exposure in Mexico's Sonoran Desert.

The George W. Bush and Obama administrations increased total fencing to 654 miles, about half of it tall steel barriers designed to prevent pedestrian crossings and half of it shorter barricades to rebuff vehicles. Between the two administrations, basically all the borderland of California, Arizona, and New Mexico got cordoned off with some kind of deterrent structure. In those three states, apprehensions plummeted. But in Texas, despite hundreds of federal attempts to seize land, virtually nothing was built.

Absurdly, the situation repeated itself during the Trump

AERIAL VIEW OF FISHER'S 3-MILE WALL



administration. Having staked his political identity on building a wall, Trump proceeded to refortify everything west of Texas, mostly commissioning taller, sturdier versions of what Bush and Obama had already built. By January 2021 Trump's administration had erected 452 miles of wall, 372 of which replaced or renovated existing structures. For this it allocated \$15 billion, compared with the \$2.5 billion spent by the Bush and Obama administrations combined. In Texas, predictably, the border stayed stubbornly unwalled: Of 110 miles Trump pledged to build in the Rio Grande Valley, he managed only 17.

It's probably not a coincidence that the most highly trafficked border region is also among the very hardest to fence off. This challenge gave Fisher his opening. The government struggles to build in Texas not only because it doesn't



own the land, but also because its sales pitch to landowners is awful. The IBWC blocks border wall construction within the flood plain of the Rio Grande, typically forcing it to take place a mile or so inland, where it might bisect somebody's property or hem it in from the north. Consider the Loops, a Brownsville farming family whose home is caught between Obama-era wall on one side and the Rio Grande on the other. To enter and exit, they must punch a code that opens an electronic gate in the wall. In January 2017 their home caught fire with their pets trapped inside. The fire department, needing



to negotiate the gate, didn't arrive in time, and the house was destroyed.

Fisher got around this problem by testing the federal government's rules and sticking his bollards right on the Rio Grande. "You gotta put your border protection on the border," he says, frequently. That, he figures, is the starting point for serious wall-building in Texas.

**A**s much as Fisher believes in his private wall, what he really needs is for someone else to believe in it, and to believe in it enough to take it off his hands. That's where publicity, he hopes, comes in. After our tour of the abandoned federal barriers, he tells me that to get the full wall experience I need to see his private one again

at night. We lunch at a Mexican restaurant in a mall, head back to our respective hotels, and return a few hours later, at sundown. The weather is windy and cool, the atmosphere unnervingly hushed. The wall's foundation doubles as a wide concrete road, illuminated by floodlights that turn on at sunset. Federal walls tend to lack such amenities, and he wants me to get a good look at them. Our vehicles trace the perimeter like stock cars on a track. We drive by a burning bush. One of us runs over a snake.

Before Fisher cleared the land, the banks were populated by a thick, tall, invasive species known as carrizo cane, which probably helped protect the banks from erosion but also made it easy for people to hide from the Border Patrol. The sugar cane farther inland has recently been harvested, too, giving much of the property a buzz-cut look. When we reach the end of the wall, a couple of Border Patrol agents are hanging out in their truck. Dyer, the landscape guy, mentioned to me earlier that Border Patrol sometimes comes here to nap. The two agents tell Fisher they've generally been apprehending someone here every other day.

Fisher opens a gate in the wall to get a better view of the river. Just to the north, a handful of Texas Army National Guard soldiers, deployed in support of the Border Patrol, are monitoring the Rio Grande in a Humvee. On the river a motorboat passes by, mounted with what appears to be a .30-caliber machine gun. "Rangers!" Fisher calls to the Texas Rangers on board. He gestures upriver, past some swaying palm trees. "This is always my favorite. Sort of peaceful," he says. "All lit up." The wall, he tells me, was designed to integrate with the landscape. He calls his bollards "silver trees." Their pyramidal tops are a tribute to the Washington Monument.

Walls get a bad rap, in Fisher's view. "I just think they gotta take the stigma out of the wall as a, I mean, you know what I'm saying, racist kind of thing?" he says. "It's a border, it's a barrier, that's all it means." Part of his attempt to destigmatize walls involves pitching his as, in essence, a family-friendly mixed-use property. Earlier he gave me a flash drive containing what's surely a one-of-a-kind rendering: Mexico, the river, his wall—and a bike path. In the illustration, the concrete roadway is divided in two. On one side are bikers wearing helmets; on the other, green-and-white Border Patrol trucks.

Ideally, Fisher wouldn't just sell off his wall—he'd expand it, charging \$20 million per additional mile. Standing there that evening, he starts to dream. "Can you imagine if this was 50 to 100 miles, and this was a bike path you could use? Even if the Border Patrol was over here, minding their own business?" He dreams some more. "Texas could have the longest bike path anywhere in the world. Four hundred miles. Five hundred miles."

I find it hard not to imagine an amended rendering that includes a Border Patrol officer chasing immigrants across the sugar cane field. Not to mention that, by the agency's count, at least 203 people have died trying to cross the border illegally so far this year; in late 2019 the body of a man washed up yards away from Fisher's construction crew, attached to empty ►



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“Can you imagine if this was 50 to 100 miles, and this was a bike path you could use?”

◀ plastic water bottles that hadn't saved him from drowning. I suggest to Fisher that bike riders might find it hard to enjoy the great outdoors as they witness destitute Central American families rafting across the river. But he's now dreaming even bigger, and he doesn't seem to hear me. He imagines creating a gigantic athletic field on the nearby farmland. He could host competitions. “The best of Mexico would play the best of America.” The Border Games. He sounds serious.

For most Americans, the wall is a charged political symbol and a physical abstraction. For Fisher, it can seem like the opposite: a cool infrastructure project that just happens to separate the U.S. and Mexico. But although his North Dakota upbringing may not have steeped him in the nuances of Central American migration, he's lived for over a decade in Tempe, Ariz., where his company has its southern headquarters, and he's developed views. He's certainly not in favor of open borders, though he often frames his opposition to illegal immigration by citing abuse that migrants suffer at the hands of cartel coyotes. “I really feel that if the border was done, people couldn't exploit people from other countries,” he says.

At least to me, Fisher is pitching his wall in idealistic terms. To his potential buyers, he claims it's just a superior product. For one thing, his wall doesn't have the 5-foot-high “anti-climb” plate that graces recently built federal wall. These plates are supposed to make it harder for people to hike themselves up the bollards. But Fisher argues that they're excellent anchors for makeshift grappling hooks and that, when the wind batters them, they shake the wall's foundation. Other differences: His steel bollards have been coated with zinc to prevent rusting, and at 18 feet rather than 30, they pose less risk of serious injury if someone falls from the top. Then, of course, there are the border security perks offered by the cleared cane, the bright lights, the road for Border Patrol trucks, and—most important—the proximity to the river.

None of these virtues, nor the billions of dollars the Trump administration was planning to bestow on Fisher to build federal fencing, prevented the U.S. government from turning against his private wall. “I never got any pushback from the White House or the DOJ or anybody else,” says Patrick, the former U.S. attorney who sued on behalf of the IBWC. “Everybody was like, ‘This is stupid, this violates the law, go ahead.’”

In July 2020, several months after the suit was filed, reporters from *ProPublica* and the *Texas Tribune* commissioned hydrologists and engineers to analyze the wall. They concluded that riverbank erosion put it at serious risk of toppling. Trump evidently saw the article, tweeting that the wall had been built “to make me look bad.” (“I don't believe he had all the facts,” Fisher says.) A month later a hurricane caused significant erosion of the banks, up to and under the concrete foundation. Treviño-Wright, the National Butterfly Center executive director, crawled underneath to demonstrate, tweeting out the photo evidence.

I'm not an engineer, but the soil around the base of the wall does feel disturbingly crumbly when I kick at it. Fisher says that his concrete is buttressed by steel rebar and that his erosion problem will disappear once the Bermuda grass he planted fully grows in and his sloped “golf course” riverbanks are lush.

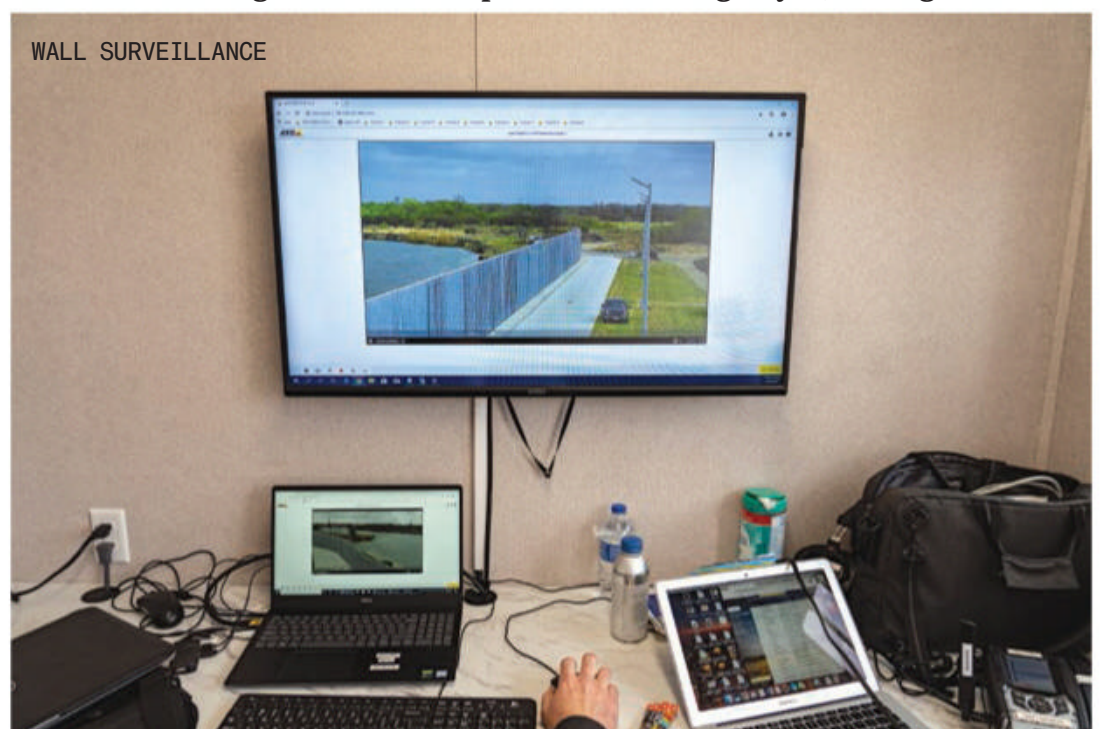
At one point, Fisher tells me he heard that someone with the Army Corps of Engineers derided his wall as “toothpicks in concrete.”

“Toothpicks that don't break,” he retorts. The Corps declined to comment.

While Fisher's critics wrangle over whether his wall is primarily an object of exclusion or of pathetic ineffectiveness, some of its neighbors have an entirely different perspective. Across Military Road, north of the sugar cane farm, Al Parker and his wife have been living in the same house for about 25 years. Surrounded by thorny shrubs and low-hanging mesquite trees, the property is remote, with no neighbors on either side. When I meet him, Parker, who works as a maintenance manager in the oil industry, is wearing a camo hat and a work shirt with “Al” emblazoned above the breast. He starts telling me about the last time a migrant passed through his property. “My wife was sitting on the back porch, and a woman walked out of the brush in tears,” he says. “She'd been hiding in the brush for two days, and she was exhausted, and hungry, and thirsty. I fed her and got her some water and called BP.”

The point of the story isn't the event itself, which Parker says has repeated itself thousands of times at the house. The point is how long ago it took place. “It went from three or four times a week, to now it's every four months,” he says. “I mean, the activity has ceased. One day my wife and I are sitting at the table, and it's one of those ‘exhale’ moments: You realize it's been a month, we haven't had anybody at the front door or traversing through the property.” The change came after Fisher's wall went up.

I get a similar report from George Syer, a longtime local





Border Patrol agent who retired last September. Syer had spent countless nights patrolling the farm's 800 acres with his flashlight, trying to apprehend migrants who'd rafted onto the property. He says the crossings abated when Fisher's wall was erected. On their own, he tells me, walls are inadequate. People can go over or around them. They can saw through them. There's video of all of this on the internet. What they do is slow down and funnel foot traffic, easing the Border Patrol's job. "What Fisher did is he mitigated all of the brush, he put up the wall. Now we have visibility, and we have control of the flow," Syer says. "Once his fence was up, we were concentrating further up the river, where we didn't have fence."

Whatever the merits of Fisher's wall, there is one factor, a recent change in immigration patterns, that can render its advantages moot—and can make it seem pointless to build any kind of barrier in Texas. The morning after we meet, Syer and I hop in a boat so he can show me the location of popular river crossings in relation to Fisher's property. Toward the end of the ride, not far from the official U.S. port on the Anzalduas International Bridge, we see a smuggler unsteadily ferry almost 20 people, mostly women and young children, across the river on an inflatable green-and-yellow raft. No one appears to be wearing a life vest. On the bank on the Mexican side, off a well-trod dirt path, about 20 more people are waiting for the smuggler to return for them. When Syer and I disembark, we climb in his pickup and head to the levee-wall border fence, a combination of Obama-era and Trump-era construction, that the migrants are probably aiming for. He texts his ex-colleagues to tell them a small group is on its way to find them, in case a brush sensor hasn't alerted them already.

And that's the thing. Prior to 2014, illegal crossers tended to be Mexicans seeking to evade detection. The migration surges since then, including the last two big ones, in 2014 and 2019, have been driven by Central Americans, many fleeing poverty or gang violence and hoping to apply for asylum. Once these migrants disembark on the U.S. side of the Rio Grande, they aren't trying to escape Border Patrol. They're trying to be found.

Biden is expelling the majority of migrants, ostensibly for public-health reasons, as soon as they're encountered by Customs and Border Protection, under a Covid-era policy instituted by the Trump administration. But unlike Trump, Biden is allowing all unaccompanied Central American minors and what's amounted to roughly 80% of families to remain in the country while they seek asylum. While most of the new arrivals won't technically qualify for it, the immigration courts are so backlogged—about 1.3 million cases were pending when Biden took office—that many applicants can live in the country for months or years awaiting a hearing.

Fisher's barrier might be closer to the border than any other wall in Texas, but the 30-odd feet separating it from the Rio Grande is all an asylum-seeker needs. The irony of Fisher Sand & Gravel's 3-mile wall, with its floodlights and

freshly cleared carrizo cane, with its ambitions of bike lanes and sports fields, is that it isn't so much thwarting immigrants as beckoning them.

For now, everything is in limbo. The IBWC is trying to get Fisher to fortify the riverbank or maybe modify the structure—and, if all else fails, remove the wall entirely. The commission's and the National Butterfly Center's cases have been joined, and a trial won't take place until spring 2022 at the earliest. Meanwhile, the tax bill on the land has skyrocketed. The property has been reassessed at 100 times its previous value because of a county quirk that now classifies it as "commercial" rather than agricultural land. Fisher, who says he's disputing the assessment, is on the hook.

His federal wall contracts are in limbo, too. While border wall construction is currently paused, it's unclear if it will stay that way. In May the Biden administration announced that it was canceling wall-building contracts Trump paid for by diverting funds from the Department of Defense. But that still leaves all the suspended wall projects funded with \$5 billion of Department of Homeland Security money. "I suspect there's a plan being formulated," says Garza, of the Texas Civil Rights Project. "The Biden administration will try to claim a win and say, 'No more wall construction, but we'll pivot to virtual walls: sensors, cameras, and roads.'"

When Biden's moratorium was announced, Fisher had completed 79 of the 135 miles he'd been contracted to build. If Garza is right, it's conceivable Fisher could keep working a couple of his jobs, build border infrastructure that's more palatable to Democrats, and recoup some of the cash he spent on his private wall.

There's still hope for the big score, too. When we were at the border, Hennen, the radio host, helpfully floated the idea of finding 20 patriotic billionaires to pay \$1 million each to help sustain the private wall, but that scheme is thus far 20 billionaires short. Instead, Fisher has been traipsing around Texas, pitching his barrier as part of a larger state-wide system. On the strength of his silver-tree prototype, he tells me, he's reached handshake agreements with 15 or so landowners to build on their properties. He says he's also enlisted former CBP Commissioner Mark Morgan and former Immigration and Customs Enforcement Director Thomas Homan as paid consultants, in hopes they'll have influence with Texas Governor Greg Abbott. (Morgan and Homan didn't respond to requests for comment.)

In June, Fisher was handed a potential lifeline when Abbott announced that Texas was getting into the wall-building business. Whether or not the state hires Fisher or builds anything at all, at least one element of its operation will be familiar: In the week following Abbott's announcement, Texas raised \$459,000 from private donors.

And if nothing comes of any of it, well, it's not in Fisher's nature to dwell on the negative. "Worst-case scenario," he says, "I protected 3 miles of the southern border." **B**





0.5 mL (1.0 pH 7.0)  
0.25 mL (10% Tween)  
49.25 mL water  
0.4 mL Tris  
0.2 mL (10% Tween)  
99.4 mL water

48

The U.S. system for tracking Covid variants is scattered and slow. Time to fix it

▲ Inside the Pandemic Response Lab in Queens, N.Y.

By Cynthia Koons  
Photographs by Dina Litovsky



**There's no good place to stand inside the Pandemic** Response Lab's sequencing facility in Queens, N.Y. Take a wrong step, and you're blocking a gowned-up lab tech as she ferries a plate with the RNA from 384 Covid-19 test samples to a machine that runs a polymerase chain reaction (PCR) test, identifies positives, and extracts them with a robotic arm. A data scientist hurries by, bringing more RNA samples to a device that will convert them into DNA. In the corner are genomic sequencing machines that piece together chopped-up bits of that DNA to identify what form of SARS-CoV-2 a patient has. Name a mutation you've heard of, and this lab has seen it, as it takes part in the national and global efforts to sequence virus genomes, spot new and dangerous variations, and stem their spread.

Things are moving in this world with mind-bending speed. Earlier this year, the main concern was alpha, a variant originally identified in the U.K., which seemed to spread more easily than the original "wild type" coronavirus. Toward the end of April, the Pandemic Response Lab (PRL) spotted the delta mutation, first identified in India and believed to be even more contagious than alpha. A variant like alpha or delta is distinguished by changes to its genetic code that have effectively altered the virus's behavior. Delta has more than 20 differences in its genetic makeup, some of which may make it easier for the spike protein to bind to human cells and help the virus evade antibodies. Sequencing has shown that delta cases make up almost 70% of Covid positives in New York City. The CDC estimates the variant is responsible for 83% of cases nationwide.

In late June, PRL (pronounced "pearl") started gearing up to screen samples for "delta-plus," a mixture of mutations first identified in India and South Africa. "On a weekly basis these variant definitions can change," says Henry Lee, director of genomics at PRL. When they do, software must be updated, samples must be reanalyzed, and authorities must figure out how to respond. It's like watching a Covid wildfire: Find a new mutation, watch it spread, calibrate a response, find a newer mutation, and watch the process repeat, hoping the response will be more effective this time out.

Lee's lab sends its sequencing data to New York City's health department, then epidemiologists use it to study questions such as whether a case is a reinfection or whether it happened in a vaccinated person. In this manner, they assess how dangerous a mutation is—how fast it might spread, how severe it might be, how effective vaccines are against it. Then public-health officials can decide whether to enact safety measures such as masking and quarantining. Sequencing data can also contribute to the long-term fight to end the pandemic by helping pharmaceutical companies plan booster shots.

And yet for all of the value genomic sequencing provides, no one paid the Pandemic Response Lab to start doing it. PRL was formed as a Covid testing site with city funding last fall, then months went by as Lee and his colleagues waited for guidance on how positive samples would be sequenced. Jon Brennan-Badal, the 35-year-old chief executive officer of the company that set up PRL, Opentrons Labworks Inc., remembers being on a call with city officials, trying to work out how



to get samples to another lab for this purpose. "The conversation bottomed out, because we were like, 'Oh, it's going to take a lot of money to make this happen,'" he recalls. Insurers wouldn't reimburse for it, because sequencing rarely, if ever, influences the treatment of a given case. PRL decided to begin doing the work for free. "It's a nonrational business decision if you just care about shareholder value," Brennan-Badal says.

Opentrons had the luxury of being privately held and of having available capital and equipment. Its primary business is supplying the kinds of robotics in use at PRL and other medical facilities, which have been busy throughout the pandemic. Soon the lab will expand its operation to other cities. In March, Opentrons announced the launch of four national Covid testing hubs—in Los Angeles, New York, Seattle, and Washington, D.C.—to help get children back into the classroom. The company will charge \$25 for a pooled test; those samples will be shipped back to the Queens lab for sequencing, with that part, again, on PRL's dime. "The approach that I took with this is no one is willing to pay for it, but everyone is happy to have it," Brennan-Badal says. "If you asked them, 'Hey, would you pay an extra dollar for it?' they'd be like, 'Whoa, whoa, whoa.'"

Scientists and public-health officials across the country would love to see the kind of information Opentrons is producing gathered en masse and fed into a rapid, comprehensive national surveillance system. For much of the pandemic, though, sequencing has been piecemeal, spread between state health departments, academic labs, hospitals, nonprofits, and commercial unicorns such as PRL. The system is so scattered, it's generous to even call it a system. Different types of labs have different priorities for the data. Some work quickly, some take longer. Some have struggled to obtain samples. Fuzzy regulations have caused delays and headaches all over.

In perhaps the most hopeful sign of progress in the U.S., the Biden administration in April announced it would dedicate \$1.7 billion to developing sequencing capacity. But so far that hasn't amounted to a sea change, despite scientists' pleas that the system needs to be fixed in a matter of weeks—not months, and certainly not years. "There's a total lack of coordination and a systematic plan," says Eric Topol, director and founder of the California-based Scripps Research Translational Institute, which is home to one of the country's biggest Covid sequencing operations. "I just don't know why it's not moving like it should be. This should be going at a very high velocity, and that's not happening."

**Kenny Beckman, director of the University of Minnesota Genomics Center (UMGC),** has a vision for the future of pandemic fighting in America. The Centers for Disease Control and Prevention (CDC), he says, should create a robust, user-friendly tracker that surveils virus mutations in something close to real time, much as the National Hurricane Center tracks storms. ►



◀ Scientists in public and private labs would feed in sequences, which would be compiled to create straightforward maps of virus activity that everyone from health experts to the curious public could consult to see what mutations are in their vicinity.

Beckman says he “doomscrolls” hurricane maps himself, even though he lives in St. Paul. He thinks the CDC could create something just as useful and compelling for Covid. The agency does have a tracking webpage showing the proportion of positive tests and their given variants, but the 10 regional classifications it uses are almost comically broad, lumping together places as far away from one another as Arizona and Guam. And the data was, as of mid-July, a month old; while the CDC does offer a projection of current mutation activity, it’s based on estimates. It isn’t clear how the tracker might help anyone make an informed decision.

“The CDC ought to be the national Covid preparedness center,” Beckman says. And not just Covid. Done right, the platform could be applied to all kinds of threats, from other viruses to antibiotic-resistant bugs to foodborne pathogens. “All of the technology for carrying out this kind of sequencing, this kind of genomics, this is all quintessentially American,” Beckman says. “This is the country that manufactured and pioneered the methods to do this kind of work. It’s appalling to me that we weren’t also the leaders to use it.”

No one knows this better than Beckman’s colleague Daryl Gohl, who runs the UMGC Innovation Lab. In March 2020, as the novel coronavirus was spreading, Gohl and his teammates leaped into action, working with the university’s medical school to develop a PCR test for it. The lab had also been working on next-generation sequencing technology, so the following month Gohl submitted a request for funding through the university and the Mayo Clinic to start looking for SARS-CoV-2 mutations. He was denied. “Surveillance sequencing was not a priority,” he says.

He tried crowdfunding, entering a statewide life sciences competition called Walleye Tank, a habitat-appropriate riff on the venture-funding reality-TV show *Shark Tank*. He’d won the Minnesota contest before, but this time he mustered only \$1,395, enough to sequence maybe 30 samples. At the time, the state had more than 600 new Covid cases each day. “We had this nice method, but we had no money to do any sequencing,” Gohl says. He applied for funding from the CDC over the summer, but his proposal wasn’t reviewed because of an administrative error. He tried the university and Mayo Clinic once more and was denied again. Some other labs started using the procedure, but Gohl’s team couldn’t sequence much themselves.

Even one of the country’s best sequencing operations, two states over in Michigan, has struggled to meet the challenges posed by Covid. Since 2014, the health department there had been building a system that can track flu strains, tuberculosis outbreaks, and foodborne pathogens. Within weeks of discovering its first Covid case last March, Michigan was sequencing positive test samples. “We’ve been basically teaching other states what we do,” says Marty Soehnlén, director of the department’s infectious-disease division.

But Michigan faced major limitations. Some testing sites would send samples daily for sequencing, others might send them once a week; logistical issues like snowstorms could add delays. All that, plus the minimum of five days needed to do the sequencing, meant it could take up to two weeks before officials had the information they needed.

This January the state public-health lab discovered that the alpha variant had arrived. By one point in the spring, when Michigan had become a global Covid hot spot, it had the second-highest number of alpha cases in the country, behind only Florida, according to CDC data. (The high number in Michigan could also have been because the state was actively looking for the mutation.) “At the beginning we were hoping that that variant information would help us do more aggressive contact tracing and circle those wagons to control that spread,” says Annette Mercatante, the medical health officer of St. Clair County, which was among the state’s hardest-hit areas. Sequencing reports would trickle in, and her staff would drop everything to contact-trace people with mutated versions of the virus. But the genomic data simply wasn’t coming back fast enough. Eventually there were too many cases for her staff to keep up.

The most practical effect the mutation surveillance had for Mercatante was to give her talking points to persuade the public to take extra precautions. She successfully fought attempts by school districts to shorten quarantine times from 14 to 7 days. “For us it was kind of like a no-brainer. We’re not going to do this now,” she says. Other advice, including on social distancing, was frequently ignored. It was left to increased vaccination rates and possibly the warmer weather to slow alpha’s spread.

Soehnlén’s group is about to expand the state lab, using federal dollars they got last year. They’re also hoping to work out how to visualize sequencing data so local public-health teams can use it more effectively—those hurricane-style maps, perhaps. But, she says, “that’s not something that’s super easy to do in the immediate.”

**That’s where the Biden administration, in theory, comes in.** The \$1.7 billion funding announcement in April committed \$240 million to states and other jurisdictions, with a total of \$1 billion being invested over time. A further \$400 million has been earmarked to create six Centers of Excellence in Genomic Epidemiology—partnerships between state health departments and universities. A final \$300 million will be put toward building a National Bioinformatics Infrastructure, which would provide a uniform way to share and analyze sequencing data.

The CDC says it’s been increasing sequencing capacity, contracting companies such as Labcorp and Quest Diagnostics Inc. to do the work. That’s helped the U.S. rise from 45th place in January to 36th in terms of percentage of reported cases sequenced and submitted to GISAID, the global mutation database. The country’s standing has also been boosted by funding from nonprofits, including one project—by the Chan



“This is the country that manufactured and pioneered the methods to do this kind of work. It’s appalling to me that we weren’t as the leaders to use it”



▲ Gohl and Beckman

Zuckerberg Biohub and Chan Zuckerberg Initiative, financed by Facebook Inc. founder Mark Zuckerberg and his wife, Priscilla Chan—that involved actually doing the sequencing. The CDC estimates the U.S. is now sequencing 10% of all Covid cases.

The CDC has its own priorities for the resulting data. “It’s important to state upfront what

the objectives of sequencing are,” says Greg Armstrong, director of the agency’s Advanced Molecular Detection Program. “They’re different at the national level than at the state and local level.” The national goals are to find variants that evade vaccines, don’t respond to existing treatments, or are highly transmissible. This is the sort of information that helps pharmaceutical companies update their vaccines. It may also help the U.S. government allocate resources—in July, it announced it would send surge response teams to areas where delta is spreading rapidly.

Given the patchy start to Covid surveillance last year, some experts have expressed concern over whether the CDC can create a system that will help bring the pandemic to a true end. Early on, according to Rick Bright, senior vice president of pandemic prevention and response at the Rockefeller Foundation, the agency failed to grasp the urgency of sequencing. “There didn’t seem to be a champion for it. It seemed to be a side project or a hobby from a well-meaning or well-intended group in the CDC,” says Bright, who famously clashed with the Trump administration over its handling of the pandemic while he was director of the Biomedical Advanced Research and Development Authority. “I would say even today there’s not a full recognition of the value of this genomic data even at the CDC.”

Many in the field are critical of how long it takes the agency to share Covid data publicly and the level of detail it provides. When a variant of concern is found, for instance, the CDC publicizes only the state where the test was done, which doesn’t help public-health researchers track its spread. Jeremy Kamil, a virologist at Louisiana State University Health in Shreveport, points out that the agency takes weeks to provide data for diseases such as influenza, too. “They like to centralize and have control,” he says. “We have the technology to change this, but there’s this rigid momentum.” The result, according to Stacia Wyman, a senior scientist at the Innovative Genomics Institute at the University of California at Berkeley, is that the CDC is “increasing the numbers broadly but not necessarily increasing the usability and usefulness for public health.”

Jade Fulce, a spokeswoman for the CDC, says the agency can’t provide more granular data about Covid mutations because sequencing of positive tests isn’t mandatory; it uses geographically broad regions on its tracker because there isn’t sufficient information coming in from certain states or jurisdictions. Fulce adds that the CDC has also formed a consortium of

scientists who are doing sequencing. The more robust National Bioinformatics Infrastructure is a multiyear project and just getting started, she says.

For sequencing to achieve truly widespread adoption, health insurers may need to get involved. Right now, insurance companies don’t pay for it, because the discovery of a mutation doesn’t alter a patient’s treatment plan. “It’s not approved as a medical health activity,” says James Crawford, senior vice president of laboratory services at Northwell Health, the largest health-care provider in New York state. “We have not bridged that gap.”

Where Covid is concerned, there are generally few therapies to begin with. Finding ones tailored to variants will be that much harder in the short term because federal regulations prevent labs from telling a doctor when a patient has a mutation unless the patient is participating in a study. But if that problem can be cracked, and if sequencing increases broadly, it could help researchers develop targeted interventions, which would give insurance companies a reason to cover it. And that would in turn result in a new wealth of data for doctors, scientists, public-health experts, and the companies developing treatments and vaccines. “We have to do more than generate data,” Crawford says. “We have to generate knowledge.”

**Gohl, the University of Minnesota scientist and Walleye Tank emeritus, found out in May that he did, in the end, get some money for sequencing from the CDC. It will be enough to sequence 6,000 Covid samples. Even as overall case numbers are on the decline and public-health measures are being relaxed, concerns about mutations, especially delta, are rising. There are still many people who remain vulnerable to Covid—children, the immunocompromised, the vaccine-hesitant. Gohl’s lab will be sequencing positive samples not only from Minnesota but also from nearby states such as South Dakota and Iowa. Missouri and Arkansas, where cases are on the rise again, have reached out for help. “This makes me very glad that we were persistent,” he says. It’s critical public-health work, getting under way long after it should have begun.**

The very long game for the U.S. will be working internationally to guard against new threats. As of early June only 14 countries, all of which have developed economies, were sequencing 5% or more of cases and sharing that information through global databases, according to the Rockefeller Foundation. The foundation is trying to fill some small part of the gap, investing more than \$20 million for sequencing in India, sub-Saharan Africa, and the U.S. Variants of concern continue to incubate in places where vaccination is limited. Delta-plus was initially spotted in travelers from Nepal, where just 6.3% of the population has been immunized, according to the Bloomberg Vaccine Tracker.

If another dangerous variant arrives in the U.S., “we’re at great risk of missing it until it’s too late again,” Bright says. “We have resources now, we have the science and technology. We have amazing willpower in the university system and the private sector. All we have to do is take the money and enable these groups and get the information as quickly as possible.”



Who

Killed

the

Butterfly

King?



A conservationist in Mexico put himself  
between threatened monarchs and  
the avocado and timber industries



Then he disappeared

By Matthew Bremner  
Photographs by Fred Ramos



At midday on Jan. 13, 2020, Homero Gómez González, one of Mexico's most respected conservationists, attended his final meeting. Like most of his appointments, this one was about butterflies. For years, Gómez had been the leading defender of the Monarch Butterfly Biosphere Reserve, a collection of sanctuaries in Michoacán, about a two-hour drive west of Mexico City, that attracts swarms of orange-and-black butterflies migrating south for the winter, some of them the size of a small dinner plate. The migratory phenomenon, recognized by the United Nations as a cultural heritage worthy of protection, draws millions of monarchs from as far as Canada and Alaska and, in pre-pandemic times, some 300,000 tourists.

That day in January, the middle of butterfly season, Gómez was visiting the monarch sanctuary in a village called El Rosario. In most ways, attendees recall the meeting as unremarkable, focused on the sanctuary's finances, visitors, and tree plantings. If there was one odd thing, they say, it was that Gómez's phone was buzzing the entire time. They'd seen the butterfly activist, a onetime community president, get lots of calls from tourist agencies, politicians, and journalists. But this barrage seemed relentless. Eventually, Gómez picked up.

Whoever was on the other end of the line seemed to want Gómez to attend the final day of a local fair in the town of El Soldado, according to people who overheard the call, including Miguel Angel Cruz, the current community president. The caller told Gómez the fair was an important local event, noting the horse racing, gambling, alcohol, and many local politicians sure to attend. "Yes, yes, of course I'm going," Cruz and others heard him reply.

After the meetings finished, Gómez drove the 40 minutes to the fairgrounds, arriving at around 5 p.m., according to his family. He parked his red Seat Ibiza next to a bunch of similar cars in a field near the racetrack. The day was overcast but mild. The grounds sprawled with flapping white tents and hordes of people held back from the sandy track by white metal barriers. Jockeys paraded the paddocks while their horses nickered and snorted. Among the bobbing Stetson hats, jeans, chunky belt buckles, and *botas picudas* (pointy boots), Gómez wore a white *guayabera* shirt, grayish suit trousers, and brown shoes. He was 50 years old, chunky, and square-headed, with a thick shoe-brush mustache bristling beneath his ski-jump nose.

Gómez was famous in these circles. Locals beckoned and greeted him wherever he went, attendees say. They included the politician Elizabeth Guzmán Vilchis, who was hosting a lunch for influential local officials. As afternoon crept into evening, the music and the crowd swelled, but Gómez kept schmoozing amicably. "We

danced, drank, joked, and laughed," Guzmán says. "There was no tension between anybody." She last saw him at 8 p.m., when she took her kids home. Others say they spotted him in one of the tents about an hour later. After that, he was never seen alive again.

The news of Gómez's disappearance spread quickly.

There were articles in the national press, followed by accounts from the BBC, NPR, and the *Washington Post*. Experts speculated that whatever had happened to him was tied to his activism.

Rebeca Valencia, Gómez's wife, had always been ill at ease about her husband's work. Now she felt paralyzed with fear. In the village of Rincón de San Luis, several miles away from the sanctuary, she stared at her phone. There were no messages, no signs of life.

Valencia, her round face puffy and her eyes brimming with tears, had good reason to worry. The state of Michoacán was rich with international trafficking routes, exploitable pine and fir forests, and the billion-dollar avocado trade. And for the past several years, the state had been caught in a brutal war. On one side was the Jalisco New Generation Cartel, Mexico's fastest-growing criminal organization. On the other, a collection of local groups defending their home territory under the banner of United Cartels. The conflict had become so violent that many politicians and police had stopped fighting and joined forces with the cartels. It was often difficult to separate the mafia from the state.

For people who tried to disrupt this collusion, there were always consequences. "There was plenty of friction between him and powerful people," says Amado, Gómez's brother.

Valencia knew her husband frequently had to meet with various bigwigs. He'd often told her they were his friends, but she was skeptical. "They were the type of friends, I thought, who could stab him in the back at any moment," she says.

Still, when a loved one disappears, generally you have to go to the authorities. Three hours from the sanctuary by car, in the state capital of Morelia, Michoacán's state prosecutor's office took up the case. The state attorney assigned police, the national guard, and even anti-kidnapping specialists and sniffer-dog units to hunt for Gómez. Within days, 53 members of the local police force were brought in for questioning. Meanwhile, search parties formed with locals and volunteers, about 1,000 people in total, scouring the surrounding woods and hills for traces of the activist.

His eldest son, Homero Jr., became one of the leaders of these 50-man brigades. Tall, dark-haired, and thick-set like his father, he started searching from as early as 7 a.m. until 5 p.m. or 6 p.m., when it began to get dark. The work was tiring and desperate. Much of the forest was located at a high altitude. The winter sun stung, and the steep slopes and boggy roads slowed progress. Among the fir trees, the monarchs' flapping wings whirred like a giant air conditioner.







Homero Jr. had grown up in these woods. He'd spent many mornings in a fog of butterflies filming and uploading videos of his father to promote the butterfly reserve. Now the creatures seemed to speak only to his father's absence.

Every fall since the mid-1970s, Homero Gómez Gonzalez, the eldest of nine siblings, had watched millions of monarchs migrate to the butterfly sanctuaries near his home. He saw how the insects blanketed thousands of firs like leaves. His grandparents had told him the monarchs were the spirits of their ancestors, returning every year to rest on the Day of the Dead. Gómez respected these myths.

After studying agronomy at Chapingo Autonomous University, he fell into his family's timber business and started cutting the oyamel firs that carpeted the surrounding hills. By his own accounts, back then he saw the butterflies as a necessary sacrifice. When the Mexican government announced the creation of the nature reserve, he opposed it.

Gómez's feelings began to change following the decrees of 1980, 1986, and 2000, which officially formed the biosphere reserve under federal protection. The laws forbade local communities from carrying out logging, hunting, or plant gathering. Like many members of the area's land collectives, Gómez wanted compensation if he was to be deprived of his livelihood. "We were afraid that if we stopped logging, it would send us all into poverty," he told the *Washington Post*.

◀ "My dad always lived without fear," says Homero Jr.

The formation of the reserve would deprive them of their old jobs, but it also brought new opportunities. In the following years, scientists from the U.S. and Europe visited the sanctuary. They taught the locals that in one complete migration, four generations of the monarch were born and died. The butterflies, they said, chose their habitats carefully, seeking shelter in the oyamel firs that populate the cool 10,000-foot elevations of the local mountains. They pollinated many types of wildflowers, formed an important link in the food chain, and took advantage of the umbrella effect of the forest canopy, packing together in clusters on the trees' branches. Often the newest generation would roost on the same trees, even the same branches, as butterflies from the previous migration. If the locals safeguarded the oyamel firs that populated the area, they could protect one of nature's most mesmerizing events and attract tourists with money to spend on food, drink, lodging, and all things butterfly-related.

As these ideas percolated in Gómez's mind, he sensed possibilities. Why couldn't butterfly tourism be a more sustainable economic idea? The butterflies beautified the land and brought real international acclaim, whereas logging seemed to bring only an ugly vista of tree stumps. Over the following years, Gómez and other like-minded people sought to persuade the government to increase the allowance local farmers received for saving trees. They also tried to persuade local farmers to replant trees on land that had been cleared for crops.

Getting the balance right was tricky. The Rosario, the sanctuary where Gómez worked, operates as an *ejido*, a piece of communal land to which the community members have rights but the state owns. In the Rosario there were some 280 *ejidatarios* (locals who had rights to work the land) and about 4,000 more people without land rights. Only the *ejidatarios*, divided into three groups each working every third year, were allowed to participate in the butterfly tourism industry and share the money from ticket sales, food, and souvenirs. Each received roughly \$1,000 to \$2,000 during the three-month butterfly season—potentially a big deal in an area where a typical annual income is about \$3,600. The remaining 4,000 residents of El Rosario would have to rent the right to operate in the sanctuary as a guide or vendor from an *ejidatario* or find other work.

Despite the small pool of beneficiaries, these incentives seemed to have a positive impact on the forest. Not only did the local community manage to reforest about 370 acres, but also, according to Cruz, the community president, "now we have no illegal logging in the sanctuary." Other residents generally agreed the practice had declined, though not to zero.

Gómez's fight to preserve the forests had been tough, he'd told the international press. He said his work had ▶



◀ been endangered by criminals, including illegal loggers and the cartel-infiltrated avocado trade. “Gómez was probably hurting the interests of people illegally logging in the area,” Mayte Cardona, a spokeswoman for the State Human Rights Commission of Michoacán, told journalists shortly after his disappearance.

Throughout Mexico, two dozen environmental activists were killed the year before Gómez disappeared, according to Amnesty International. And Michoacán, his home state, is one of the most violent overall, with 1,309 murders in the first 10 months of 2020. The state contains essential drug-smuggling routes, and in recent years it wasn’t unusual to see rival cartels shooting at each other during the day in the larger cities and towns.

One of the reasons for the gun violence is avocados. From 2001 through 2018, the annual consumption of avocados in the U.S. increased by 5.5 pounds a person, to 7.5 pounds a person. Of those avocados, 87% came from Mexico, and most from Michoacán, whose high rainfall and rich soil have made it the avocado capital of the world. The industry is worth \$2.4 billion annually, it pays workers as much as 12 times Mexico’s minimum wage, and it offers high profit margins for local landowners. The money attracts criminals looking for safer alternatives to the drug trade.

The competition for the business in Mexico is fiercer than anywhere else. Four cartels are said to be fighting over avocados in Michoacán, including perhaps the country’s most violent, Jalisco New Generation Cartel. The violence has at times seemed medieval. In August 2019, 19 people were murdered in Uruapan, their body parts exhibited at three different sites around the city.

Much of the avocado trade, and the violence, has been in the central part of the state, a few hundred miles away from the wintering butterflies. Still, tourism fell as many would-be visitors decided not to risk running afoul of the cartels. This, in turn, made a slew of new avocado mini-plantations all the more important to the region.

**Days passed after Gómez’s disappearance, and the searches in the fields and the woods turned up nothing. At the same time, police investigations yielded little more than uncertainty. Then Gómez’s car was found parked in El Soldado, a few hundred yards from where he’d attended the horse races the night he disappeared. His tablet and phone were found in the possession of a local councilor’s assistant.**

The family knew Gómez never went anywhere without his phone or tablet. In fact, in many of the pictures he posted on his Facebook and Twitter accounts, the tablet would be bulging from one of his coat pockets or his phone would be grasped tightly in hand. So how had they ended up in the hands of a politician’s assistant? More specifically, a personal

assistant of a councilor from Zitácuaro, one of the last people to be seen with Gómez and the person who’d been so insistent he attend the races that day?

Gómez wasn’t everyone’s favorite person. He had a reputation for being outspoken and forceful in his political dealings. Such as when he and local farmers stormed the state congress building in Morelia to demand development aid. Or in 2019, when he led a demonstration in the nearby town of Angangueo to demand that local authorities pay to use the water from the mountain springs on the community’s land. Many people say there were tensions between Gómez and local officials. “When the municipality didn’t fulfill a promise it had made to the El Rosario land collective, Homero went down with everyone and fought it,” Guzmán says.

Homero Jr. says gangsters didn’t faze his father much, either. “My dad always lived without fear,” he says. “He would go out on these patrols and capture the loggers. If they didn’t listen, he would threaten to beat them to the ground.” Gómez had a black belt in taekwondo.

Even some local researchers and academics had issues with Gómez. The best interests of tourism boosters, they say, weren’t always precisely aligned with those of the butterflies. On the contrary: Too much foot traffic could prove harmful to the reserve and its inhabitants.

Still, the monarch sanctuary had seemed to help insulate the community from the worst of the region’s violence, and the activist’s disappearance threw that equilibrium into



[Gómez’s memorial site ▶](#)



doubt. It had become much harder to know whom to trust. Most residents were hesitant to speak to me. A relative of Gómez's promised to take me to his grave, but then the next day didn't show up. The leader of a nearby butterfly sanctuary inside the reserve agreed to meet, then didn't return my calls. When pushed for answers, most locals feigned ignorance, and others evaded my questions.

Those who did speak to me said that where there had once been tranquility and some economic prosperity, there was now only uncertainty. Although illegal logging seemed to have decreased, the community feared that, in Gómez's absence, it would pick up again. They also feared further violence resulting from the avocado trade, whose popularity abroad posed an existential threat to the reserve. Without Gómez they were more vulnerable than ever—to corruption and to exploitation by the state's more nefarious figures. They prayed along with Homero Jr. and his mother, Valencia, that the authorities would find him alive.

**But on Jan. 29, 2020, Gómez turned up dead.**

A local shepherd found his blue, swollen body floating at the bottom of an irrigation ditch in the corner of an empty field in El Soldado, 200 yards from where he'd last been seen. He was still dressed in his white guayabera shirt and grayish pants. Forensics would later estimate that he'd been dead for about two weeks, the same amount of time he'd been missing, and that the cause of death was asphyxiation and blunt head trauma. They also reported that 9,090 pesos (about \$500) had been found on his person. The circumstances were suspicious, yes, but the authorities were reluctant to pronounce his death a murder. Although they stated that they couldn't rule out any line of inquiry, they seemed to suggest his death was an accident.

Perhaps for the family, this would have been easier to believe—that Gómez, drunk from that night's festivities, had tripped and fallen down an irrigation ditch. Certainly, it would have made the future seem less threatening. But that irrigation ditch had been searched before. Five days after his father had disappeared, Homero Jr. headed a party that checked precisely that area. "We combed the whole place, and some guys even threw stones into the well to see if there was anything there," he says. "We found nothing."

If someone had moved him there later, where had he been beforehand? The ditch where he was found was right next to a house and a farm track—wouldn't someone have smelled the rotting body? "My father was murdered," Homero Jr. says.

Two days later another corpse showed up in the sanctuary. It belonged to a 44-year-old tourist guide named Raúl Hernández. He was found with bruises all over his body and a head injury caused by a "sharp object," according to a statement from the prosecutor's office. Valencia says the men hadn't known each other; neither the family nor the authorities could be sure there was a link between the two

**"We miss him a lot," Homero Jr. says. "It feels like everything is out of control, and he was the only person who could control it"**

cases. On this occasion, however, the police were quick to declare Hernández's death a homicide.

Why had the authorities pronounced his death a murder and not Gómez's? Both bodies were found in suspicious circumstances, within days of each other, and in one of the most violent parts of the country. The state government promised a thorough investigation. They vowed not to disregard any hypothesis and said they would catch all responsible parties. But Gómez's tablet and phone being found in the possession of a local councilor's assistant weren't mentioned again, and the prosecutor's office didn't respond to requests for comment for this story.

Today, Gómez's case is stalling. Valencia, who knows full well where she lives, is skeptical. Michoacán is a place where organized crime and the state exist in some symbiosis. Out of Mexico's 32 federal entities (31 states plus Mexico City), Michoacán is ranked as the most corrupt as perceived by its own residents, according to a 2019 poll by Mitofsky, a consulting company in Mexico City. Police in Michoacán solve only 3% of the state's homicide cases. "On the one hand, there may be powerful people stopping the investigation, and on the other, there is a problem of resources and an inability to investigate the case properly," says Bernardo León Olea, a former Morelia police commissioner.

Sitting in her dark living room staring at her husband's picture, Valencia says she feels uncertainty and dread. Homero Jr. is studying away from home in Morelia and seems determined to follow in his father's footsteps. That makes her think, "Will they come for him next?"

Homero Jr. doesn't seem to share his mother's concerns, except about the slim possibility that the case will be solved. He does agree that the Rosario community is struggling. The butterflies are in decline across North America, but especially near his home. This past winter alone, climate change and the increased use of herbicides reduced the monarchs' forest habitat in Mexico by 53%. A mining company is trying to make use of a legal loophole to open a mine near the reserve, further threatening the population. Violent crime is also on the rise across the state, with some avocado farmers arming themselves against the cartels. And, not least, there's the pandemic. To limit the spread of Covid-19, the butterfly sanctuary was shut for much of this year's peak migration season. All this during the first season without Gómez. "We miss him a lot," Homero Jr. says. "It feels like everything is out of control, and he was the only person who could control it."

And with no advances in the state's investigations, Homero Jr. says it's as though his father has been forgotten: "We'll never find his murderer." **B**



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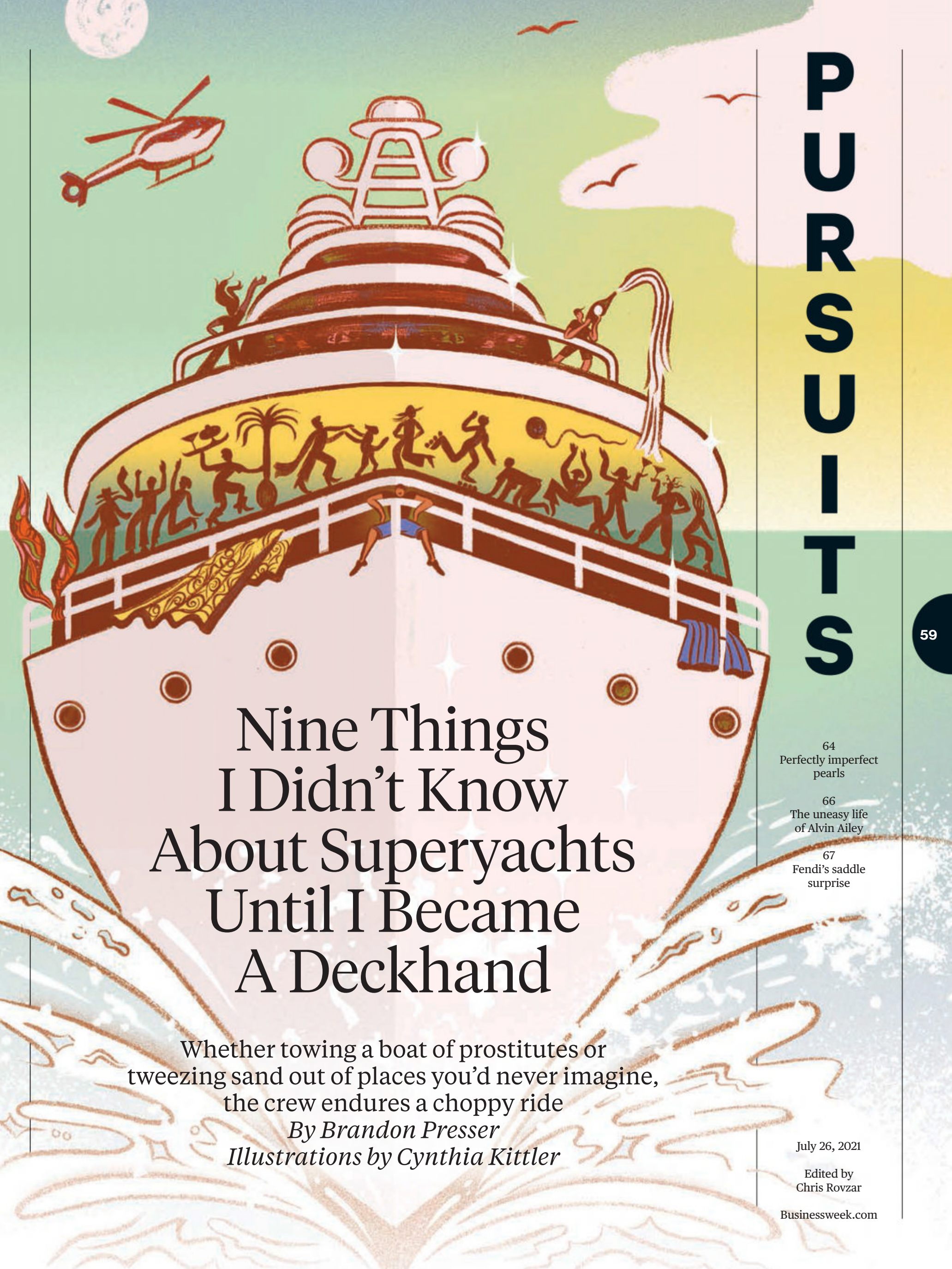
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Nine Things  
I Didn't Know  
About Superyachts  
Until I Became  
A Deckhand

Whether towing a boat of prostitutes or  
tweezing sand out of places you'd never imagine,  
the crew endures a choppy ride

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July 26, 2021

Edited by  
Chris Rovzar

Businessweek.com



At a shipyard in the Netherlands—the world’s megayacht maternity ward—the largest vessel of its kind is being custom-built for Amazon.com Inc. founder Jeff Bezos at a projected cost that tops \$500 million. With more than 400 feet of sleek aluminum and steel, it will join an elite new vessel category: the gigayacht.

The pandemic has intensified the desire to bubble oneself away from the world and widened the wealth gap further, making Bezos merely the latest business magnate fancying a life at sea (when he’s not in space).

“The market’s been roaring,” says Sam Tucker, head of superyacht research at VesselsValue Ltd. in London. “Second-hand sales are red-hot, and it’s impossible to get a slot in a build yard.”

Even charters—where a person, group, or family rents out a yacht for a trip—are through the roof. “Our year-on-year business is up over 340% from 2020 up to now,” says Patrick Curley, co-founder of brokerage firm YachtLife Technologies Inc. The company has been fielding so many requests, it’s started offering membership services that give priority to repeat renters.

Even the onboard jobs have become competitive. “There are hundreds of people clamoring to get a spot on a boat,” says Luke Hammond, captain of the 146-foot *M/Y Bella* (“M/Y” for motor yacht). Most applicants have fantasies of beachside bottle service and sailing to more than a dozen countries a year while attending to deep-pocketed glitterati.

But reality for the crew is hardly sunning in St-Tropez and hobnobbing with sheikhs, as I quickly learned when I scored a position as a deckhand aboard the *Bella*—a pristine, semicustom, six-cabin, four-deck vessel with a skylight and floating tub in its owner’s suite.

The to-do list I shared with the eight other crew members included tweezing fried chicken crumbs off the teak flooring, acting as a human clothes rack on seven-figure shopping sprees, and ferrying to the middle of nowhere to pick up caviar. If you thought life was always glam aboard a superyacht, here’s proof that it’s super-not.



## 1. Privacy doesn't exist

A good yachtie isn't seen or heard—but they see and hear everything. Earpieces, radios, and cameras help keep a constant eye on guests, all feeding back to a control room.

When guests are seen leaving for breakfast, the stewards (or stews, for short) are immediately deployed to the guest rooms to clean. When someone picks mushrooms out of an omelet, the chef makes a note to tweak the dish the next morning.

Of course, this also means staff see and hear things of a more risqué nature, such as one yachtie whose repeat client insisted on spending her entire seven-day foray in the nude, often passing

out drunk in unbecoming positions. Semiclad sunbathing (most often by “paid friend” types), spouse swaps, and drunken fisticuffs are also common.

Watching the cameras can be like blooper TV. “We’ve seen guys do splits with one foot on the boat and the other on the tender as they drifted apart,” one of my colleagues recalls. “One time,” Hammond adds, “we watched someone get slapped in the face by a flying fish.”

## 2. There's clean, and then there's yacht-clean

“Salt kills everything,” says Clint Jones, a longtime captain who worked aboard an A-list golfer’s vessel before joining



YachtLife as a broker. Anytime the ships move through water—even if it’s simply steering to another beach 30 minutes away—the sea splash necessitates hours of cleaning.

Sports stars are reputed to be the messiest guests and most prone to trashing vessels. The biggest infraction in recent memory, says a senior YachtLife broker, was a current NBA player who went out on a boat in the morning and had wrecked it by lunch, dousing the interiors in sprayed Champagne, then clogging all of the cabin toilets with his vomit.

Even without all that, a stem-to-stern cleaning takes six people around 10 full days. And you can clean a half-dozen hotel rooms in the three hours it takes to clean one yacht stateroom, suctioning walls and air vents with special vacuum attachments and scrupulously microcleaning grout with toothpicks. One day I spent 45 minutes “Q-tip cleaning” a single bathroom cabinet.

The crew knows immediately if you’re a charter newbie when you bust out the aerosol sunscreen—it’s the hardest stain to clean, says Gina Nivison, the *Bella’s* chief stewardess, who makes every effort to gently cajole clients toward creams before they arrive. Women who sleep in tanning oil and makeup drive staff nuts, too; when I boarded the *Bella*, staff members were

replacing \$8,000 worth of linens for that very reason. (Frequent stains of other natures require a quick 86 of bed linens, as well.) Fried food is also terrible: The greasy crumbs tend to escape sweeping and need to be meticulously picked off teak floorboards one by one.

### 3. Sometimes you need a second boat for prostitutes

Gone are the days when pleasure yachts were drifting cocaine dens—“it’s definitely not the ’80s anymore,” Hammond says. Boats can be impounded and captains arrested if illegal substances are found on board, thanks to ubiquitous port laws that clamped down on smuggling in the ’90s. In a total U-turn, the Bahamas, once a prime drug-dealing way station, is now among the most family-friendly locales—along with much of the Caribbean. And in general, the narcotics rules are so strict, Hammond has had to fire a few deckhands over the years for casually smoking a blunt off the bow of his ships.

Prostitutes are a different story. “We

see day-use girlfriends on other boats all the time,” says Christopher Sawyer, the *Bella’s* chef, “especially in the Med.” He’s even witnessed big spenders fill a secondary superyacht with women to trail the lead vessel, swapping them on and off—10 at a time—throughout the course of several days.

Often a yacht will be rented for two weeks: the first for the family, the second for bachelor party-esque antics. I’ll tell you about the crazy land-bound shopping sprees in a bit—they’re often the wives’ revenge.

### 4. Stocking the fridge is a seven-person job

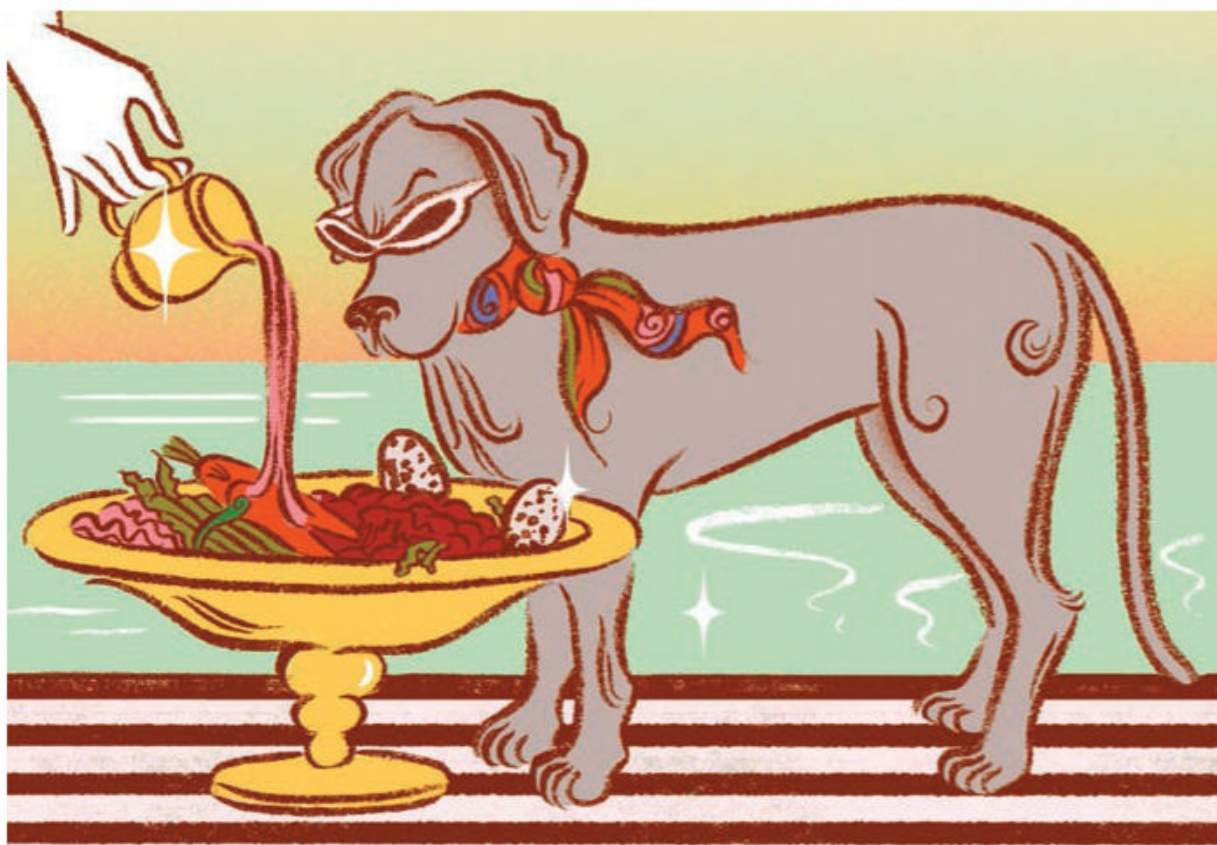
Taking every guest into account when food shopping is key. Especially pets. Once, Sawyer cooked a week’s worth of meals for a dog named Bellini. “He just looked at you like he knew he was rich,” he says.

Babies can be discerning, too. “One guest had me cook whole meals, just to cram them down the blender for his kid,” the chef notes. “I remember making a lovely Irish stew, then pulverizing it into mush.”

Most ingredients are purchased near the shipyard before departure. “The Publix in Palm Beach is probably the most profitable grocery store in America,” Sawyer says. It’s the go-to spot for yachts docked in both Riviera Beach and West Palm Beach, and stocking the *Bella’s* six fridges and freezers takes seven piled-up grocery carts.

“Milk is the bane of my existence,” Sawyer laments. “Everyone needs it for their coffee, and it’s hard to keep it fresh for a weeklong charter.”

Additional port purchases require upcharges of about \$1,000 for every \$6,000 of groceries. “If you want to make bank, start a business that stocks boats,” says Hammond, whose 18-year yachting pedigree includes stints aboard vessels that Microsoft and LVMH execs own. ▶





## 5. Chopping in caviar is like an Olympic relay race

The *Bella's* kitchen staff sends out detailed guest preference surveys to anticipate unexpected food requests. But guests' nationalities contain valuable clues, too.

Whatever Middle Eastern clients want, they want it in abundance. "They eat like Americans but want five times the portion size, always served buffet-style," Sawyer says. "And they only eat around 10%." Emirati and Saudi wives like to commandeer his kitchen to cook meals just as their families like them. "I don't usually mind," Sawyer says. "I get to learn new recipes!"

For Russians, "it's a lot of lentils," he continues. "You know, besides the vodka and caviar."

And, boy, do they like their fish eggs. Every experienced yachting I met said that if a guest arrives via private jet from Moscow, a chopper will likely come to replenish the supply halfway through a trip. "It's a total flex move," Jones says.

Once, in an ultra-remote part of the Caribbean, he had to magically conjure more Champagne and caviar—calling up a provisioner in Florida and then organizing a private plane to fly it to St. Lucia. From there, Jones says, "we had to hire a boat to run it halfway to our vessel, so I could take a tender and ferry it the rest of the way."

## 6. Crew are often more spoiled than the guests

"When you're around people with high demands all the time, it really starts to rub off on you," Nivison says. "Since

we don't have to pay for our food or housing, we really go all out when we have time off—as though we owned our own boats."

The average stewards and deckhands make about \$3,000 a month—a number that's barely gone up in decades. But yachting will commonly throw down on bottle service at Nikki Beach alongside moguls and heiresses, "and we buy all the Gucci glasses and bathing suits, too," Nivison says.

Better yet, they're frequently asked to accompany guests on six- or seven-figure shopping sprees—to hold the bags—and get rewarded with collateral, such as an Hermès scarf. Other times, luxury apparel is left on board. "We offer to send it back to clients. But they usually don't care, so we get to keep it," one of the stewardesses reports.

The same applies to food and booze. "We once had such a ridiculous surplus of Kobe beef that I was doing wagyu fajitas for the staff after we got sick of eating fillets every night," Sawyer says, laughing.

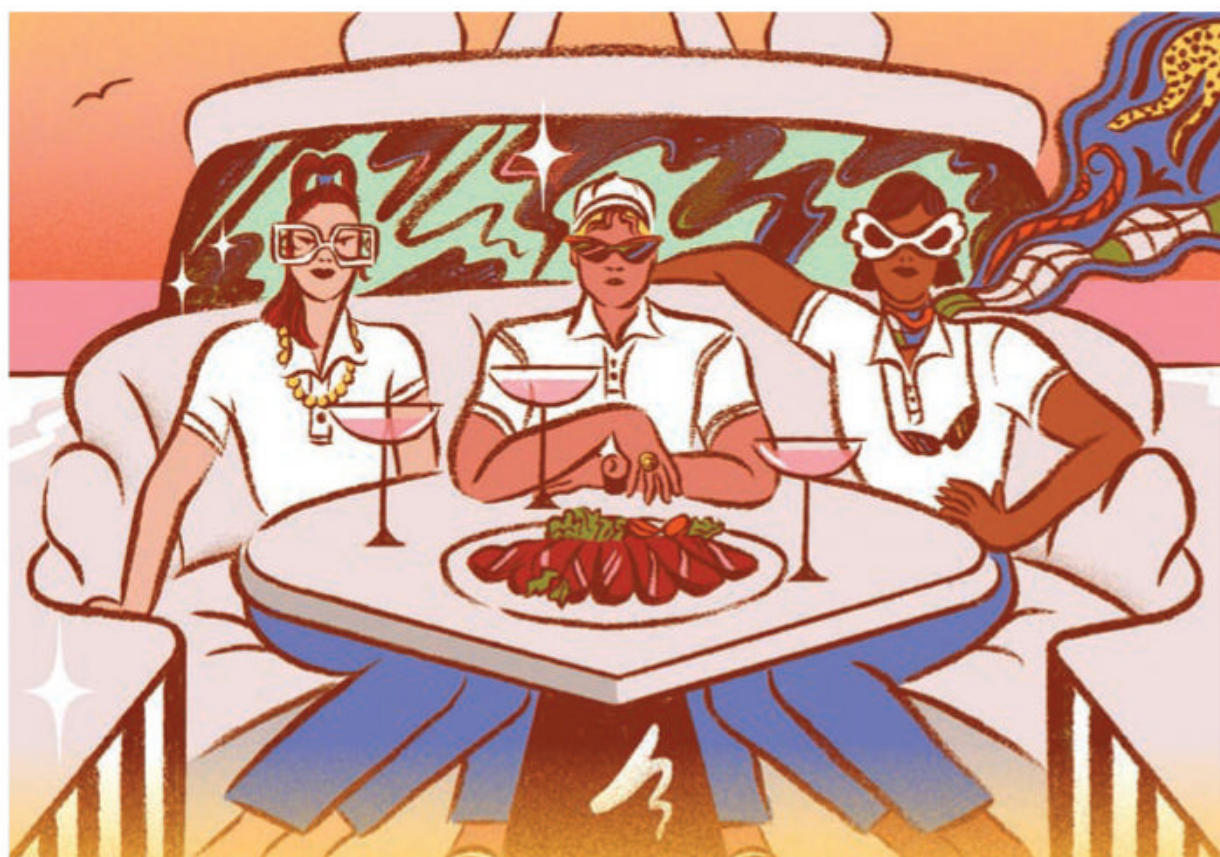
Even still, employee turnover is high, largely thanks to "cabin goggles," the phenomenon of appearing better-looking simply because you're among a limited population of yachting. You may not be looking to shack up, but if you're a three on land, suddenly you're an eight at sea—so it's only a matter of

time. Usually it's a stew quitting to follow a dashing deckhand onto another yacht. (Sure enough, while I was on board, the *Bella's* third stew—who was as new to the crew as I—was passionately texting a yachting she'd met at the previous shipyard.) Very rarely, a senior crew member will marry into the owner's family, securing a lifelong upgrade on the yacht they once scrubbed. Dreams can come true.

## 7. It's all about the tips

When a boat is being chartered, the unspoken rule is for the renter—called the "primary"—to tip each crew member 1% of the total weekly rental cost. For the *Bella*, which costs \$220,000 for seven days (not including food, fuel, and dockage), staff can plan on pocketing at least \$2,200 each. The number can be far higher if a group leaves behind what's left of their food and fuel deposit—30% of the total trip cost—and it's dispersed to staff. A great summer in the Med could bring in \$50,000 worth of tips per person, and then there are those elusive one-off charters where yachting hit it big with a \$10,000 bonus.

Owners, on the other hand, rarely tip because they're the crew's boss. But anniversary bonuses, meant to reward





loyalty, can be tremendous: a Breitling watch for completing a year of service or a Rolex for hitting five. Yachties who get in with their owners are even sometimes granted shares of their companies or invitations to be early investors in their next ventures—forms of gratitude that could pay dividends.

## 8. South Florida is the new Med

South Florida—from Palm Beach down to Miami—is quickly becoming a 'roided-out version of the Mediterranean. “But in Florida,” YachtLife’s Curley says, “the party’s all 12 months of the year.”

There the business is about day charters, often for time-crunched celebs willing to drop \$15,000 on one epic joyride. On “Sunday Fundays,” Curley says, “you head out in the morning, drop anchor at the sandbar off Key Biscayne, play with the toys before you’re too drunk, then dock at the trendiest club.”

Drugs are rampant on land, even among brokers. At one agent’s office, I watched as he closed the sale of a limited-edition 110-foot Riva Dolce Vita (a certain soccer star owns one; the asking price is more than \$15 million). He then slammed his laptop shut and did a line of blow off its silvery sheen; another did a key bump while we were driving to meet a day charter client at his house.

At one club, I was invited on board an owner’s docked boat, only to find a veritable buffet of weed. While looking for the bathroom, I stumbled into another secret lair: a dedicated cocaine room, complete with an ornate mirrored table.

## 9. You lose going in and going out

As a general rule, superyachts cost a million dollars for every 3 feet you build. Because they measure at least



120 feet, buying one will set you back about \$40 million before common add-ons such as Jacuzzis and helipads. And then there are the toys, from Jet Skis to \$5 million submarines.

Fueling, electricity, dockage fees, maintenance, and other operational expenses stretch the wallet further at an annual rate of about 5% of the ship’s purchase price. That includes taking care of the crew. As I learned happily, owners are responsible for feeding them, stocking their bathrooms with toothbrushes and shampoos, and outfitting them with a branded wardrobe. My Manhattan closet would barely fit everything I received upon boarding: on- and off-charter uniforms, three colors of evening wear, formal “number ones” for greeting clients, and Helly Hansen wind shells for a stop in Alaska.

Then there’s the art. “I once worked

on a vessel that had a Picasso in the galley—the staff saw it way more than the owner!” Hammond says, adding that his ships have held everything including Fabergé eggs and concert pianos. Another, owned by an LVMH exec, was designed with as many Dior products as could fit inside, including custom wallpaper. (Salt air and sunshine be damned.)

But the biggest depreciating asset is the ship itself. “You lose 20% of what you paid as soon as your boat leaves the yard and then single-digit percentage points off the purchase price every 12 months after that,” Hammond notes. That’s an \$8 million instant hit on a \$40 million sticker price, minus an additional \$2 million a year in upkeep.

Says Hammond: “Clearly if you’re getting into yachting, you’re not doing it as an investment.” **B**



# Clutch These Pearls

This summer, it's all about  
asymmetry and bold color variation

*By Kristen Shirley*

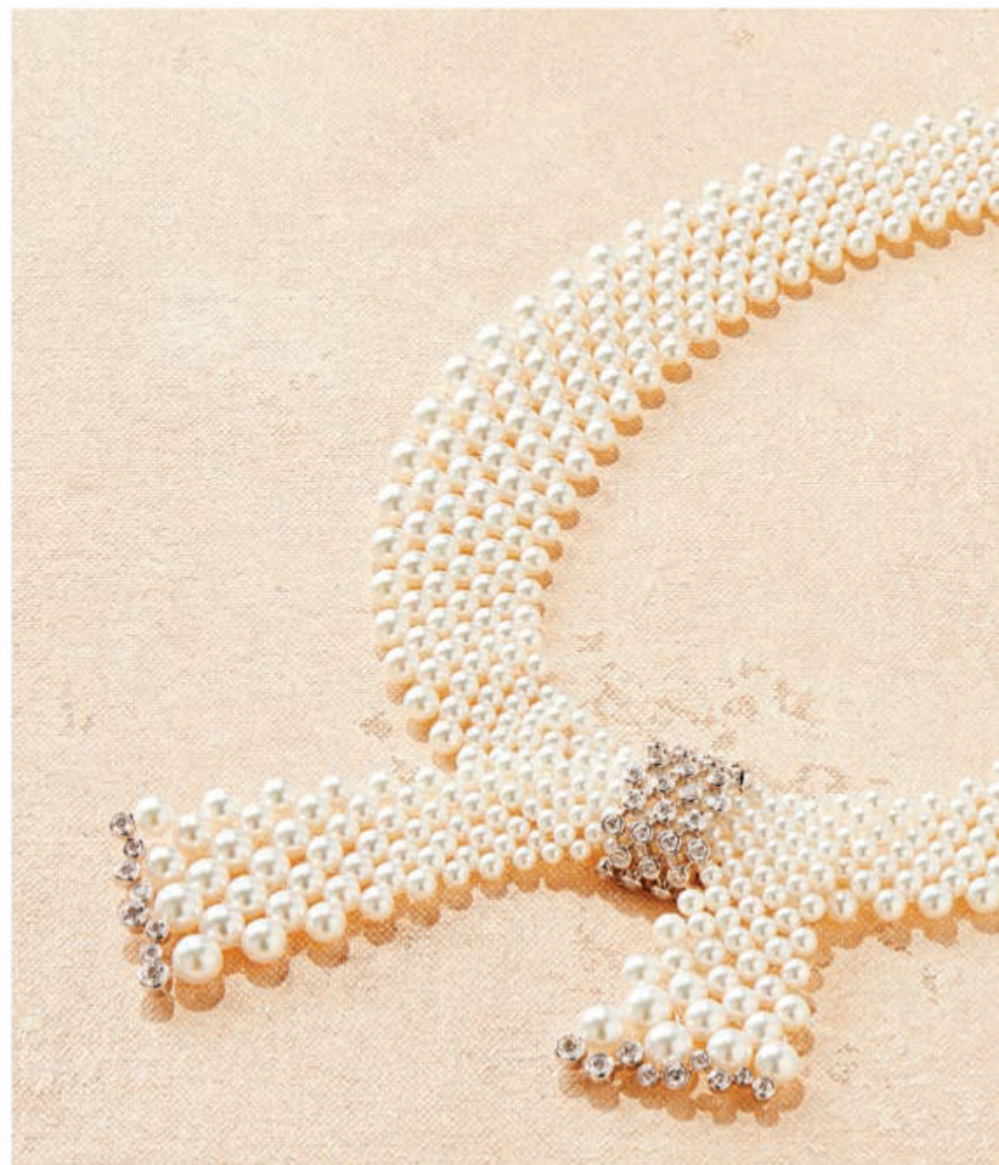
*Photographs by Sarah Anne Ward*

## AKOYA NECKLACE

The founder of the Japanese jewelry company K. Mikimoto & Co. created the first cultured pearl in 1893 using Akoya oysters. It took him more than 20 years to perfect the unblemished

spheres that made the category accessible to millions. Akoyas have a very high luster and are typically white, with pink overtones that distinguish them from other pearls. They're also smaller, ranging

from 2 millimeters to 11mm. This Lace necklace of 7.5mm-by-3mm cultured Akoya pearls offsets their rosy sheen with 18-karat white gold and 4.05 carats of diamonds. \$60,000; [mikimotoamerica.com](http://mikimotoamerica.com)



## BAROQUE NECKLACE

Baroque pearls can come in all shapes, sizes, and colors. They were once desirable—any pearl was valuable—but after the invention of perfectly round cultured options, baroques were deemed inferior and destroyed. (In 1932, Mikimoto famously burned 720,000 pearls that didn't meet his standards.) Now many collectors like the edgy look, and brands are using them again. Mish, a New York designer, made this triple-wrap strand from Tahitian baroque pearls in shades from silver to almost black, with an 18-karat yellow gold clasp. \$68,600; [mishnewyork.com](http://mishnewyork.com)







**MELO MELO NECKLACE**

Unlike most on the market today, Melo Melo pearls can't be cultured and are found by chance in a southern Asian sea snail, making them the rarest of all. They take decades to grow and can reach rather large sizes because of the unique shape of the snail's shell—the biggest ever found weighed almost 400 carats. The best versions have a porcelain-like finish and a remarkable flame pattern. This one set in 18-karat yellow gold from Tiffany & Co.'s Blue Book high-jewelry collection is more than 95 carats. *Price on request; tiffany.com*



**BIWA BRACELET**

First cultured by Mikimoto and found in Japan's Lake Biwa, these nonsymmetrical pearls are created in mussels, not oysters, giving them a range of unique colors. (At

one point many pearl dealers would refer to any freshwater pearls as Biwa pearls, but the Federal Trade Commission now protects the name, and only ones from Lake Biwa can use it.) This

Verdura X bracelet has 7.94 carats of diamond and 10 twisted strands of beaded Biwa pearls in colors that can fluctuate between eggplant and charcoal. \$73,500; *verdura.com*

**GOLDEN SOUTH SEA NECKLACE**

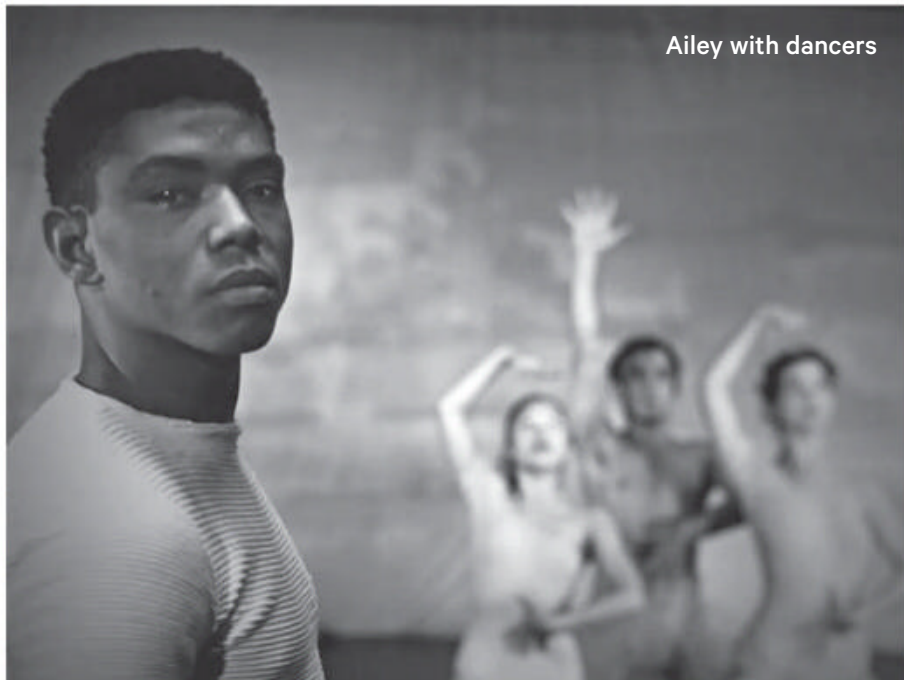
Harvested from the warmer waters of Indonesia and the Philippines, golden South Sea pearls vary from a pale Champagne color to

a rich gold and have a soft luster. Maker Assael is noted for unexpected pairings of its top-quality gems, as in this necklace in 18-karat yellow gold. Its three strands of cultured

pearls are joined by a clasp set with 0.85 carat of fancy yellow diamond and turquoise, which has golden veins that highlight the overall warmth. \$98,000; *saksfifthavenue.com*







# Looking Past Revelations

Can a documentary tell new truths about the man behind the Alvin Ailey dance company?

By James Tarmy

In 1960, with his fledgling company only two years old, choreographer Alvin Ailey premiered *Revelations*, a series of kinetic, soaring dances set to African-American spirituals. Drawing on the modernist techniques of Martha Graham and Ailey's mentor, Lester Horton, the work was entirely new: a dance about the Black experience that audiences around the globe could love. "Alvin Ailey is Black, and he's universal," said actor Cicely Tyson during a tribute to Ailey at the Kennedy Center in 1988. It's "the very spirit that has made him a Pied Piper of modern dance."

As the Alvin Ailey American Dance Theater has grown, shrunk, and eventually been institutionalized in the firmament of American culture, Ailey's name is closer to a brand than that of a person. The original company is the resident at New York City Center and has performed in more than 70 countries; Ailey II, a younger dance ensemble, was founded in 1974; the Ailey School provides professional dance training; and Ailey Extension offers dance and fitness classes to the general public. (Bloomberg LP, the parent company of *Bloomberg Businessweek*, is a supporter of the AAADT.)

But *Ailey*, a documentary directed by Jamila Wignot and premiering in New York on July 23, is an attempt to return focus to the man. "Sometimes your name becomes bigger

than yourself," says Carmen de Lavallade, one of the early members of the AAADT, during one of the documentary's interviews. "Do you really know who that is?"

Ailey was born in 1931 in Rogers, Texas, when his mother was 18; his father left the family before Ailey could walk. "Tough times, rural country," Ailey says in one of many voice-overs drawn from archival footage. After the family moved to Los Angeles when he was 12, he slowly discovered the world of dance and theater.

The film progresses from Ailey seeing the Ballet Russe de Monte Carlo at the age of 14 ("It was a new world"), to quitting high school football ("I refused to [be] running and knocking [people] down"), to attending Horton's dance classes three days a week. "I sat way up in the corner, never doing anything," until Horton finally approached, Ailey explains, and ordered him into the studio.

Viewers are treated to early footage of Ailey, a magnetic, muscular, and deliberate dancer. But then things get hazier: There's no mention of why he moved to New York, his time on Broadway where he acted in shows such as *House of Flowers*, how he transitioned from dancer to choreographer, or why he founded his own company. Instead the chronology jumps from a dance class in LA to the premiere of *Revelations* at the 92nd Street Y in New York about a decade later.

The performance was a hit. "What took me away was the prowess and the technique and the fluidity and the excellence," Judith Jamison, a onetime Ailey dancer who ran the company after his death, says in the film. "That was the miracle."

*Revelations* remains Ailey's most recognizable work, though many people in the documentary, including Ailey himself, are ambivalent about its success. "The problem is, if you're a Black anything in this country, people want to put you in a bag," says Ailey in undated footage. "People sometimes say, 'Why is he doing that now? Why can't he stick to the blues or the spirituals?' But I'm also a 20th century American, and I respond to Bach and Ellington and Benjamin Britten and Samuel Barber, and why shouldn't I?" The choreographer Bill T. Jones, who appears throughout the documentary, puts it more sharply: "Black creators are used. 'See? This is the progress we're making. See? We're not racist, we have Alvin Ailey.'"

As the documentary floats uncertainly through the rest of Ailey's tragically short life—he died at 58 of complications from AIDS—Jones stands out among the film's various luminaries for his unapologetic candor. Artists, Jones explains, might create beautiful things, but the process is often ugly. "They wanted something they could feel uplifted by," he says. "What about the troubled artist, who is oftentimes turned in and barbed?"

Despite the film's attempt to reanimate the man with flesh and blood and emotion, no one, aside from Jones, seems particularly eager to take a chip at Ailey's pedestal. That's a shame, because the power, anger, and beauty of Ailey's choreography deserve a more rigorous treatment. "This was a very vulnerable thing to witness," Jones says. "But I saw him really trying to go in search of what I believe had probably made him a choreographer. He wanted a poetry." **B**



Given our collective interest in the great outdoors over the past year, it's no wonder designers are embracing the classic silhouette of the saddlebag. Although originally inspired by the equestrian staple, they're now being

reinvented with unique design details and bright colors in buttery leathers. Italian brand Fendi introduced one of the bolder takes on the shape in spring with the \$2,100 Moonlight bag in bright yellow.

# Giddy Up

A structured saddlebag is the space-conscious way to welcome back the summer soiree  
*Photograph by Ryan Jenq*

## THE COMPETITION

- Loewe is known for its supple hides, which are on full display in the Heel Duo saddlebag (\$1,750). The front flap is made of smooth, unblemished calf leather that's embellished with the Spanish house's discreet motif on the top right corner.
- Hedi Slimane immersed himself in Celine's archives and created the Besace 16 bag (\$2,450) on his first day at the historic French house. It has a vintage-looking turn-lock closure and a cropped front flap.
- The Gucci Horsebit 1955 collection takes the equine inspiration to the next level with gold double-ring-and-bar hardware, which looks like a piece from a very chic bridle. The shoulder bag (\$2,700) comes in a rainbow of colors and exotic skins.



## THE CASE

Fendi's Moonlight bag adds an unexpected twist on the shape with an acrylic detail that frames the sides with a glossy tortoiseshell effect. The surprises continue inside: Open its gold-toned closure, and you'll find a Fendi Roma

logo underneath, hot-stamped into the leather as in the cowboy days of old. It's completely hidden when the bag is closed and still discreet when open. The edges are trimmed with the house's signature exposed Selleria stitching. This satchel is

available in seven colors, and each is finished by hand at the company's leather ateliers. Measuring only 5.5-by-8.3 inches, the Moonlight is large enough to hold a phone and a slim wallet. There's also a small inner pocket to stash cash for tips. \$2,100; [fendi.com](http://fendi.com)



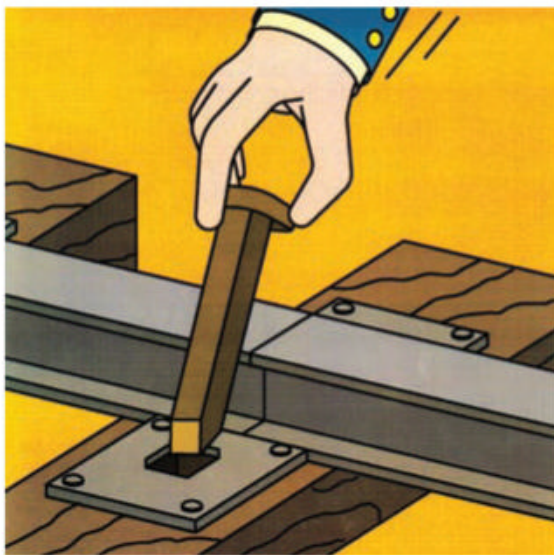
# New Roadblocks for A Big Rail Deal

By Brooke Sutherland

Kansas City Southern investors are right to worry that the Biden administration's tougher stance on antitrust enforcement may signal trouble for the company's \$34 billion plan to sell itself to Canadian National Railway Co.

On July 9, President Joe Biden signed an executive order aimed at curbing abuses of pricing power in consolidated industries. The directive is broad, targeting sectors including agricultural-equipment makers and banks in an apparent attempt to signal that the shift in tone goes far beyond the technology sector that's borne the brunt of public antitrust criticism. It's still notable that railroads were included in the order. Seven providers dominate the industry, and the physical nature of rail infrastructure makes it more difficult for shippers to price-shop from one company to the next. But while most of the other sectors mentioned in the order have seen a rash of deals in recent years, there hasn't been a sustained effort to win regulatory backing for a major combination of two North American railroads since the 1990s. Until now, that is.

Kansas City Southern first agreed to sell itself to Canadian Pacific Railway Ltd. but transferred its allegiance to Canadian National after the latter made a higher offer. The Surface Transportation Board (STB) has primary and independent oversight for the railroad industry, though the U.S. Department of Justice has asserted a "statutory right to intervene" in major merger proceedings and has already raised objections to aspects of the deal. Because



Canadian National directly competes with Kansas City Southern in certain markets and the two railroads overlap somewhat, the STB has said the acquirer must meet tougher rules adopted in 2001 that require it to prove a transaction enhances competition and serves the public interest.

But the "public interest" standard is fuzzy and untested. Canadian National has touted the benefits of connecting the U.S., Canada, and Mexico with one railroad and the prospect of luring traf-

fic away from more environmentally problematic trucks. But in the executive order, the Biden administration proposed adding another dimension to the public-interest consideration: It wants the STB to factor in how railroads have performed when it comes to respecting Amtrak passenger trains' priority right of way. Amtrak grades the railroads based on how many delays they cause for its trains. Although Canadian National showed substantial improvement in 2020 to earn a B+, the company has had a prickly relationship with Amtrak, and its four-year average is just a D+. Only Norfolk Southern Corp. scored worse.

Kansas City Southern's share price is now about \$50 below the implied value of Canadian National's cash-and-stock offer—the biggest gap for any pending takeover in North America—in a sign that traders are skeptical the deal will pass muster. The ultimate decision still falls to the STB, but the Biden order gives the regulator ample cover to block the deal.

🇧 —Sutherland is a columnist for Bloomberg Opinion



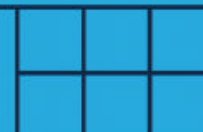


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