

# Bloomberg Businessweek

May 20, 2024

## THE DNA DELUSION

MASS-MARKET GENETIC TESTING  
HAS LITTLE TO OFFER MOST PEOPLE.  
THAT'S AN EXISTENTIAL  
THREAT TO 23ANDME <sup>30</sup>

When's the best  
time to trust  
your instincts?

When our  
insights help  
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# We're for tomfoolery.

For made-up names and SILLY games.

*Shenanigans*

and its cousin, HORSEPLAY.

We're for *goofiness* and *whimsy*

and imaginary friends

with names like Charlene.

We're for giggle fits

and laughing sprees

balls stuck in *trees*

and zebra-striped imaginations running *free*.

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So we fight *against* poverty

and the CYCLE it brings.

We fight to keep childhood

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**We're for less childhood poverty,  
more childhood.**

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**RED  
NOSE  
DAY**



◀ IM Academy members at a February event in Budapest

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■ COVER TRAIL

How the cover gets made

1

"This issue's cover story is all about 23andMe."

"Oh, sweet! I assume they're doing great and the CEO has agreed to kickbox for us again?"

"Not exactly. Turns out DNA testing isn't quite the useful medical tool we were told it would be."

"But there was so much promise. A deeper understanding of ourselves, our ancestral histories—not to mention potential diseases!"

"It's very good for finding out your father is not biologically related to you and maybe for catching serial killers. Less great at giving you much medical information about yourself."

"Sounds like a real unraveling. Is it strange that I feel sad?"

"Maybe you're genetically predisposed to handle disappointment by grieving."

"If only there was a company that could tell me that."



Cover: Illustration by Saratta Chuengsatiansup

A STAR ALLIANCE MEMBER 

# CONNECT TO HOSPITALITY

with our caring cabin crew



**TURKISH AIRLINES**

Products and services are subject to change depending on flight duration and aircraft.

● Inflation in the US cooled in April for the first time in six months, a promising sign for Fed officials looking to cut interest rates. The so-called core consumer price index—excluding food and energy costs—rose

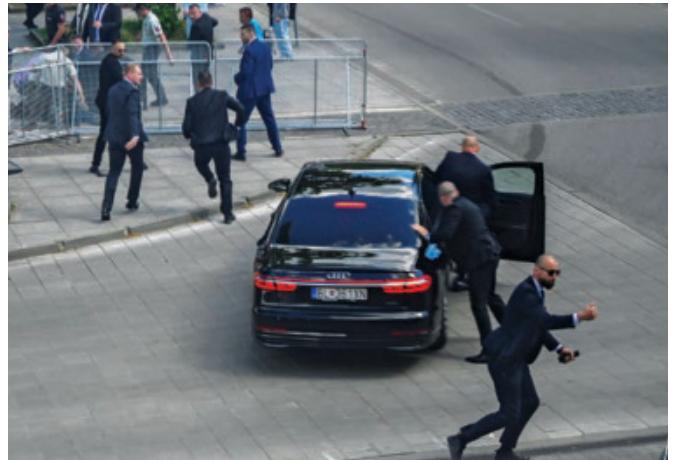
## 0.3%

from March, ending a streak of three above-forecast readings. On May 15, the Dow, Nasdaq and S&P 500 all reached record highs on the news.

## ● War in the Middle East

▶ At a far-right Independence Day march on May 14 in Sderot, in southern Israel, members of Benjamin Netanyahu's government, including National Security Minister Itamar Ben-Gvir, called for the resettlement of Gaza by Israelis. In remarks reported by many outlets, Ben-Gvir used a well-known euphemism for ethnic cleansing, saying Israel should urge "the voluntary departure of the residents of Gaza."

▶ Cease-fire talks with Hamas reached an impasse following Israel's ground offensive on the outskirts of Rafah, according to Qatari Prime Minister Sheikh Mohammed bin Abdulrahman Al Thani, who's been brokering the talks.



● Guards rushed Slovakian Prime Minister Robert Fico to the hospital after he was shot on May 15 in Handlová, Slovakia. Fico, 59, an EU-skeptic who's taken a hard line on immigration, was gravely wounded; the alleged attacker is in police custody.

● Vanguard named Salim Ramji as its new CEO on May 14. Ramji, who oversaw ETFs and index investing at BlackRock, will succeed Tim Buckley in July. He'll be the first outsider to lead Vanguard, which revolutionized investing with the index fund. The company managed about

## \$9.3t

at the end of March.

● Antony Blinken arrived in Kyiv on May 14 to reiterate US support for Ukraine.

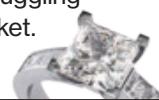


The US Secretary of State took a 10-hour train trip from Poland to see President Volodymyr Zelenskiy. Some in Ukraine had feared the US was abandoning its partner, with lengthy delays in US aid forcing the military to ration munitions. Congress finally approved \$60 billion in new aid for Ukraine in April; a few weeks later, Russia launched a major offensive in the northeast Kharkiv region.

● Anglo American says it will quit diamond, platinum and coal mining in a move designed to help it fend off a

## \$43b

bid from rival BHP. Anglo's shareholders had long been pressing it to focus on its lucrative copper assets. The company's intention to spin off De Beers, which dominates the diamond business, sent shock waves through the struggling gemstone market.



● Luiz Inácio Lula da Silva fired the CEO and CFO of Petrobras.

CEO Jean Paul Prates, who'd fought with the Brazilian president over dividend payments at the state-owned oil company, was formally dismissed at a board meeting on May 15, along with the chief financial officer, Sergio Caetano Leite. Lula, as the president is known, plans to nominate Magda Chambriard, who formerly led Brazil's oil and gas regulator, to replace Prates.

● "Those fighting to protect and advance equality are in urgent need of support."



Melinda French Gates announced on May 13 on X that she's resigning as co-chair of the \$75 billion Gates Foundation, which she co-founded with Bill Gates. As part of her agreement with her ex-husband, she'll receive \$12.5 billion to use for her own charitable purposes. She intends to focus on women and families.

● China is considering a proposal to have local governments across the country buy millions of unsold homes, in what could be its most ambitious attempt yet to salvage the beleaguered property market. Home sales in China plummeted about

## 47%

in the first four months of 2024, and unsold housing inventory is hovering at an eight-year high.

● BNP Paribas is no longer underwriting oil and gas bonds.

In a dramatic crackdown on fossil fuels, the EU's biggest bank has stopped participating in conventional bond sales for the sector. BNP has been gradually limiting oil and gas clients' access to financing as it contends with Europe's ever stricter ESG regulations and a lawsuit brought by climate activists in 2023. Concurrently, the bank has become the world's biggest underwriter of green bonds, according to data compiled by Bloomberg.

# Trumponomics 2.0 May Be Much Worse Than the Original

Inflation will present an immediate challenge to whoever wins November’s election. More than two years after the Federal Reserve started raising interest rates to alleviate a pandemic-era price spike, the core consumer price index remains well above the central bank’s target. It’s a bit puzzling, then, that former President Donald Trump’s economic agenda seems to be dedicated to raising prices.

What policies would a second Trump administration pursue? The presumptive Republican presidential nominee hasn’t been a model of clarity on the campaign trail, but some general themes have emerged.

Tariffs, one of Trump’s only consistent enthusiasms, are a sure thing. Starting in 2018 his administration imposed several rounds of duties, prompting predictable retaliation. Combined, these measures eliminated jobs, slashed incomes and cost consumers about \$51 billion annually. Now Trump wants to impose tariffs of 60% on Chinese-made products and 10% on other imports. Bloomberg Economics estimates that such tariffs would raise consumer prices by 2.5% over two years and reduce growth by 0.5%. Trump has also promised a 100% duty on imported cars. Details TBD—one analyst describes the likely effect as catastrophic—but the point is that trade wars of this kind are always prone to rising prices.

Trump’s plans for monetary policy pose a similar risk. According to the *Wall Street Journal*, his advisers are laying the groundwork for the president to weigh in directly on interest-rate decisions. (His campaign has vaguely disputed the report.) The rationale for central bank independence—among the most successful policy innovations of the post-war era—is that politicized monetary policy will tend to have a pro-inflationary bias. In this case, a self-fulfilling prophecy is likely: Consumers and businesses, expecting the Fed to tolerate higher inflation under Trump, will behave in ways that (once again) make prices go up.

More directly, Trump is toying with devaluing the dollar. Although the hope is to revive domestic manufacturing, exactly how he’d carry out this plan isn’t clear. On balance, such manipulation is likely to invite retaliation, erode faith in the dollar and do little to actually boost exports. Raising the cost of imported goods and inputs for domestic producers would also (perhaps you’ve sensed a pattern) increase prices.

Trump’s tax plans, finally, would tend in the same direction. He says he’ll extend the expiring provisions of the Tax Cuts and Jobs Act of 2017 and has at times mused about a further reduction in the corporate rate, to 15% from 21%. Recall that the drafters of the law tied themselves in knots to avoid acknowledging its true costs (hence the expirations).

Extending it in full would cost about \$3.8 trillion by 2033. A 15% corporate rate would cost perhaps a half-trillion more. Plans for further tax cuts—“I’ll give you a Trump middle-class, upper-class, lower-class, business-class big tax cut,” he said at a rally on May 11—remain rather nebulous, but fiscal discipline doesn’t sound like the governing priority. It’s safe to say (at the risk of repetition) that these policies, too, will contribute to higher prices.

Some caveats are in order. Trump doesn’t always mean what he says. He rarely gets what he wants from subordinates. Many of these policies may never come into effect, or the Fed may partly neutralize them if they do. But what do you get, all else equal, when you add much higher tariffs, a politicized central bank, a deliberately weakened currency and an enormous surge in public borrowing at a time of already elevated inflation? It would be best not to find out. **B** *For more commentary, go to [bloomberg.com/opinion](https://www.bloomberg.com/opinion)*

## ■ AGENDA



### ► ¿La Presidenta?

Polling strongly suggests Mexico will elect its first female head of state on June 2. Claudia Sheinbaum, of the left-wing Morena party, looks set to succeed Andrés Manuel López Obrador. Mexico’s president is limited to one six-year term.

► The US reports GDP growth for the first quarter on May 30. On May 31 comes a slew of data for April: the core PCE price index, plus estimates of personal income and spending.

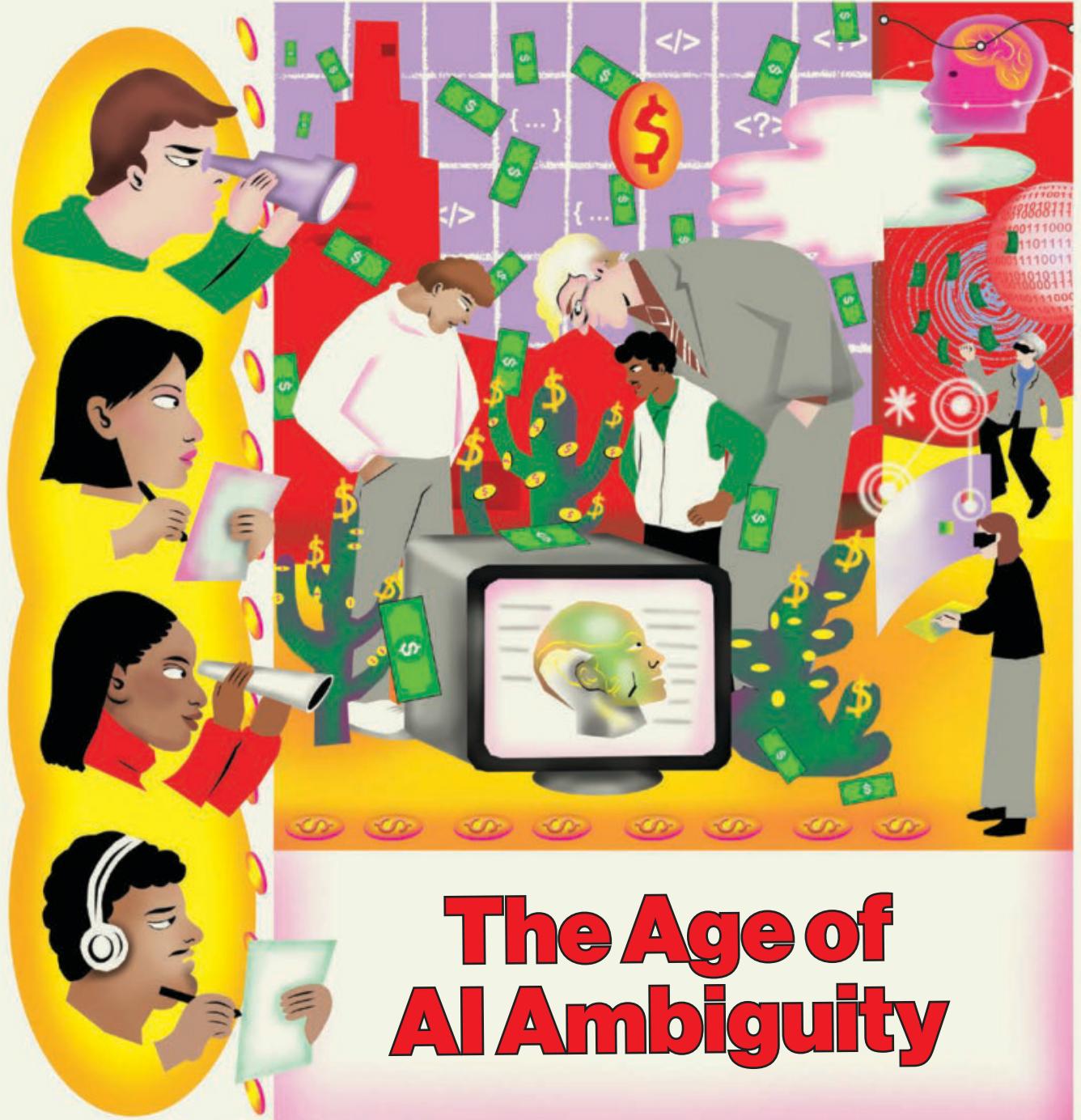
► India releases first-quarter GDP growth figures on May 31. The country, wrapping up its lengthy general election on June 1, saw year-over-year growth top 8% for most of 2023.

► Japan publishes its balance of trade on May 21, year-over-year inflation for April on May 23, and the latest gauge of consumer confidence on May 29.

► The UK releases its April inflation figures on May 22. Germany reports its preliminary inflation estimate for May on May 29; France, Italy and the euro area follow on May 31.

► May 20 is World Bee Day. According to the UN, almost 35% of all invertebrate pollinators, particularly bees and butterflies, and about 17% of vertebrates, such as bats, face extinction.

► Racing fans have options on May 26: The Indy 500 and Monaco Grand Prix are both running, with Josef Newgarden and Max Verstappen defending their respective titles.



## ● There's plenty yet to be sorted out about the tech, economics and power dynamics of the emerging industry

● By Brad Stone and Rachel Metz

The 25 employees of San Francisco startup Atmo Inc. had every reason to be afraid. The four-year-old company takes atmospheric data from meteorological sensors and uses artificial intelligence to make weather predictions that it sells to customers such as the US Air Force and the Philippine government. Atmo says its AI tools generate forecasts that are more precise than those produced by crunching data on supercomputers, cost far less to use and can learn from past mistakes.

The startup seemed to have clear competitive skies—until March 29, when Alphabet Inc. published an academic paper titled “Generative AI to Quantify Uncertainty in Weather Forecasting” that described its own AI weather model, which it dubbed Seeds. Suddenly Atmo, which had raised a grand total of \$11.2 million, was facing the prospect of competition from a \$2 trillion behemoth with one of the largest AI operations in the world.

In the week of May 13, Google and Microsoft-backed OpenAI both staged public demonstrations of their upcoming AI tools. They introduced models that can ingest not only words typed on a keyboard but also spoken commands and images, expanding the way people can interact with computers. They both seem determined to dominate the transformative field of AI.

Alex Levy, Atmo's co-founder and chief executive officer, says he's unfazed by the formidable competition. After reading Google's paper, he says, he just shrugged. The article doesn't guarantee Google is going to start selling a weather forecasting tool anytime soon, he says in a video interview from his office, a bank of impressively detailed weather maps blinking behind him. “Google puts out a very large number of papers, and it's important to distinguish papers are not products,” he says, adding that “today you most definitely cannot buy weather forecasting from Google at any price.”

Welcome to the age of unbridled AI optimism, a time when the pace of innovation is so rapid that prognostication is almost impossible. AI inventions, in the form of chatbots, coding copilots, and services that summon pictures and video at the behest of a crisp text prompt, are emerging at startling speed. But it seems like the faster things advance, the fuzzier Silicon Valley's AI picture gets.

The ambiguities begin with the question of whether the landscape will be dominated by a handful of tech giants and a few of their amply funded proxies like OpenAI, which is backed by \$13 billion from Microsoft Corp. Startups such as Atmo hope not, but no one knows for sure. Then there are a host of financial questions. Will consumers and companies continue to embrace and even pay for generative AI when it's no

longer a novelty? And how much economic value will remain in proprietary large language models such as GPT-4, considering companies like Meta Platforms Inc. are spending hundreds of millions of dollars to develop powerful models such as Llama 3 and planning to open-source them, essentially giving them away for free.

It's also unclear whether the extraordinary rate of improvement that's marked the 17 months since the release of ChatGPT will be sustained. On May 13, OpenAI demonstrated its newest flagship AI model, GPT-4o, calling it faster and more capable than its predecessor. (It can respond to spoken queries almost immediately, and it can sing, too.) In a blog post, CEO Sam Altman said the new model “feels like AI from the movies, and it's still a bit surprising to me that it's real.”

Other trusted tech visionaries aren't as confident as Altman that generative AI will continue to astonish. “It's unbelievable how much people are asserting they know what's going on when the thing you need to know is unknowable,” says Eric Ries, author of the industry bible *The Lean Startup* and a co-founder of AI research lab Answer AI Lab Inc. “If anyone out there knows the absolute God's honest truth about how the scaling of this works, they should be out there demonstrating they are right and reaping all the rewards.”

Here's what we do know: The cost of training and running an AI model is enormous. GPT-4 used an estimated \$78 million worth of computing power as it was being trained by OpenAI, according to Stanford University's Artificial Intelligence Index Report 2024, released in April. Google's Gemini Ultra cost \$191 million to train. Both models were developed on graphics processors that are expensive and difficult to obtain from Nvidia Corp., which for now is almost the only company that makes them.

These daunting costs are having a significant impact on how the industry evolves. The need for vast amounts of capital and computing power helps explain why OpenAI shifted from being a nonprofit to a commercial entity that's closely linked to the world's most valuable company. Anthropic, another of the handful of prominent startups making foundational AI models, has raised \$4 billion from Amazon.com Inc. and an additional \$2 billion from Google, and it also relies on the tech giants for chips and cloud infrastructure.

Dario Amodei, Anthropic's co-founder and CEO, said at the Bloomberg Tech Summit on May 9 that it costs about \$100 million for the company to train an AI model and that he expects the cost will eventually reach \$100 billion as models get bigger and require more computing power. He defended the partnerships, saying it's “not plausible that various things could be exclusive,” because Anthropic has relationships with more than one tech giant. “That independence and that choice is one thing that I think differentiates Anthropic from some of these other deals,” he said.

Whether regulators will accept Anthropic's perspective on such deals remains to be seen. The Federal Trade Commission announced earlier this year that it was scrutinizing the partnerships between cloud providers and generative AI companies, ►

◀ with FTC Chair Lina Khan saying that the agency hoped to “shed light on whether investments and partnerships pursued by dominant companies risk distorting innovation and undermining fair competition.”

The scales do seem to be tipped against AI startups without relationships with Big Tech. Yet Silicon Valley keeps churning them out. Venture capitalists funded 1,812 new AI companies last year, a 40.6% increase from 2022, according to Stanford. Many of these will almost certainly careen toward failure, such as London-based Stability AI Ltd., which has struggled to pay its bills and whose CEO resigned in March. Others, like Inflection AI, will simply get consolidated into larger AI efforts. It was designing a “kind and supportive chatbot” until it got largely subsumed by Microsoft earlier this spring for a fraction of what it had raised. “Having the GPU farms to power AI requires deep, massive economies of scale, orders of magnitude more than we have ever seen in computing,” says Aaron Levie, CEO of cloud computing firm Box Inc. “No matter what, you can name three or four winners, plus the chip companies. For everyone else, it’s an open question.”

These are the kind of unfavorable odds that Silicon Valley tends to overlook. A basic tenet of the tech industry is that small, nimble companies can thrive because incumbents tend to be slow to identify and pursue new opportunities. One oft-cited local parable suggests you can make a fortune picking up dimes directly in the path of a slow-moving steamroller—e.g., a lumbering tech colossus—if you’re adroit enough to get out of the way and not get smushed. (Downside: If you slip and fall, you’re a pancake.)

Suno is among the startups picking up dimes as fast as it can. It lets paying subscribers create songs and add AI-generated vocals with a written prompt. It’s built its own AI model to generate the music but also draws on ChatGPT for lyrics and titles. Relying on OpenAI could be risky, since it may yet release an

## “It’s unbelievable how much people are asserting they know what’s going on when the thing you need to know is unknowable”

AI music product—back in 2020, for instance, it published research and code for its own song generator, called Jukebox. “I think it’s still a little too early to decide what the right business model is,” says Suno co-founder and CEO Mikey Shulman of the company’s foray into offering a subscription. “Our mentality here is, let’s figure out how to delight people. Let’s make sure we build something people really love, and the shape of that product could be so different depending on how things turn out.”

Another startup, Perplexity, is also using subscriptions to defray computing costs and test demand. It asks users to pay \$20 a month and returns answers that draw on several large language models, such as OpenAI’s GPT-4 and Anthropic’s Claude 3. It adorns its responses with source citations, links to related articles and pertinent follow-up questions, often providing more reliable answers than other chatbots and search engines. The service poses a direct challenge to Google, which at its annual I/O conference on May 14 introduced a revamped search experience that highlights AI-generated summaries drawn from search results. Meanwhile, Bloomberg News has reported that OpenAI is working on its own similar AI search engine.

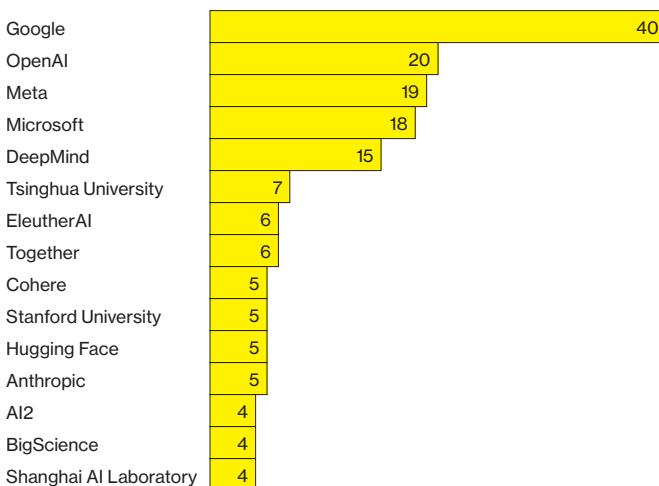
This can sound like unstable strategic ground for Perplexity, whose plans rely both on competing against far larger rivals and using models made by them to power its own product. Yet in April, Perplexity raised new financing that valued the company at more than \$1 billion, another sign of the undaunted AI enthusiasm despite all the ambiguity. And the company recently told Bloomberg News it’s bringing in \$20 million in annual recurring revenue. Aravind Srinivas, Perplexity’s co-founder and CEO, is betting that “most of the profits in generative AI” will flow toward services that have this direct relationship with users and less toward foundational models like GPT-4.

Venture capitalist Dave Morin has seen this movie before. He was an executive at Facebook 15 years ago, when the company allowed startups to tap into elements of its social network, such as its users’ friend networks and photos. A few years later, Facebook reversed course and vaporized a lot of the companies that hadn’t forged their own bonds with customers. Avoiding excessive reliance on mercurial tech platforms is “not rocket science. It’s old Silicon Valley thinking,” Morin says. He’s an investor in Atmo and says that the company is preparing to survive any coming shake-up by honing its focus on weather forecasting.

Of course, like everyone else, Morin doesn’t know for sure. “There is way more ambiguity than people want to admit,” he says. **B**

### Who’s Making AI

Foundation models developed from 2019 to 2023, by organization



DATA: STANFORD UNIVERSITY'S ARTIFICIAL INTELLIGENCE INDEX REPORT 2024

Presented by



 Bloomberg ORIGINALS

# .the. circuit

with **EMILY CHANG**

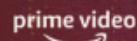
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# Kids Hooked on Video Games Head to Court

## ● Attorneys for parents say publishers are addicting users and causing big health issues

Kushanel Donerson says her 14-year-old has played Call of Duty, NBA 2K, Grand Theft Auto and Roblox games so much over the past nine years that it led to brain damage, a stroke and seizures. Jaelyn Angelilli says her 9-year-old has been playing many of the same video games “at an increasing and uncontrollable pace” since age 6 and has been diagnosed with multiple psychiatric disorders.

The two mothers have joined a wave of lawsuits that accuse the video game industry of profiting from intentionally promoting mass addiction. The complaints have been stacking up since last year, when hundreds of other families won rulings allowing them to pursue similar claims against the biggest social media platforms. Decades after tobacco companies were hit with a crush of addiction lawsuits, more and more technology giants are facing their own reckoning in the courts.

“It makes a lot of sense because these are all the same addictive designs,” says Seton Hall University School of Law professor Gaia Bernstein, who wrote a book about addictive technologies.

Parents’ attorneys are attempting to have more than a dozen video game addiction lawsuits filed so far grouped together before a single federal judge at a hearing set for May 30 in Salt Lake City. While victory for the parents is far from assured, the risk for the game publishers is real. If the litigation follows the explosive path of the social media lawsuits, the industry could theoretically face hundreds of millions of dollars in damages—even if not on the scale of the \$206 billion Big Tobacco settlement of a quarter century ago. Just as significant, getting pummeled in court could force publishers to make their games less compulsive, potentially lowering users’ screen time and thus raising the likelihood they’ll spend less on downloadable game products and lucrative in-game payments.

Donerson and Angelilli’s targets include Microsoft, Nintendo of America, Sony Interactive Entertainment, Roblox and Fortnite developer Epic Games, among others. The companies are part of an industry whose global revenue is forecast to top \$200 billion by 2026.

The Entertainment Software Association, of which Microsoft, Nintendo, Sony and Epic Games are members, disputes the lawsuits’ claims that the games are harmful. “We prioritize creating positive experiences for the entire player community and provide easy-to-use tools for players, parents and caregivers to manage numerous aspects of gameplay,” the association said in a statement. “Claims that say otherwise are not rooted in fact and ignore the reality that billions of people globally, of all ages and backgrounds, play video games in a healthy, balanced way.”

(Microsoft said it deferred to the ESA statement. Epic Games declined to comment. Nintendo, Roblox and Sony Interactive did not respond to requests for comment.)

The gaming suits stand to benefit from early rulings in the social media cases that poked holes in the legal shield internet companies have relied on for decades: Section 230 of the Communications Decency Act. A California state judge in Los Angeles and a federal judge in Oakland overseeing a total of more than 1,000 cases found last fall that the 1996 federal law, which protects platforms from being sued over content posted by third parties, doesn’t apply to algorithms designed to keep users visiting their sites. But even if plaintiffs such as Donerson and Angelilli clear the Section 230 gateway hurdle, others remain.

Microsoft Corp. and Roblox argued in a March filing seeking dismissal of a suit brought against them in Arkansas that parents who condemn their games as “too engaging” miss the point that the content is protected as free speech under the First Amendment. The lawsuits, the companies contend, “present the digital equivalent of suing a video library for distributing allegedly ‘addictive’ movies, or a recording studio for providing a forum and

equipment to create music that is ‘too catchy.’”

Another challenge for parents is that the laws governing personal injury suits haven’t changed as quickly as the technology landscape. Product liability statutes were written to address tangible goods, like the nicotine that makes cigarettes addictive, not the software code that powers entertainment platforms. Beyond that, the parents will need to prove that the harms their kids are suffering stem directly from their use of the technologies and not from other influences in their lives.

In this new legal frontier, a core claim by plaintiffs is that company-built algorithms function like casino slot machines doling out intermittent “jackpots,” which take the form of time-released rewards in video games or “likes” on social media apps. Court filings in the social media litigation compare children to the mice in B.F. Skinner’s famous experiments that appeared more likely to press a lever when it dispensed treats at random rather than consistently.

The video gaming complaints draw on research showing that long-term gameplay activates the

brain in a way similar to drugs and can damage cognitive function. The allegedly resulting list of conditions cited in suits includes attention-deficit/hyperactivity disorder and high blood pressure, as well as emotional distress and social isolation.

“I can’t go and buy liquor or anything like that 24/7,” says Angelilli’s Atlanta-based lawyer, Tina Bullock. “The fact that this can be in a child’s hands 24/7 is shocking.”

The medical community is increasingly investigating video games’ possible health impact. The World Health Organization recognized “gaming disorder” as a diagnosable illness in 2018, coinciding with a surge in rehabilitation programs for hard-core gamers. The American Psychiatric Association in 2013 called for further study after examining the issue for several years, and in 2023 said the research and debate are ongoing. Reaching scientific consensus can take time in this space: After decades of worry that video games trigger real-world violence, the American Psychological Association in 2020 said there “is insufficient scientific evidence to support a causal link between violent video games and violent behavior.” ▶

**“The fact that this can be in a child’s hands 24/7 is shocking”**



◀ Lawyers are already moving on to other technologies that they say are being used to exploit vulnerable populations. Attorney Tim Giordano, whose firm filed a suit on Valentine’s Day against Match Group Inc. on behalf of users of its Tinder and Hinge dating apps, says that addiction and psychological manipulation “know no age.” He adds: “Anybody can fall prey—especially with the dating apps when they are misled with the strongest carrot known to mankind: love.”

In a federal court filing in San Francisco last month, Match said that Tinder and Hinge users must use private arbitration for any dispute, rather than pursue a court remedy, because they accepted the apps’ terms of use. And in a statement, a Match spokesperson noted that the company’s business

model isn’t based on user engagement metrics. “This lawsuit is ridiculous and has zero merit,” the spokesperson said. “We actively strive to get people on dates every day and off our apps. Anyone who states anything else doesn’t understand the purpose and mission of our entire industry.”

Besides, Matthew Lawrence, an Emory University law professor whose research focuses on addictions, says a user’s weakness for dating apps is a “different category of seriousness” from children strung out on screen time. “We don’t have a surgeon general’s report that I have seen about the dangers of dating apps to 30-year-olds,” Lawrence says. —*Rachel Graf*

**THE BOTTOM LINE** Video game lawsuit plaintiffs, who say heavy use can lead to ADHD, depression or social isolation, are employing some of the legal arguments used against social media companies.

# Drugstores Look for a New Prescription

● Walgreens tests putting the pharmacy near the front of stores in a bid to regain business

Step into any US drugstore, and it’s likely to look the same: aisles of locked cabinets full of toothpaste, shampoo and makeup. Patients wait in line for prescriptions at the rear of the store, where staffing is often thin and harried pharmacists rush through consultations while juggling phone calls.

None of it is working. Pharmacy profit margins are falling at the biggest chains, CVS Health Corp. and Walgreens Boots Alliance Inc., which has resumed trying to unload the Boots international chain of drugstores, Bloomberg recently reported. Once a fierce competitor, Rite Aid Corp. declared bankruptcy in October. A key problem for drugstores is the front of the store, where competition and inflation are making it harder to turn a profit.

“They’re not growing. They’re negative in their same-store comps,” says Amar Singh, a senior director at retail consulting company Kantar Group Ltd. “They would want to flip that over so you bring in shoppers who are more attuned and looking for more localized high-quality products or innovative products within health and wellness regimens.”

Competition from outside the drugstore universe—especially retailers such as Amazon.com, Dollar General and Walmart—has been intense, says Jefferies analyst Brian Tanquilut, and exiting

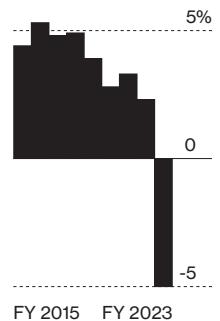
locations is expensive. “We’re over-stored,” he says. If the chains want to improve performance, “then repurposing the store is part of the strategy.”

The two US drugstore giants are unrolling blueprints with the intention of fixing America’s broken pharmacies. Walgreens has been setting up smaller versions of its stores with reduced selections of health and wellness items in the front. It’s trying out a location where most orders, prescription or retail, are placed and filled at a counter, potentially deterring theft. And in its most iconoclastic swipe at tradition, the company is turning the classic drugstore design on its head—moving the pharmacy to the front.

“They’ve realized that most people who go to the pharmacy want to get their prescription, get out of there and be done with it,” says John Talbott, who leads the Center for Education and Research in Retail at Indiana University’s Kelley School of Business.

At Walgreens’ revamped pilot location in Aubrey, Texas, the pharmacy counter is noticeably closer to the entrance. Retail aisles are off to one side so customers no longer have to weave through shelves of candy, school supplies and cosmetics to pick up prescriptions.

▼ Walgreens Boots US retail pharmacy operating margin



“Pharmacies have always been in the back of the store ever since I can remember,” says Rick Gates, a chief pharmacy officer who worked as a pharmacist for eight of his 29 years with Walgreens. “We’re looking at all different types of formats to see what’s the right solution for consumers.”

Rival CVS is testing out new store designs that integrate its Oak Street Health primary-care centers for seniors. In the pilots, the Oak Street clinics take over some retail space, providing patients with convenient access to the attached pharmacy to collect pills and deal with other medication-related issues. Oak Street’s teams also have easy access to a pharmacist to discuss prescriptions.

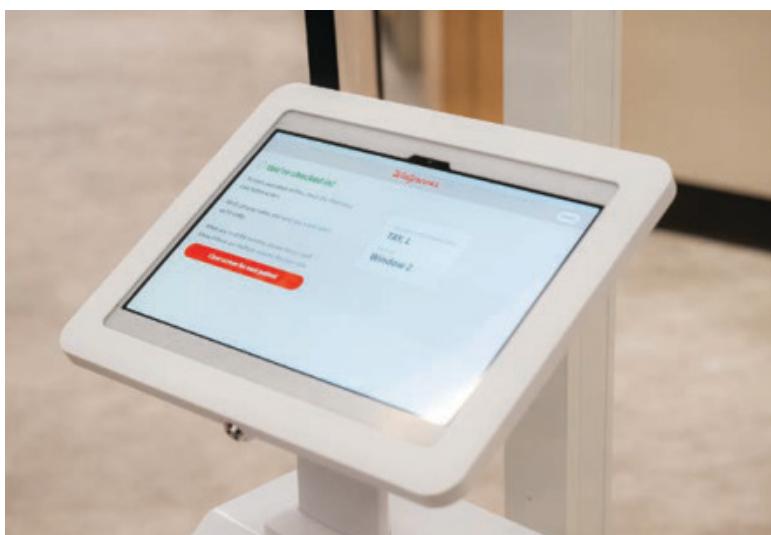
The companies, which both had a little more than \$100 billion in 2023 pharmacy sales, are taking a risk, deviating from a model that encouraged shoppers to grab high-margin retail items off shelves on their way to and from the drug counter at the rear. They’d love to return to glory days such as 2015, when Walgreens’ and CVS’ chains each had about 8,000 stores, employing tens of thousands of pharmacists. CVS’ pharmacy and consumer wellness operating margin was 9.9% that year, and Walgreens’ was 4.4% in the US.

Since then, it’s another story. CVS’ pharmacy operating margin was 4.6% last year; Walgreens’ was -5%. Investor displeasure has been evident, as Walgreens shares have lost a third of their value this year alone and 77% over the past decade. CVS shares have lost 26% over the past 10 years.

The pandemic, with its vaccinations and increased focus on respiratory illnesses of all kinds, added to the workload. Pharmacists and technicians say they’re still under increasing pressure to meet metrics such as shorter phone waiting times. The drive to boost productivity and increase profit has kept employees too busy to develop relationships with patients, says Bled Tanoë, a former Walgreens pharmacist. “We are overworked,” says Tanoë, who helped organize some pharmacist walkouts last year. “The labor is running away from a culture that is not focused on what’s important.”

Walgreens says it’s taking a number of measures to reduce pharmacists’ workload and talking to pharmacy school deans to understand how to support and recruit pharmacists. Redesigning pharmacies is also part of those efforts, the company says.

“Burnout among health-care professionals—pharmacists included—is a very real concern,” Walgreens said in a statement. “The role of a community pharmacist has expanded more in the last three years than the previous 100 years, but the pharmacy operating model has not evolved as quickly.”



Walgreens is counting on convenience as the cornerstone of the Aubrey pilot’s success. Customers check in at a self-service kiosk and receive a text once their prescription is ready for pickup, allowing them to shop or wait in their cars until it’s ready. It’s also using robotic pill-counting centers to relieve pharmacists from routine tasks and allow them to focus on patient care as new state laws expand pharmacists’ roles. Vaccinations, testing, treatments and screenings are all part of the future vision, says Gates, the pharmacy chief.

But what’s most striking is the serenity. On a recent early Monday morning at the pilot location, most calls were diverted to a centralized answering service, so there were no ringing phones, and the few customers who entered were in and out quickly. The hope is that pharmacists “get back to understanding every customer that walks in, and then you give them a store that’s designed in a way that’s very customer-friendly,” Gates says. —*Fiona Rutherford*

▲ At Walgreens’ pilot store in Aubrey, Texas, customers use self-service kiosks and receive texts when prescriptions are ready

**THE BOTTOM LINE** Drugstores long built a profitable business by forcing customers to weave through aisles of candy, cosmetics and retail items before picking up their prescriptions. That’s changing.

# ‘It Blows My Mind So Much’

Neuralink’s first patient describes how Elon Musk’s brain implant changed his life

Noland Arbaugh still doesn’t quite know what happened. He doesn’t know many of the key details about how his life took such a drastic and now extraordinary turn. How he became Noland Arbaugh, celebrity cyborg.

It was mid-2016, and he had his first day off as a sports counselor at the Island Lake Camp in Starrucca, Pennsylvania. Arbaugh, then a student at Texas A&M University, had spent two previous summers working at the kids camp. The people and surroundings, including a nearby man-made lake, were familiar, and this day was like many before it. He’d planned to go to the lake with a group of friends.

There were already people in the water when Arbaugh and his companions arrived. After chatting with his friends on shore, Arbaugh and a couple of guys made a dash for the water to join everyone else. Their plan was to run in and dunk some girls frolicking in the lake. “We all just jumped in together just like you would do going into the ocean,” Arbaugh says. “And the two guys got up out of the water, and they went over and picked up the girls and stuff like that. And I just never came back up.”

Somehow when Arbaugh jumped in, something or someone—he’s still not sure what—bashed into the left side of his head and knocked him out for a moment. As he came to, face down in the water, he tried to move but couldn’t. An inexplicable calm came over him. Arbaugh knew right away that he was paralyzed and that there was nothing he could do about it. He pondered his predicament as he held his breath. Ten seconds. Fifteen seconds. Twenty seconds. No one seemed to be nearby, and he couldn’t hold out any longer. “I thought, ‘Well, now is as good of a time as ever,’” he says. “I basically took a big drink of water and passed out.”

Two fellow counselors spotted Arbaugh and pulled him from the lake. He woke up on the shore, then passed out again. The next time he woke up he was in an ambulance where a paramedic

speculated aloud that Arbaugh had been paralyzed from the neck down and said that he would soon be transferred to a helicopter and taken to a hospital. Then he passed out again. When he woke up at the hospital, Arbaugh was being prepped for surgery to deal with what would soon be confirmed as a dislocated spine.

The accident at the lake turned the 22-year-old’s life upside down. He had to learn how to get around in his motorized wheelchair, puffing and sucking into a tube with varying force to make the machine move in different directions. He also had to figure out how to poke at an iPad with a stick he holds in his mouth to use a computer. A lot of his and his family’s time was spent dealing with hospitals and insurance providers and caregivers.

In January, Arbaugh became the first person to receive a brain implant built by Elon Musk’s Neuralink Corp. as part of a clinical trial. The device won’t help Arbaugh move again, but it does offer the promise of helping him overcome some of his physical limitations by allowing him to control his laptop just by thinking the commands. He’s already been zipping around the web and playing games with friends using the implant instead of tapping at his iPad.

Although other people have had similar devices implanted, Arbaugh has become the most public recipient. Part of this is because of the enormous attention that surrounds everything that Musk does. Arbaugh is sharing his story here for the first time. Obviously he isn’t happy about being paralyzed. But he says that it happened for a reason and that dedicating his body to science in this way is part of God’s plan for him.

Now 30, Arbaugh lives with his mother and stepdad, Mia and David Neely, and half-brother, Tavita, in Yuma, Arizona. They have a modest manufactured home just off a dirt road in a ▶



● Arbaugh, the first human to receive Neuralink's brain-computer interface implant

◀ neighborhood surrounded by desert and scrub brush. Out back, the family has coops for chickens, roosters, quail and turkeys, as well as a large pen holding several Nigerian dwarf goats.

As a kid, Arbaugh played sports and joined his school band and chess team. He had a close-knit group of friends and found school easy—so easy, in fact, that he’d often skip class and simply show up for tests, which he usually aced. He then went off to Texas A&M, pursuing political science and international studies while taking part in the Corps of Cadets military program the school offered. A couple of years in, Arbaugh began skipping class more often and spent most of his time bartending and hanging out with friends. “I eventually wanted to travel and be a nomad gypsy and do a whole lot of nothing,” he says.

Those plans, of course, all dissipated because of the accident. But Arbaugh, who comes off as an easygoing, smart young man, talks about his injury and the travails of his condition in a matter-of-fact, patient manner through a light, y’all-happy drawl that he must have acquired during his time in Texas. He has a mustache and small loop earnings in both lobes. Now and again, Arbaugh’s body will spasm, and he’ll ask Tavita, who’s 23, for help to stretch out his arm or leg after it’s been contorted into a tricky position, a ritual the pair has clearly performed many times.

Arbaugh still had his friends and family after the

accident, but he spent a few years trying to find his place in the world. At times he felt helpless, like he was a burden. Although he applied for jobs, he couldn’t peck away at his iPad fast enough to meet the typing speed criteria. “It’s hard for me to do a lot,” he says. “I’ve tried other things, and I just can’t hack it.” He considered completing his college degree but couldn’t get his transcripts from the school because of outstanding student loans that he cannot pay. “I was sure that I was going to stay with my parents as long as they could have me, and then, at some point, I would be put in a home, and there’s nothing I could do about it,” Arbaugh says.

Then in September of last year, he got a call from his cadets roommate, Greg Bain. Bain had read that Neuralink was looking for the first patient to try out its brain implant. Arbaugh had never heard of Neuralink, so Bain walked him through the basic idea. The brain-computer interface implant had the potential to give paralyzed people a way of interacting with computers via their thoughts alone. “I was like, ‘Oh, that sounds pretty cool,’” Arbaugh says.

Bain helped Arbaugh fill out an online questionnaire about the nature of his injury, how much movement he was capable of, if he smoked or drank or did drugs, if he had any other medical conditions and so on. Arbaugh had never been a heavy drinker or smoker, but he’d quit altogether about two years earlier, part of a regimen of self-improvement that also involved studying math and



◀ The implant allows Arbaugh to play computer games with relative ease



science and languages and listening to a steady stream of audiobooks.

Neuralink contacted Arbaugh the next day and soon began conducting phone interviews. Several weeks later the company asked him to show up at Barrow Neurological Institute in Phoenix for in-person tests that would, among other things, measure the thickness of his skull and the amount of space between his brain and skull. Some of the people at the hospital began hinting to Arbaugh that he was the lead candidate. “It was awesome, because you could see how excited everyone was,” he says. “You could feel this energy. It was weird, because they kept telling me what an honor it was to meet me and how I was doing the greatest thing in the world. It was very surreal.” In January, Neuralink informed Arbaugh that he would indeed be the first person to receive the implant.

When you’re paralyzed from the neck down, the last vestige of normalcy that you have left comes from your brain. Arbaugh was allowing Neuralink direct, physical access to his, in a procedure that came with all the standard risks of serious surgery as well as the unknown risks of something so new. Doctors would be removing part of his skull and inserting Neuralink’s coin-size device with its electrode-laced threads—a foreign object that had never before been tested on humans.

Arbaugh received the blessing of his mom and stepdad, who’d still be the ones caring for him if something went wrong. He also spent hours debating the merits of the procedure with Bain and other friends. One friend warned him that Musk has a “track record of being for progress above everything else,” Arbaugh says. “That he wants to make things happen and doesn’t care what happens along the way.” Another friend brought up the negative stories that have surrounded Neuralink’s implant tests on animals and argued that Arbaugh might suffer some type of horrible consequence as a result of the procedure.

Arbaugh, a Musk fan, pushed back. He questioned the credibility of the stories about the animals. He had also read a story about Musk’s behavior the night before SpaceX launched humans into space for the first time. Musk couldn’t sleep and prayed for the safety of the astronauts, despite

not being a religious man. “That really put me at ease,” Arbaugh says. “It made me feel like he would not do this if he felt like it was going to end badly.”

Mostly, Arbaugh says, his faith pushed him ahead. “I wasn’t worried at all,” Arbaugh says. “My accident was such a freak accident, and I’d wondered why it had happened to me and what God had in store for me. When I started doing all the Neuralink stuff, I was like, ‘OK, well, this is it.’”

Arbaugh arrived at the hospital on Sunday, Jan. 28, about 5 a.m. Musk had planned to meet him before the procedure, but he had issues with his private jet. The two men instead had a brief

◀ Members of the Neuralink team gave Arbaugh these signed models of his head



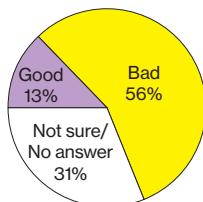
FaceTime chat, and Musk arrived at the hospital while the procedure was underway.

The surgery lasted less than two hours. As Arbaugh woke up, he saw his mother hovering over him. They locked eyes and held the stare for several beats, and Mia Neely asked if he was OK. “And he says, ‘Who are you? I don’t know who this is,’” Neely recalls. She broke into tears and was trying to get ▶

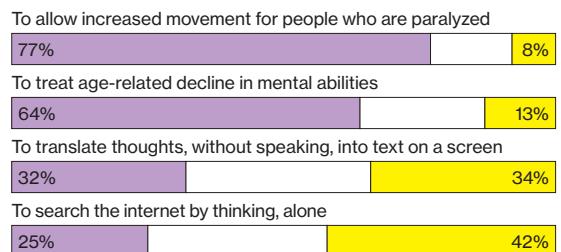
▲ Neely with some of the animals at the family’s home in Yuma

### US Public Opinion on Computer Chip Implants in the Brain

Share of adults who say widespread use would be a good or bad idea for society



Share of adults who favor or oppose implants for each purpose



DATA: PEW SURVEY CONDUCTED NOV. 1-7, 2021

◀ the attention of a doctor when she caught a smirk on Arbaugh's face. He'd planned the gag ahead of time. "I wanted to let her know that everything was OK and to ease the tension," Arbaugh says.

For about two decades, researchers have run experiments on humans with devices similar in concept to Neuralink's, but they've been bulky and typically require a medical team to help operate them. As a result, the implants are almost always used in hospital and laboratory settings. Over the past few years, a handful of startups have developed more modern takes on these products and how to implant them. All of these companies want to use the implants to help people with debilitating conditions control machines in non-hospital settings.

The implants operate by gathering data as the brain's neurons fire. With the help of artificial intelligence software, it's possible to match specific patterns of neuronal activity with certain actions and translate that data into actions that take place on a computer. Arbaugh can't move his hands, for instance, but he can think about moving his hands. The Neuralink implant can identify what that looks like, then transmit the intention to a nearby laptop or smartphone, allowing him to move a cursor around the screen. This means Arbaugh can play games, shop, pick audiobooks and generally interact with the online world much as anyone else can.

Most brain implant startups use technology that relies on placing electrodes near, but not quite right up against, someone's neurons. A device from Synchron, for instance, can nestle into a blood vessel in the brain through a relatively safe procedure that doesn't require cutting into the skull. Precision Neuroscience has a product that sits on the brain's surface. To get clearer signals, Neuralink slides electronic threads directly into the brain tissue, an approach that requires more invasive surgery.

In addition to getting closer to the action, Neuralink's device has many more electrodes than most of its rivals' and much more data bandwidth. With the higher bandwidth, the implant can receive a richer signal from the brain, allowing someone like Arbaugh to navigate his computer faster and more effectively than he would with another product. If such technology works well, it could be a huge boon to people who suffer not just from paralysis but also from conditions such as ALS and strokes where their ability to move and communicate has been compromised.

In the first couple of weeks after returning home, Arbaugh had members of Neuralink's team in his living room and kitchen to test the device. In

research settings, brain implant patients usually need to rest after two to four hours because of mental and physical strain, but Arbaugh would go for up to 10 hours. The device also outperformed its predecessors. From Day 1, he began breaking speed records on the typical battery of tests used to benchmark the performance of brain-computer interface implants.

The world began to reopen for Arbaugh. He could play games like *Sid Meier's Civilization* and chess with relative ease. He could hop between websites and audiobooks on his computer. And he could do all of this while lying in bed, which was far more comfortable and less spasm-inducing than sitting in his wheelchair and trying to get his mouth stick aligned just so with his iPad.

In the early days, Arbaugh had to learn how to tune Neuralink's software to his brain patterns and get the gist of turning thoughts into action. As the weeks went by, the process became second nature. It seemed as if he'd developed a superpower. But, about a month into the practice sessions, he found he had less precise control of the cursor on his screen and noticed a lag between his thoughts and the computing actions. These issues were the result of the electrode-laced threads in Arbaugh's brain shifting around much more than Neuralink had seen during its animal trials. This disrupted the quality of the connections between his mind and his computer. His superpower began to fade.

The company has yet to disclose detailed information on what it believes caused the threads to move so much. One issue could be that the human brain is bigger than animal brains and sloshes around more. Arbaugh also has a thicker-than-average skull, which may have affected the way the threads settled into his tissue. Arbaugh will continue using the current version of the implant, but it's possible that Neuralink will adjust its surgical procedures, and perhaps parts of the implant itself, to address the problems as it heads toward testing the device on more patients this year.

Technology products almost always improve over time; Arbaugh had talked with Bain about how he would be receiving what was probably the worst Neuralink implant that anyone would get. But Arbaugh had agreed to the trial precisely because these types of issues could occur. He wanted to be a means for helping Neuralink root out its implant's flaws. Still, that didn't make the loss of his newfound abilities any less painful.

"I started losing control of the cursor. I thought they'd made some changes and that was the reason," Arbaugh says. "But then they told me that the threads were getting pulled out of my brain. At

**"Once you get a taste for using it, you just can't stop"**



first, they didn't know how serious it would be or a ton about it.

"It was really hard to hear. I thought I'd gotten to use it for maybe a month, and then my journey was coming to an end. I thought they would just keep collecting some data but that they were really going to move on to the next person. I cried a little bit."

Neuralink set to work trying to see what it could do to fix the issues. Its software engineers tweaked the algorithms that record data from Arbaugh's neurons and made changes to the way that data gets analyzed and transferred to his computer. Arbaugh is now back to setting records, tapping into his implant 10 to 12 hours a day, moving from fantasy baseball to video games to audiobooks with ease. "I bet the next person that gets this is going to feel exactly the same way as I do," he says. "Once you get a taste for using it, you just can't stop. It blows my mind so much."

Arbaugh named his implant Eve in part, he says, because God presented Eve to Adam as his helper. Recently, he's begun tracing letters on his computer screen with a cursor he controls through the implant. It's the first stage of training Neuralink's software to recognize the words that Arbaugh is

thinking. The hope for Arbaugh is that he'll soon be able to think entire sentences and have the software know what he's trying to say. He's long dreamed of being a fantasy writer and would like to write a novel.

Beyond that, Arbaugh isn't totally sure what to do with his time in the limelight. He'd like to find a way to make a living from this experience, so he's less dependent on his family and they won't have to tend to him quite as much. "My brother has been caring for me for eight years," Arbaugh says. "He needs to go live his life." If fortune allowed it, he'd really like to make enough money to build his mom a house as a thank-you for everything she's done for him.

Arbaugh has agreed to keep the device in his head and to provide data to Neuralink for a year. After that, he and the company will discuss whether he wants to have the device deactivated or even removed. Arbaugh suspects that he'll want to keep it and even move on to the next version of the product when one is ready. "I'd want to upgrade," he says. "Hopefully, they'll put me on the short list." —*Ashlee Vance*

**THE BOTTOM LINE** Neuralink has helped its first human patient live a fuller life, even as its functioning has been complicated by issues that didn't emerge in tests on animals.

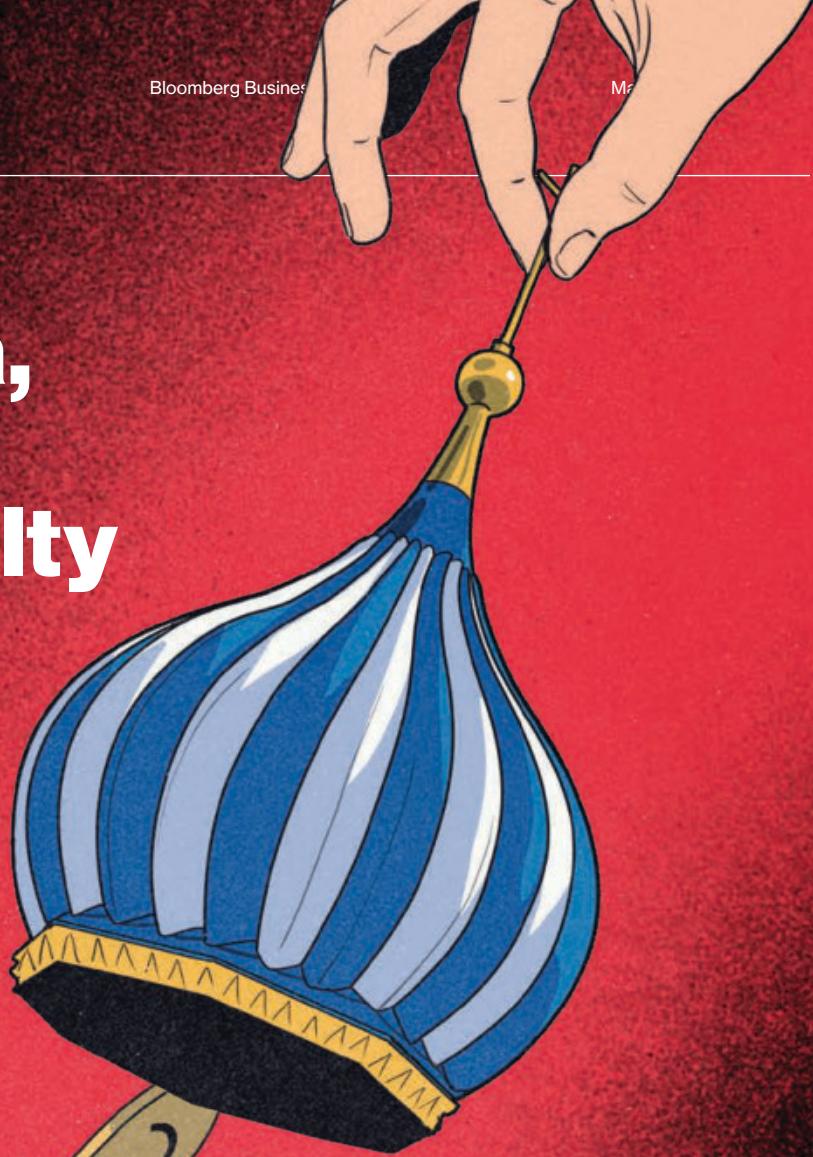
▲ Arbaugh, with his dog, Grace, has dreamed of becoming a writer

3

FINANCE

# From Russia, With Difficulty

Europe's banks have been slow to leave the country, and the ECB is getting impatient



Edited by David Rocks

Two years after Russia’s full-scale invasion of Ukraine, big European lenders continue to operate hefty, increasingly profitable units in the country despite public pledges to wind them down. The combined head count of the five European Union banks with the largest Russia operations has fallen by only 3% since the invasion, and earnings have roughly tripled, thanks to the fat interest rates they’re getting on their piles of cash stuck in the country.

The slow pace has spurred the European Central Bank to press the laggards to hasten their departures. One worry is that a continued presence in Russia risks exposing the lenders to US sanctions and heavy fines, according to a person familiar with the matter who asked not to be named because the information is private. The watchdog has asked all banks with sizable businesses in Russia “to speed up their de-risking efforts by setting a clear road map for downsizing and exiting.” Claudia Buch, the central bank’s top oversight official, told euro-zone finance ministers on May 13.

Western sanctions that sharply limit companies’ scope of business in Russia, combined with local rules and punitive taxes on sales, make it tough for the banks to get money out of the country. Subsidiaries of foreign banks in Russia must of course adhere to domestic regulations, which can run counter to the ECB’s pressure on the parent company. And they face the risk of retaliation: The Kremlin sometimes seizes assets of companies or individuals from countries it considers unfriendly. Italy’s Intesa Sanpaolo SpA in September got authorization from President Vladimir Putin to sell its Russian unit to a group led by the unit’s local managers, but the deal has been slowed by bureaucratic hurdles, says the bank’s chief executive officer, Carlo Messina. “It’s not easy to complete a disposal,” he told Bloomberg TV in February.

The only large EU lender to make a clean break is Société Générale SA, which offloaded its largest Russian subsidiary, Rosbank, weeks after the invasion—though the deal spurred the bank to write down the value of the business by more than €3 billion (\$3.2 billion). After selling two smaller units, Société Générale has seen its staff levels in Russia fall more than 99%. And Dutch bank ING Groep NV (in the country for more than three decades) says it’s slashed its Russia-related business by three-quarters, to about €1.3 billion, since early 2022. “It’s embarrassing to be in Russia given the current political situation,” says Nicola de Caro, an analyst at Morningstar DBRS in Frankfurt. But “a disorderly exit could be viewed as a favor to the Russian authorities.”

Deutsche Bank AG has drastically cut its employees in Russia, largely as a consequence of shutting down an IT hub, yet it also generated higher earnings there last year than in 2021, before the invasion. Such developments are fairly typical of banks that still have money in Russia, given the difficulties the Europeans have in bringing money home—and the double-digit interest rates the Russian central bank pays on the lenders’ deposits. Profits at the subsidiary of Austria’s Raiffeisen Bank International have more than tripled in the period, and at Intesa they’re up roughly twentyfold. For some banks, “the contribution to earnings is higher than before the war, which must raise red flags for authorities,” says Tomasz Noetzel, an analyst at Bloomberg Intelligence. “There’s a high risk of breaching sanctions unintentionally.”

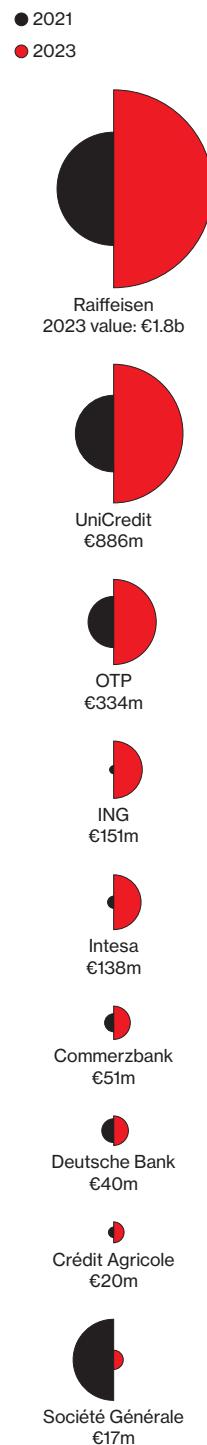
US banks have faced similar issues. Citigroup Inc. ceased almost all institutional banking services in Russia early last year, though it still has \$7 billion tied to the country, most deposited with the central bank and other agencies. JPMorgan Chase & Co. says it had about \$350 million stranded in Russia as of March.

No lender illustrates the Europeans’ dilemma better than Raiffeisen, which for two years has been trying to cut back or exit with money in hand. A complex transaction to repatriate capital collapsed on May 8, with the bank saying it hadn’t been able to get Western regulators to back the plan, putting it at risk of violating sanctions. Raiffeisen says that it’s working to ensure compliance with sanctions and that it has “significantly reduced its activities in Russia” since 2022, cutting its loan book by almost 60%, to about €5.8 billion—though its head count has actually climbed 7%, to almost 10,000. It says it would prefer a sale, but it’s difficult to find a buyer, and any transaction would require Russian approval.

Hungary’s OTP Bank is among the few EU lenders to move money out of the country. Hungarian Prime Minister Viktor Orban is the Kremlin’s closest ally in the EU, and he held up aid from the bloc for Ukraine’s defense for months before relenting, but OTP insists it hasn’t benefited from his cozy relationship with Putin. The company says that it fully complies with sanctions and wants to exit the market, but that Russian regulators make it tough to dispose of the unit at a fair price.

Italy’s UniCredit SpA operates in Russia through a subsidiary with about 3,100 employees and more than 50 branches. The Milan bank says it has set aside more than €800 million against defaults in Russia since 2022 and has cut back its loan portfolio by two-thirds. CEO Andrea Orcel said on a conference call in May that the bank ►

▼ Pretax profit from Russia of selected European banks



◀ will continue to do what it can in the country and that it's in compliance with sanctions, but that a final exit will be difficult to execute. "Obviously," he said, "if there were an opportunity to further accelerate our disengagement, we would."  
—Steven Arons and Nicholas Comfort

**THE BOTTOM LINE** The banks say Russian rules and Western sanctions make it almost impossible to sell their businesses there, and it's tough to transfer money out of the country.

# The Heat Is On for California Insurers

● Fire policies are getting harder to find in tony areas such as Beverly Hills, Bel-Air and Napa

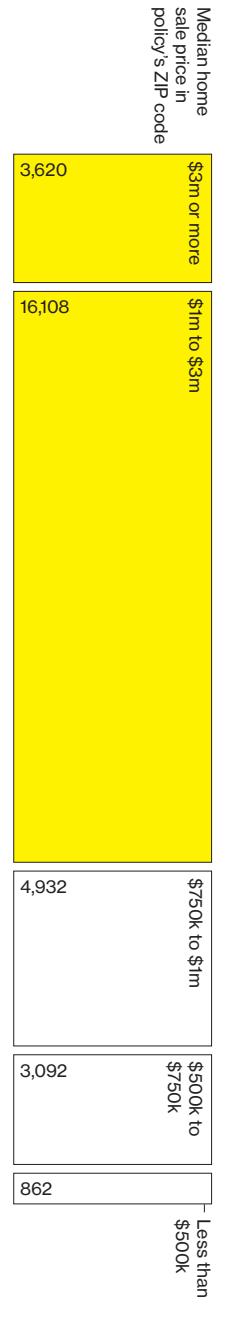
In February, as Peter Mac was about to close the sale of a four-bedroom, five-bath estate with an infinity pool perched in the Hollywood Hills that had been on the market for two years, the deal appeared to hit a snag. After negotiating a price of \$25.6 million, down from the original listing of \$48 million, he presented the purchaser with a quote for fire

insurance: \$200,000 a year. "She almost fell off her chair," says Mac, a broker with The Agency. "She wanted to renegotiate." In the end, the buyer found an alternative policy for \$80,000, but it covers only a fraction of the home's replacement cost.

California's property insurance crisis is shaking up real estate in some of the most expensive housing markets in the US. Insurers are charging sky-high premiums or abandoning coverage completely in exclusive enclaves such as Beverly Hills, Montecito and Napa Valley wine country. It's part of a nationwide trend driven by climate change, and the fear is that California could become the next Florida. Homeowners insurance in the Sunshine State costs more than three times the national average, and at least a dozen insurance companies have stopped writing home policies there.

Instead of Category 5 hurricanes pummeling coastal communities, California's big concern is wildfires devouring multimillion-dollar hillside estates. State Farm General Insurance Co., the state's biggest insurer by market share, announced in March that it was discontinuing policies on 30,000 houses and 42,000 apartments before this year's fire season. Almost 70% of the houses are in ZIP codes where the median sale price topped \$1 million last year. The cancellations included 67% of State Farm policies in Bel-Air's 90077 ZIP code, 69% in Pacific Palisades' 90272 and 46% in Beverly

▼ California homeowner insurance policies on houses that State Farm says it will not renew



◀ The buyer balked at a quote of \$200,000 a year for fire coverage



Hills’ famous 90210, according to a filing. In Montecito, whose residents include Oprah Winfrey and the Duke and Duchess of Sussex—aka Harry and Meghan—State Farm axed 28% of its policies.

John Morris is feeling the heat. For almost 30 years he paid his premiums and never filed a claim on his six-bedroom hillside mansion in Bel-Air, where the average home lists for \$8.4 million. In 2022, American International Group Inc. canceled his policy, so he switched to State Farm, paying \$22,000 a year for a plan he says covers only about 40% of the home’s \$10 million replacement cost. In April, Morris’ agent broke the news: His State Farm coverage will end in 2025. “There will be options, but they’re going to be a lot more expensive,” Morris says. “It’s a problem that’s not going away.”

The squeeze is by no means limited to the wealthy. A survey by BMO Bank found about half of California homebuyers fear rising insurance costs will make it harder to buy or keep a home. And only 18% of households can afford the \$5,210 monthly payment for mortgage, insurance and taxes that would be due for a median-priced home, according to the California Association of Realtors.

Even for some high-end investors, rising insurance costs are a deal-breaker. Stephen Shapiro, co-founder of Westside Estate Agency, in 2022 balked at buying a \$15 million rental home in Bel-Air after he was quoted \$150,000 a year for fire insurance, plus more for special flood coverage because it’s near a reservoir. “If you’re talking \$15,000 a month just for insurance, that offsets the ability to make any money on it, and that was before rates went to where they are now,” Shapiro says.

More than 90% of state-licensed insurers in California either aren’t offering new property coverage or have heavy restrictions, says veteran broker Karl Susman. Over the past 18 months, 7 of the 12 major licensed insurance companies have cut back on new policies or renewals amid concerns over disaster risks fueled by climate change and state-imposed limits on premiums. In April two affiliates of Tokio Marine Holdings Inc. said they would cut 12,556 policies, though they’re working on a deal for another company to take over the coverage. “Now you might have one option—maybe two—from a carrier that you’ve never heard of before, and it’s offering minimal coverage for a lot of money,” Susman says.

State Insurance Commissioner Ricardo Lara is trying to coax insurers back to California and stabilize the market, a move the real estate and insurance industries support. As part of regulatory reforms, insurers will be allowed to raise premiums based on future climate risks and reinsurance



▲ Morris

costs, as long as they provide a share of coverage in wildfire areas. The plan, which won’t go into effect before December at the earliest, would mark a departure from the status quo established by Proposition 103, a 1988 ballot measure that allows the commissioner to reject rate hikes. It also restricts insurance companies’ pricing models while giving the public a say in rate-setting.

As private insurers withdraw, more homeowners are turning to California’s FAIR Plan, the state-created insurer of last resort, which is financed by the dwindling cohort of licensed companies—those that are required to file their rates to the state. The number of dwellings with FAIR coverage more than doubled from 2019 through 2023, to 339,000 homes, representing about \$300 billion in exposure. “California faces an unprecedented insurance crisis, and there is not one solution to address it,” Victoria Roach, president of the California FAIR Plan, testified at a hearing on industry reform in April.

When state-licensed private insurers stop offering coverage, more expensive unlicensed companies will step in with less comprehensive policies that have fewer consumer protections. Some homeowners have no choice but to pay those bills because their mortgage lenders require insurance, says Max Kramer, an independent insurance agent in Topanga Canyon, a community northwest of Los Angeles with high fire risk. “I’ve been yelled at by more real estate agents than ever lately because of the insurance,” he says. “People are breaking deals that are already in escrow.” —*Nadia Lopez, John Gittelsohn and Ann Choi*

**“There will be options, but they’re going to be a lot more expensive”**

**THE BOTTOM LINE** Facing bills that can top \$10,000 a month for fire insurance, many owners of expensive California homes instead opt for cheaper policies that don’t offer full coverage.

# Eastern Tail Winds

● Georgia's ports of Savannah and Brunswick are poised to gain from "reglobalization"



Named for a segregationist Georgia governor who served almost a century ago, the Eugene Talmadge Memorial Bridge over the Savannah River is a vestige of the Jim Crow era rendered in concrete. At 33 years old, it's young by US infrastructure standards. But economic progress and the shifting winds of global trade have turned the bridge into a barricade.

That's why state officials plan to spend \$189 million to shorten the span's suspension cables and raise its deck as much as possible, among other upgrades. The additional clearance will allow ever-taller vessels to reach the expanding docks just upstream at the Port of Savannah, the nation's fourth-busiest for container traffic.

Raising the Talmadge is a small yet essential step as the Georgia Ports Authority pushes for \$4.5 billion in investments over the next decade, in a direct challenge to the top three American container ports. Aided by their shorter distance to China, the ports of

Los Angeles and neighboring Long Beach, California, have long held the top spots, though the Port of New York-New Jersey did edge out Long Beach for second place during the pandemic disruptions of 2022.

The competition spans decades, but new forces are reshaping it. As more export production destined for the US migrates to South Asia from China, the geographic edge is tilting toward the East Coast, which boasts quicker deliveries through the Suez Canal and across the Atlantic from such countries as India and Sri Lanka.

Savannah also stands to benefit from a host of domestic factors, including the US population shift to Sun Belt boom states, a growing auto industry in the South and something that ports crammed into the country's largest cities lack: real estate, combined with the political will to expand.

"China is still going to be a power player for some time to come, but there is a change happening and



● The container ship CMA CGM Marco Polo sails past Savannah's historic River Street and City Hall

Vessels are currently avoiding the Suez Canal, fearing attacks in the Red Sea by Houthi rebels, and instead traveling around the southern tip of Africa. Still, the longer journey from ports including Mumbai, Mundra and Pipavav is three to five days shorter than going across the Pacific to the US West Coast, according to Georgia port officials.

Maximizing the opportunity will require India to invest in more modern logistics infrastructure, too, and so far Georgia's trade with the world's most populous country has been bumpy. Shipments to India from Georgia rose 43% in 2022 but dropped almost 25% last year. Total bilateral trade increased 39% in 2022, to \$6.24 billion, then decreased 13% last year, to \$5.43 billion. Such volatility is to be expected with an emerging market, and "despite these fluctuations, we are tracking a positive long-term trend," says Lizann Grupalo, deputy commissioner of international trade with the Georgia Department of Economic Development.

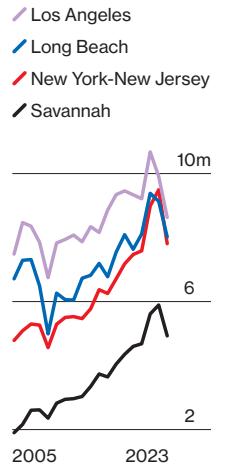
The ports authority, which is financing the expansion with its own cash and about \$1.3 billion in bonds issued over the past few years, is renovating Savannah's existing container terminals and planning to develop 400 acres it owns across the river into new berth and container yard space. To make room for more containers and ease their flow to a new rail yard, port officials shifted a general cargo facility to Brunswick, a hub for vehicles and heavy machinery. Both ports should get a boost in this year's fourth quarter, when Hyundai Motor Co. starts production at its \$7.6 billion electric-vehicle and battery "Metaplant." It's about 30 miles from Savannah and 80 miles from Brunswick.

By 2030, if Georgia's plans pan out, Savannah's annual capacity will rise to more than 12 million 20-foot container units, up from about 7 million this year. That would allow for more volume than the ports of LA or Long Beach have ever posted in a calendar year, even when they were running at full capacity during the height of the pandemic, meaning Savannah has the potential to be No. 1 in the US in the next decade.

"LA-Long Beach and New York are limited in expansion capabilities," Lynch says. "They're landlocked." Gene Seroka, executive director of the Port of Los Angeles, doesn't seem worried. He's been to Asia three times this year speaking with cargo owners and carriers at symposiums in Hong Kong, India, Indonesia, Singapore and Vietnam.

LA and Long Beach lost market share to eastern and Gulf ports such as Houston last year because importers looked for alternative routes amid fears of a West Coast dockworker strike. With that threat avoided, Seroka says 4 percentage points ►

▼ Largest US container ports, by volume of trade in TEUs\*

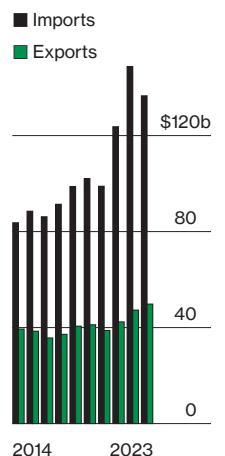


a shifting market share," says Griff Lynch, president of the Georgia Ports Authority, which oversees Savannah and a major vehicles port in Brunswick, Georgia. "All the areas that drive consumption and growth on the container import and export side are working towards our favor, and it's our job now to make sure we make the investments to be able to handle the growth that comes with it."

Georgia wants to catch the wave economists have termed "reglobalization," where such companies as Apple, Tesla and Walmart seek to diversify their supply chains away from China. The goal is to avoid getting caught in the crossfire of tariffs and other trade weaponry in the geopolitical showdown between the world's leading exporter on one side of the Pacific and the top importer on the other.

At the Georgia International Trade Conference last month, one focus was India, which is connected to Savannah by several weekly shipping services.

▼ International trade with Georgia



◀ of those share losses have returned, and LA's volumes in the first quarter were up 30% from a year earlier. US-China trade will remain a key factor even if it diminishes, he says. China's goods exports to the US last year amounted to \$427 billion, according to US Census Bureau data, compared with India's total of about \$84 billion.

This year it's the East and Gulf coasts' turn to deal with the threat of labor trouble from dockworkers, whose contract expires on Sept. 30. Lynch says negotiations are underway, and after a half-century of good relations with the International Longshoremen's Association (ILA), "I'm very confident that we'll work through that peacefully."

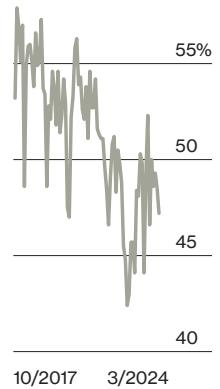
Maintaining LA's leading position hinges on boosting the efficiency of existing resources, Seroka says. LA is investing in digital technology and trying to keep expenses low in a state notorious for high business costs. To train truck drivers, warehouse attendants and software coders—workers often in short supply—LA and Long Beach are jointly developing a 20-acre facility scheduled to open in 2029 that will simulate a live maritime terminal.

At the Port of Long Beach, Chief Executive Officer Mario Cordero says he's seeing the benefits from Vietnam's rise as a top exporter to the US. He says Long Beach's growth will be helped by \$2 billion in investment planned over the next decade, primarily on rail connections. "I'm not too concerned that we will not be competitive in the future," he says.

The leaders of both Southern California ports, whose surrounding communities have for years complained about traffic congestion and pollution, appear more focused on a newer metric than sheer container volumes: zero-emissions targets. "Whether it's Savannah or other ports, as they continue to grow, I predict they are going to have the same challenges," Cordero says. "That is, how do you grow volume without impacting and resulting in congested corridors, with pollution and health issues in the surrounding communities?"

—Brendan Murray, with Chloe Whiteaker

▼ West Coast ports' share of US inbound container volume



THE BOTTOM LINE The ports of Savannah and Brunswick are spending billions to win business away from Pacific Coast rivals that have long dominated trade with Asia.

## Lessons From A Severance Saga

● Argentina's president wants to make the country's labor code more pro-business

A onetime Citibank employee who earned a \$130,000 salary working in New York stands to collect a \$10 million severance award, thanks to Argentina's pro-labor laws.

The case, which has been wending its way through the courts for more than a decade, crystallizes why Argentine President Javier Milei is pushing to revamp the rules around hiring and firing, even as he battles inflation of almost 290% a year and a deepening recession.

Tucked into a 238-article omnibus bill, Milei's proposals are facing their biggest test in the Senate this month after passing the lower house of Congress in late April. Meanwhile, unions have mobilized to oppose the changes. On May 9 they paralyzed the country via a 24-hour general strike—the second since Milei took office in December.

The World Economic Forum ranked Argentina 139th out of 141 nations on hiring and firing practices, reflecting the country's prohibitive severance costs and high payroll taxes. Workers' rights are enshrined in the constitution, and aggrieved employees don't hesitate to seek redress

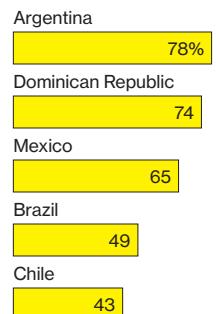
through the courts, where they're likely to find sympathetic judges.

This state of affairs points to the outsize role trade unions have played in Argentina's politics going back to the time of Juan Domingo Perón, the army general who in the 1940s harnessed the discontents of blue-collar workers to propel himself to the presidency. Unions remain a bedrock of support for the Peronists, who've ruled the country for much of the past 70 years.

"Improving labor laws here is long overdue," says Dario Judzik, dean of the school of government at the University of Torcuato Di Tella in Buenos Aires. "They're rigid and outdated." Still, there's a good chance that, with the economy in dire straits, some of the changes Milei is seeking will trigger a jump in layoffs, at least in the near term.

Alejandro De Nevaes is in position to collect a huge windfall under the current system. Over his 16-year career at Citibank, the Argentine banker worked his way up from the auto loans department in Buenos Aires to a job in New York as head of institutional sales for Latin America. He was terminated

▼ Informal employment as a share of job growth from Q3 2020 to Q2 2023



in 2007, for reasons that remain unknown, and offered the equivalent of approximately 14 months of salary as severance. He rejected that offer and took Citibank to court in Argentina, even though, as reported by Bloomberg Law, he'd previously waived his right to do just that.

Under Argentina's rules, stock options and bonuses can be counted toward severance. So even while De Nevares' highest monthly salary at Citibank was less than \$11,000, a judge ruled in 2009 that his total compensation topped \$68,000 per month. The court also said the banker's contract had been improperly registered, a ruling that automatically doubles any severance award.

Suddenly, Citibank was on the hook for \$3.9 million, a sum that's since ballooned to more than \$10 million because of the 6% interest applied by the judge. The company attempted to get the case moved to the US, but when that failed it continued to battle De Nevares in Argentina. The case is now before the country's Supreme Court. There's no timetable for when the justices will render their verdict. De Nevares and his lawyer, Juan Manuel Arias, both declined to comment, as did a spokeswoman for Citigroup Inc., the parent company of Citibank.

A libertarian who's vowed to make Argentina more business friendly, Milei initially attempted to enact changes to severance rules and other labor laws as part of a sweeping "mega decree" packed with measures to liberalize the economy. But a three-judge panel ruling on a lawsuit filed by the leading union confederation deemed the president had overstepped his authority, and it suspended the provisions.

A somewhat watered-down package of labor rule changes cleared the lower house of Congress on April 30, thanks to votes from the centrist Unión Cívica Radical, which merged its own proposals with those of the administration. But the real fight will be in the Senate, where Milei's two-year-old party holds just seven of 72 seats.

While employment in Argentina is technically at-will—meaning companies can terminate employees at any time and for any reason, provided they give proper notice and pay the mandated severance—there's plenty of minutiae to trip companies up. For instance, a business faces an automatic fine if it doesn't give 60 days' notice to an employee who's logged more than five years at the company.

Economists have long argued Argentina's labor code is so tilted toward workers that it incentivizes businesses to pay their staff under the table. Since mid-2020 almost 80% of the new jobs created in the country are in the vast informal sector, compared with 65% in Mexico and 49% in



◀ Demonstrators at an International Workers' Day rally in Buenos Aires on May 1

Brazil, according to a 2023 annual report from the International Labour Organization.

Diego Kelly, a partner at Argentina's largest law firm, Marval O'Farrell Mairal, points to the penalties that companies incur when they're found to have registered contracts improperly as a key obstacle to hiring. "Instead of encouraging registration, they've created a lot of tools to incentivize litigation because the fines are very onerous," Kelly says. This is one of the targets of Milei's reforms. (De Nevares' case wouldn't be affected.)

Employers as well as employees stand to benefit from a measure that would allow businesses to create a special severance fund—money a worker could tap either over the course of their employment or upon termination. Labor experts say the additional expense for companies would be well worth it if it meant their severance costs were predictable and the size of the awards couldn't be disputed in court.

Union officials argue that, with the country in the middle of a recession, businesses will take advantage of the changes in labor laws to cut payrolls. Surveys of companies in the construction and manufacturing sectors already show that a larger proportion expect to reduce head count, rather than expand it, this year.

Among the measures Milei and his allies are pushing is one that would allow businesses with five employees or fewer to extend the probationary period for new hires from three months to a year. Workers at hotels, restaurants and in other seasonal industries would have to wait as long as eight months before being made permanent, exposing them to the risk of continued layoffs.

Testifying before a Senate subcommittee on Monday, Hector Daer, who leads the CGT—Argentina's largest labor group—criticized the proposals, saying, "We're not only sending workers into informality, but we're creating a legal umbrella for informality." —Patrick Gillespie

THE BOTTOM LINE Legislation that would make Argentina's labor code more pro-business is before the Senate. Unions say some of the changes would spark layoffs, amid a recession.

**"They've created a lot of tools to incentivize litigation"**

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A

answers to our greatest questions, we were told about a decade ago, could be ours if we just spat in a tube. Celebrities were using DNA tests to trace their ancestry on the hit TV show *Finding Your Roots*. A “Who’s Your Daddy” truck rumbled through the streets of New York City, offering paternity tests on the go. Angelina Jolie sent droves of women scrambling to get their DNA tested when she wrote a 2013 op-ed in the *New York Times*. Jolie, whose mother was diagnosed with breast and ovarian cancer and died at 56, credited a DNA screening with identifying a mutation in her BRCA1 gene that meant she had an elevated risk for cancer, too. In detailing her choice to get a double mastectomy, she helped cement the popular understanding that a single gene could mean the difference between life and death.

A few months after the op-ed ran, during an appearance on *CBS This Morning*, 23andMe Chief Executive Officer Anne Wojcicki said she was bringing the power of these sorts of DNA tests to everyone. Her startup would make testing affordable, she said, so it could build a massive repository of genetic data, one big enough to speed research and create a road map for living to age 100. Wojcicki cited her own DNA as proof of concept: She’d quit drinking after finding that she also carried a gene that heightened her risk of breast cancer. When co-host Gayle King said she’d heard some doctors were skeptical, Wojcicki brushed it off. “Anytime there’s a new technology for physicians, it’s a challenge,” she said. Then the conversation moved in a different direction, as co-host Norah O’Donnell asked whether 23andMe planned to usher in a future of designer babies.

Around the time of that morning show appearance, Wojcicki’s team brought 1,000 of their DNA-testing spit kits to 23andMe’s first medical conference and managed to give away maybe five. Physicians breezed past her team to line up for Dippin’ Dots instead. In late 2013 the US Food and Drug Administration ordered 23andMe to stop selling its health tests until the company could prove they were safe and effective.

In a recent interview with *Bloomberg Businessweek*, Wojcicki looked back on that period with good humor. She says the

early rejections only made her more determined. It was just a matter of time, she believed, until the medical community added genetic testing to its standard operating procedures. “When you start, you’re just naive about everything,” she says. “We thought, at some point, physicians would adopt it.”

Given more evidence, of course, the FDA later authorized the tests, and 23andMe became a household name. The problem, for Wojcicki and the rest of the DNA testing industry, is that all these years and millions of spit kits later, the doctors still don’t care. Mass-market genetic screenings remain well apart from the medical mainstream, and 23andMe has never made a profit. And unfortunately for Wojcicki and her peers, the reasons for that seem to be less about the stuffiness of the doctors than about the limits of genetic testing.

When researchers unveiled a working draft of the human genome in the early years of the 21st century, it was billed as a panacea. Within our DNA, the project’s boosters said, lay the keys to victory over almost everything that ails us. Drugs tailored to a person’s particular genetic code had the potential to cure diseases instead of merely treating them. Genetic risk assessments would drive people to eat and exercise in the ways they needed to avoid getting sick in the first place. Today, however, the biggest insight most people have gained from DNA testing is trivia about their ancestors’ countries of origin. Most doctors remain untrained in genetics, when to order a DNA test or what to do if a patient brings one in. Therapies targeting the human genome are few and far between, and they’re often too expensive for most people to afford.

We’re still waiting, in other words, for health care’s great DNA revolution. And a growing contingent is starting to question whether genetic data simply isn’t of much use to the average person. “Everyone now is getting their genetic reports back and realizing that it’s not actually making a damn bit of difference when it comes to their health,” says James Tabery, a professor of philosophy and bioethics at the University of Utah and author of *Tyranny of the Gene: Personalized Medicine and Its Threat to Public Health*.

“I’m more confident than ever,” Wojcicki says. “But I think there’s also that reality that it’s not like gold dripping from trees.” Few have more riding on the next phase of applications from DNA testing than 23andMe. Over the past decade, it’s tried a lot of strategies to make personalized genetics profitable. It partnered with Big Pharma to develop drugs from DNA insights. It acquired a telehealth company. Most recently it rolled out a \$999 yearlong testing subscription that includes full sequencing of the genome’s protein coding regions, two rounds of blood tests and analysis from a clinician. Still, it has yet to graduate from stocking stuffer to health care. As kit sales have slowed, investors have soured on the company’s longer-term bets, and its stock is on the verge of being delisted from the Nasdaq. (On May 10, the company said it had received an extension of 180 days to bring its share price back above \$1, according to a filing with the US Securities and Exchange Commission.) 23andMe needs to find a way to increase sales, raise capital or slash

spending, even as it struggles to close the gap between the practical uses of DNA testing and the hype.

Wojcicki acknowledges things aren't going exactly according to plan. "We're in an industry that is definitely figuring out what is that application of genetics in the clinical space," she says. "It's a little bit of a sector in crisis."

**C**ode has proven an imperfect genetic metaphor. DNA's double helix structure, first revealed to the world in the 1950s, is made up of billions of base pairs of A's, C's, G's and T's. Each one of a person's roughly 20,000 genes amounts to a stretch of those letters, and the ACGT makeup of individual genes can make the difference between brown eyes and blue ones, or attached earlobes and the free-swinging kind. In the 1980s and '90s, a string of research breakthroughs began to pinpoint the location of individual genes for conditions such as Huntington's disease and cystic fibrosis. The prospect of

JAMES WATSON AND FRANCIS CRICK, WORKING WITH ROSALIND FRANKLIN AND MAURICE WILKINS, DISCOVERED THE DOUBLE HELIX STRUCTURE IN THE 1950S

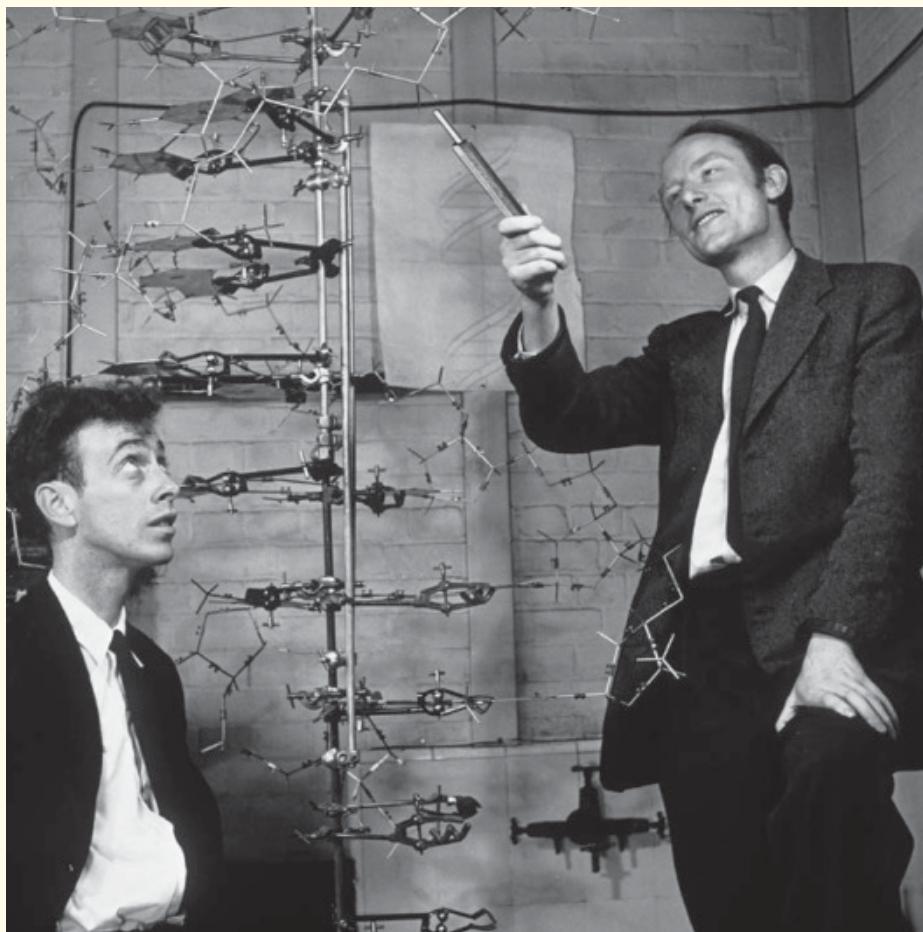
a full-length genetic code, then, seemed to promise that we could reverse-engineer the eradication of diseases by treating DNA as something akin to a programming language. If we could decrypt the code, we'd just have to figure out how to intervene in the disease genes—to switch the 1s to 0s, the ons to offs.

As a team of international researchers drew close to finishing the Human Genome Project, the first full sequence of a person's code, its backers made grand promises about the data's potential. In 2000, President Bill Clinton said it would lead to cures for Alzheimer's, Parkinson's, diabetes and cancer. In 2003, at a celebration of the project's completion at the National Museum of Natural History in Washington, Francis Collins, the scientist who led the endeavor, predicted that researchers would identify the genes responsible for those diseases within a decade, and that by 2020 "we will have a gene-based designer drug available for almost any disease that you can name." Collins, who went on to run the National Institutes of Health, capped his remarks with a DNA-themed song to the tune of Del Shannon's *Runaway*. He played guitar, and the audience clapped along to the chorus: "I wonder / wo-wo-wo-wonder / Why / why why why why why / you've got an A / I've got a C there, what does that say? / Amazing DNA."

Within a few years of Collins' performance, new technology made it much easier to suss out teeny variations in DNA

that can turn a healthy gene into a disease-causing one. Keeping up with the pace of discovery, the *New England Journal of Medicine* wrote in 2007, was like "drinking from a fire hose." That same year, 23andMe shipped its first product, a \$999 DNA test, with the help of \$4 million in funding from Google. (At the time, Wojcicki was married to Google co-founder Sergey Brin.) Wojcicki and her co-founders said they planned to take the genetics revolution out of the lab and put it in people's hands. "That any consumer with \$1,000 can now capitalize on this project is a rare case of groundbreaking science overlapping with an eager marketplace," *Wired* magazine wrote at the time.

We now know of about 10,000 diseases caused by mutations in single genes, but they are, for the most part, rare. Combined, they affect about 6% of the population, according to one estimate. Few are as genetically clear-cut as Huntington's disease, which causes a debilitating ►



◀ and eventually fatal breakdown in the brain's nerve cells. Everyone with the telltale mutation in their HTT gene, perhaps a handful out of every hundred thousand people, will develop the disease, leading to progressive decline in their mental faculties and motor skills. Small populations of people with monogenic diseases mean small markets for potentially lifesaving drugs. To date, most successful gene therapies have been prohibitively expensive, on the order of millions of dollars per patient.

Humankind's leading killers, on the other hand, can rarely be defeated by flipping the switch on a single gene. The past decade of research has made clear that there isn't usually one gene responsible for a person's diabetes or heart disease. An unknown number of genes might play a role in the many bad things that can happen to your heart, and we understand very little about how those genes interact with one another. "The human genome was far more complex than anybody anticipated," says Tabery, the bioethicist. What we do know is that while your genes might give you an increased risk of diabetes or heart disease, it's not a foregone conclusion. Your environment, diet and exercise are factors of comparable or greater significance. And some of it is just random.

"Genetics is mainly usefully informative for conditions that are sufficiently uncommon that mass screening doesn't make sense," says Hank Greely, a law professor who directs Stanford University's Center for Law and the Biosciences. "It's just not compelling enough medically."

Despite this shift in expert thinking, the popular narrative of DNA testing's surpassing power endured for years. In 2017, Oprah Winfrey named 23andMe's test kit one of her favorite things, calling it "the ultimate selfie." In 2018, the National Institutes of Health, under the leadership of former Human Genome Project chief Collins, announced plans to sequence the DNA of 1 million Americans "to advance individualized prevention, treatment and care for people of all backgrounds." In 2021, when it went public via a special purpose acquisition company founded by Richard Branson, 23andMe was valued at \$3.5 billion.

These days, though, the cliché isn't that your test results will help you head off a fatal disease. It's that they might break up your family. (Or, less often, help cops catch a serial killer.) As testing has slowed, 23andMe and its leading competitor, Ancestry.com, have collectively laid off hundreds of employees in several rounds of cutbacks. Branson has lost more than \$150 million since 23andMe began trading, according to data compiled by Bloomberg.

The prevailing wisdom on how to make it to 100 is still the same old boring advice: exercise, eat well and get enough sleep. Even so, the idea that we all run on a code that can be decrypted and debugged—a code that explains who we are—is hard to give up. Wojcicki says her team isn't going to

Genetic data may not be the cure-all we once dreamed of, but it still has the potential to deliver a holistic health assessment, according to Wojcicki. Some of the latest tools the company is using to do that are called polygenic risk scores, statistical models that calculate a person's risk of disease by analyzing many genetic variants. The value of genomic screening is twofold, she says: It gives guidance for preventive care and a road map for personalized drug treatments.

"Everyone gets something," she says. "Every single person." Of course, if you look at enough risk factors, eventually everyone will be at risk for something.

Wojcicki had just returned from a ski trip to Montana with her kids and Noura Abul-Husn, the company's vice president for genomic health, when she sat down for a February interview at 23andMe's offices in Sunnyvale, California. A storm had littered the roads around the



headquarters with downed trees, which seemed very on-the-nose for the moment. A *Wall Street Journal* headline had just called 23andMe “virtually worthless.” The company was fighting a class-action lawsuit related to the theft of customer data by hackers. Its stock was trading at about 66¢ a share. Wojcicki, still dressed in her plane clothes after rushing from the airport to drop her kids off at school, could have been forgiven some grumpiness. Instead, she was decidedly upbeat. Her main complaint was that the bad weather didn’t wind up gifting her family an extra ski day.

“Relentless” isn’t a strong enough word for Wojcicki’s brand of optimism. The CEO attributes her sunny outlook to a solid team and a 10 p.m. bedtime. If having its main product outlawed for several years didn’t kill the company, she says, the latest decline is just another hiccup. She does acknowledge that the pressures of being a public company have made things tenser and quieter. “We were so lucky in 2013 that we weren’t public,” she

says. “It’s a whole new level of complexity, because you are very much restricted about what you can say.”

Unbowed by disinterest from doctors, Wojcicki hired her own by buying telehealth startup Lemonaid Health for \$400 million in late 2021. Last fall, in the face of slackening demand for its cheaper testing options, 23andMe introduced Total Health, its \$999 tests-and-coaching subscription. (Each extra year costs \$499.) Rather than try to win over insurers, “we’re really trying to create a

different system that’s self-pay,” she says. 23andMe has so far not seen the subscription rates it expected, Wojcicki says, so it needs to give the people who have bought in more opportunities to buy things. Blood tests. Doctor visits. Pharmaceuticals. Care plans. An app store for DNA. “We can have an all-in service for individuals who are looking to really know about themselves, like, what the risk factors are and what can they do?”

Abul-Husn says Total Health, 23andMe’s latest bet, is focused on care plans for people with more than 100 genes linked to 55 conditions that are broadly considered “actionable,” including forms of cancer, cardiovascular disease, metabolic disease and neurological disorders. Total Health might recommend that a person it’s identified as at risk for heart disease, for example, consider taking statins to lower their cholesterol sooner than a doctor might otherwise suggest. 23andMe’s most valuable asset may be its database of

“WE NEED TO COMBINE GENETICS WITH FAMILY AND PERSONAL HEALTH HISTORY, BLOOD AND RNA ANALYSIS AND OTHER FACTORS TO FULLY UNDERSTAND RISKS AND BEST ACTIONS”

15 million customers, which it continues to mine for drugs. The company has used its customer data to identify dozens of potential treatments for development. It is conducting clinical trials for two of those and has a stake in a third trial conducted by GSK Plc.

Ancestry and other rivals, however, have mostly struck out in the areas 23andMe is pursuing. Helix Inc. shut down a gimmicky app store. Color Health Inc. killed its consumer-facing testing. Both have shifted focus: Helix to partnerships that incorporate genetic testing into research and primary care for large numbers of participants, Color to cancer screenings, including DNA testing, as part of employer benefit packages. Ancestry shuttered its own DNA-based health analysis product inside of two years. “To connect all those dots from risk to diagnosis to action is the hard part,” says former Ancestry CEO Margo Georgiadis, who now runs Montai Therapeutics. “We need to combine genetics with family and personal health history, blood and RNA analysis and other factors to fully understand risks and best actions.”

And drug development takes many years and lots of money, with few guarantees the return will cover the investment. So far, there have been only a few instances where genetics has directly led to a brand-new drug. The biggest blockbusters of our time—Ozempic and its sibling GLP-1s—came from an investigation into how the GLP-1 hormone works.

To see what Total Health could discern, on behalf of *Businessweek*, I took a full battery of its tests, starting with the familiar spitting into a large plastic tube. Most consumer DNA testing relies on genotyping. Total Health includes sequencing the entire exome, the portion of DNA widely believed to be responsible for the vast majority of disease-causing genetic variants. Sequencing delivers a far more complete picture of the genome. 23andMe’s standard tests can identify whether someone has certain harmful variants of BRCA genes that are commonly associated with breast cancer, but it can’t rule out whether a person has other problematic variants of the ▶



WOJCICKI SHOWS OFF A PURSE PRINTED WITH A DNA MICROARRAY AT THE BREAKTHROUGH AWARDS IN APRIL

◀ BRCA genes. Sequencing can decode any variant of a BRCA gene, not just identify pre-selected ones. By combining this with blood testing and a clinician consult, the company hopes to give people a well-rounded picture of their health.

After months of waiting, 23andMe said my results were ready in early May. I logged into my account and clicked the link for my “Health Action Plan.” Its conclusions were anticlimactic: “Keep doing what you’re doing. We don’t have any activities to recommend for you at this time.”

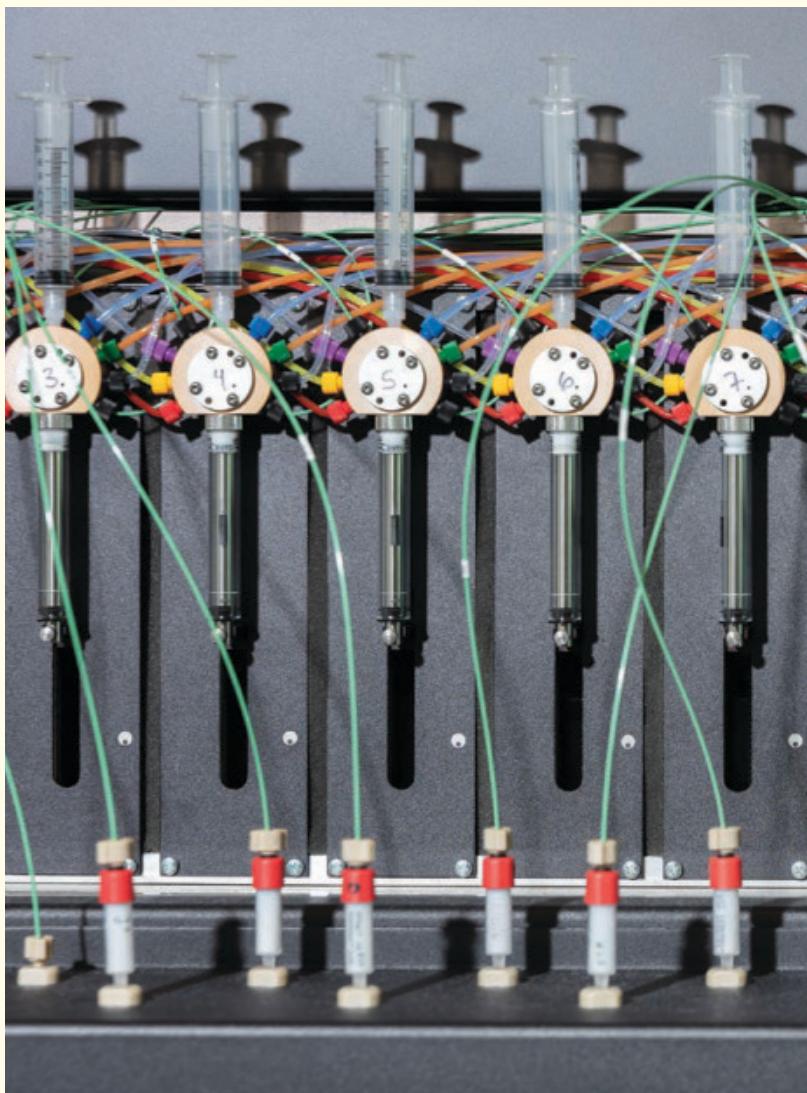
After spending 20 minutes filling out a detailed family history, I talked to a physician. “Sometimes the family history can tell us more than the genetics, believe it or not,” she said. After having the same sort of lengthy chat about my diet and other habits that I might have at my annual physical, she walked me through my results. I had a slightly elevated risk of celiac disease and a more moderate risk of eventually developing glaucoma. She said to not worry about the celiac—I would know by now if I had a gluten intolerance, and my consumption of avocado toast suggested I did not. As for the glaucoma, she said, the only real thing I could do was generally strive to live a healthy life, which I was already doing. She didn’t have any real recommendations. In her after-visit summary she wrote: “Keep up the great work.”

Not having a harmful variant on one of the 33 genes associated with cancer that 23andMe sequenced doesn’t mean I won’t one day get it. As the report explained, “only 5-10% of cancers are believed to be hereditary.”

What I’m more certain about is that if I can cut down on stress-eating Girl Scout Cookies while on deadline, fit in daily workouts before work and finally drop the 20 pounds I’ve gained over the past decade, it will make a significant difference to my health. I don’t need a DNA test to tell me that. And for the average person, the advice to eat healthier, move more and sleep better is about as much insight as a DNA test can offer.

In response to the sharing of my results, Abul-Husn says broadly that a DNA test will have value to “virtually every person” when you include polygenic risk scores and pharmacogenetics, which analyze how genetics might affect a person’s response to drugs. More than 90% of subscribers to one of the company’s premium subscriptions, 23andMe+, have an actionable result, she says.

The difference may lie in what you consider actionable. Greely, the Stanford professor, had a different takeaway. “You are, I think, going to prove to be representative of about



A 23ANDME “PROTEIN MAKER,” DESIGNED TO ISOLATE AND PURIFY SAMPLES OF DNA, PROTEINS AND ANTIBODIES

90%-plus of the population,” he said. I have a boring genome. Most people do.

The most powerful revelations of the genome can sometimes be not who we are, but who we aren’t. In my own family, DNA testing got one relative’s heritage dead wrong but correctly revealed that a second was not, in fact, genetically related to their father. (Long story.) It’s a common occurrence these days. Consumer DNA testing has broken and remade so many families, it hardly grabs headlines anymore.

For some people, DNA winds up being an especially important piece of life’s puzzle. For most, it’s starting to look like just another data point. “We live in a society where

almost no one exercises enough, no one eats enough fruits and vegetables,” says Timothy Caulfield, a professor of health and science policy at the University of Alberta. “It seems almost absurd that we’re focusing on these slight genetic differences between individuals and suggesting that’s going to make a significant change.”

To date, peer-reviewed studies have often found that people don’t really make large-scale behavioral changes based on DNA tests. The people most likely to benefit from something like Total Health, Caulfield says, were probably already proactive about their health care to begin with. “They’re the worried-well, the wealthy that are already highly, perhaps overly, engaged in their health,” he says. “We’re not looking at this profound revolutionary shift.”

23andMe says a customer survey showed 76% of respondents reported a positive behavior change after viewing their 23andMe results, and it says the evidence of positive health effects is mounting. Wojcicki dismisses the naysaying as a lack of patience for patients. “Everyone’s like, ‘No one’s going to change behavior,’” she says. “That’s kind of like, ‘I’ve given up on you already, before it’s even started.’”

acknowledges that the landscape of genetic testing has been far more complex than anticipated, but says he’s still bullish the genome will eventually deliver on its full promise. In the meantime, he says, being able to tell 2.4% of people they are at risk of developing disease is extremely valuable. “I get a little defensive about this,” says Collins. “People say, ‘Well, you know, the Human Genome Project said all this was going to happen, and here we are and I don’t see it.’ Well, look, people, it’s there. It may not be quite the places we expected, but it’s happening.”

Other businesses are placing their bets. Robert Green, a Harvard geneticist, recently went public with Nurture Genomics, a company that promises to “provide ongoing personalized support to deliver genomic-guided care early in life” after screening the DNA of your newborn. “If you combine genetic risk with targeted care and surveillance for those individuals at higher genetic risk, I believe that you can change outcomes,” Green says. Just as it was impossible, decades ago, to predict what we might learn from decoding the genome, we can’t yet be sure what else we might find as we continue to untangle its myriad connections.

“EVERYONE’S LIKE, ‘NO ONE’S GOING TO CHANGE BEHAVIOR.’” THAT’S KIND OF LIKE, ‘I’VE GIVEN UP ON YOU ALREADY BEFORE IT’S EVEN STARTED’ ”

Decoding the human genome, of course, has led to incredible breakthroughs. It has given us a better understanding of how some diseases work, and even helped to come up with non-genetic therapies for them. It has helped us to diagnose rare diseases. Carrier screening and genetic testing ahead of IVF implantation have helped countless parents avoid passing on genetic conditions, while newborn screening helps to identify conditions such as cystic fibrosis early, before symptoms appear. Some evidence suggests it might be worth screening large swaths of the population for genes linked to hereditary breast and ovarian cancer, a form of colorectal cancer called Lynch syndrome and a condition called familial hypercholesterolemia. Those genes are rare but not that rare, and regular screenings seem to make a big difference. Those are the genes Helix screens for on behalf of its health-care partners, the genes insurers are most willing to pay to spot. Even then, though, it’s unclear whether people themselves want that information. When the 2018 NIH research program began returning test results to its 100,000 participants, only about half wanted them. And those results were free.

Wojcicki isn’t the only one who still thinks DNA can play an outsize role in an individual’s health. About 2.4% of the NIH program’s participants came back with an actionable variant of concern. Collins, the former NIH chief,

Greely, who 20 years ago believed DNA testing would revolutionize health care, says it’s possible that in another decade or two a standard checkup will include genetic screening, but he doubts it’ll do much good. “Every utopian says, ‘Oh, we’re almost there. We just have to try a little harder,’” he says.

In the end, that is pretty much what Wojcicki is saying. She still envisions 23andMe becoming a “true preventative care service” that remains apart from the health-care system but connected to it. If she has any hope of making that happen, she’ll have to avoid running out of cash. In February, she told *Businessweek* she might split 23andMe’s drug development business from its consumer business. More recently, she told board members she is proposing to acquire the company in a potential go-private transaction. In a filing, Wojcicki indicated she plans to maintain control of the company and “will not be willing to support any alternative transaction.”

In her interviews with *Businessweek*, she’s held firm to her grander vision. “Our ambition is not just an elite few million people,” she says. “Our ambition is we become a cornerstone.” And how, exactly, does she plan to do that? “Perseverance,” she says. “One day we’ll look back—I don’t know what day, what year it will be—and we’ll be like, ‘They’re an overnight success.’” **B** — *With Ben Stupples*

# THE CHURCH OF TRADING

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*IM Academy promises young investors a quick path to riches. But instead of getting a Wall Street education, many of its members got sucked into a multilevel marketing scheme and lost everything*

**BY ALICE KANTOR**

**ILLUSTRATION BY MICHAEL KENNEDY**



**W**hen Patrice Rechards entered the Rotterdam arena, pop songs were pumping, strobe lights were blinding and she could feel God running through her. She'd grown up in a relatively poor and religious Surinamese-Dutch family in Amsterdam, and she'd always known she had a higher purpose. But it wasn't until she discovered IM Academy that she figured out what that was. Since joining the financial education platform three months earlier, the 26-year-old had learned how to trade options, crypto, stocks and foreign currencies, all in pursuit of getting rich—and she would soon share those lessons with others. Along with 15,000 other young IM members from all over Europe, she'd made the pilgrimage last spring for a three-day conference to see Chris Terry, their guru and the chief executive officer of IM, in the flesh.

During the pandemic, IM grew from a small New York operation into a global phenomenon by selling the promise that it could teach anyone, particularly teens and twentysomethings, how to become a savvy retail investor. For a one-time \$275 fee and \$250 a month, members had access to online courses and coaches providing trading strategies—the “Yale of forex, the Harvard of trading,” as a salesman described IM in a marketing video. When young people weren't being invited by their friends to become budding stock market mavens, they might encounter Instagram videos showing how others had gotten rich with the IM method or hear about celebrity members, including fashion model Blac Chyna and professional boxer Floyd Mayweather Jr.

Terry, a self-made trader turned multimillionaire who flaunted luxury cars, private jets and apartments across continents, said IM was more than just a path to financial freedom. It was a worldview. “It's for people to live on a higher frequency of being,” he often said. The company, which had only 68,000 members in 2018, had grown to 225,000 by June 2021, with recruits spanning the globe, from the US to the Philippines. Membership exploded to half a million in 2022, and IM was bringing in at least a billion dollars in annual sales.

Inside the Dutch arena, young men arrived in their finest business attire, some wearing black turtlenecks and silver chains, others with sunglasses lolling on the back of their heads and one AirPods in, many periodically checking their phones for trades. Rechards, dressed in black with her hair pulled back and face carefully made up, was ecstatic. After months of anticipation, she was finally about to see the genius

behind IM. Terry, wearing a red blazer and sneakers, walked onstage. The crowd began chanting his name, forcing a dramatic five-minute pause, until he finally greeted his followers: “Daddy's here. You're my children, OK?”

**T**erry started out as a construction worker in the Bronx. The company he worked for had ties to criminal gangs, according to former IM consultant and still close friend Troy Dooly. In the late 1990's, Terry had to pay \$60,000 when he pleaded guilty to one count of theft for his role in an organized criminal conspiracy, according to US records cited by Bahamas financial authorities. But he seemed to enjoy his tough-guy image. “Chris has no formal education but believes he graduated from the school of hard knocks and got his street smarts by growing up in the Bronx,” read an early personal website of his. (Terry, IM Academy and its executives didn't respond to inquiries from *Bloomberg Businessweek*. This account is based on interviews with dozens of former IM members, as well as close friends and former partners, some of whom declined to speak on the record for fear of retribution.)

Then Terry discovered Amway Corp., the wellness giant famous for its MLM, or multilevel marketing structure, in which salespeople made money from recruiting new salespeople who would buy bulks of products to resell. He quit construction to become an Amway sales manager, until a friend turned him on to day trading. He studied the stock market and started charging people \$5,000 for six months' access to his easy-to-learn trading strategies, like looking for repetitive patterns in price moves and timing when to sell an asset. He even persuaded some to let him manage their

money, despite never registering with any financial authority as a broker or adviser. “I remember people telling me to stay away from this guy,” says trader Daniel Riley, who encountered Terry two decades ago on the Chicago trading floor and who took their advice.

Linda Raschke, a reputable trader who ran a subscription business selling her trading strategies on video, hired Terry to moderate her company's chatroom. Even though people struggled to replicate her strategies, Terry used his new perch to land his name in industry publications like *Stock Futures* and *Options* magazine alongside Raschke's, eventually claiming to be “an advisor to venture capitalists” who also managed “several high profile teams at hedge fund companies,” according to his 2013 personal website, though he didn't cite any. “From a Penthouse in NYC to the cities and towns of Czech Republic and Colombia,” his bio continued, “Chris has



AN INSTAGRAM POST FROM  
TERRY IN MAY 2022

helped countless numbers of people raise their personal flags of freedom and financial independence.”

Around the time Raschke’s company folded in 2014, Terry decided to start his own. Instead of focusing on a few wealthy traders spending \$1,000 a month for insights, he’d sell his monthly subscription for as little as \$145 to as many people as possible, targeting ethnic minorities and people from poor backgrounds who were desperate to make some quick cash. International Markets Live Inc., or IML, paired a more basic version of Raschke’s trading videos with an Amway-inspired MLM structure.

Terry promised newbie IML day traders spectacular returns. “We have a product that matches the highest-income earners in the arena,” he said in a video, mentioning the \$30 million in yearly bonuses Goldman Sachs traders make. IML students could learn foreign exchange trading or how to trade commodities or options. Lessons included a dozen or so prerecorded videos of Terry—at the time the company’s sole employee, along with freelance contractors—explaining market basics, like relying on price charts to predict pricing patterns. “Those kinds of charts are absurd,” says forex expert Brent Donnelly, president of trading analysis firm Spectra Markets. Even if prices followed a certain direction at one point, he says, it doesn’t mean they’ll follow that same direction again.

***“I felt like I was in an abusive relationship. I couldn’t leave, and I always thought it was my fault”***

If students wanted to make money on trades but were less interested in mastering the contours of the markets, IML offered to automatically trade for people, mirroring moves from expert traders. In 2018, when officials at the US Commodity Futures Trading Commission found out that IML was trading directly for its customers and wasn’t a registered brokerage, they demanded the company to shut down and Terry to pay \$150,000 in penalties. At the same time, the anti-MLM group Truth in Advertising published an exposé saying IML made false claims about how much members could make and promised returns that it never delivered. Terry pretended to adhere to the cease and desist by starting IM Academy as a new company—rebranding online and in his communications—while still filing most of his regulatory company documents under the original IML name.

Just as with IML, when a person joined IM, they would soon be encouraged to become an “independent business owner,” or IBO, a title that referred to customers who become salespeople. If a salesperson brought in two new members, they didn’t have to pay for their own subscription that month; if they brought in 12, they made \$600 that month, and every month those new members remained active. Monthly commissions ranged from \$150 to \$750,000, but to reach the top level, a member needed 70,000 active recruits. While that was impossible for any individual to do, an IBO could exponentially increase their count by training recruits to also become IBOs and bring in new members—the hallmark of an MLM.

Recruiting members would very quickly become a full-time job, while learning to trade became less of a focus. All of this was gamified with “ranks”—thresholds people could reach once they had a certain number of recruits in their “downline,” the people they recruited and that their recruits had recruited. Someone who brought in three people would be called a Platinum 150 and earn \$150 monthly, while a Chairman 750 would earn \$750,000 monthly for bringing in 70,000 recruits. If people dropped out of IM, a recruiter would “derank,” losing commissions from no-longer active members that month.

By 2016, Terry was struggling to find his audience. Maybe it was his jargon-filled hourlong YouTube monologues discussing price patterns and forex rates. Maybe it was a lack of charisma. Either way, he needed reinforcements, so he tapped a growing army of muscular salesmen who could sell IM products while also projecting the fantasy of youthful vitality and a millionaire’s lifestyle. It also didn’t hurt that the people he recruited had already made names for themselves, selling young customers pretty much anything from protein shakes to skincare products under MLM structures. There were Jason Brown and Alex Morton, who’d hawked energy drinks for Vemma, a company shut down for operating as a pyramid scheme that same year. Matt Rosa, then a 25-year-old former pot dealer and high school dropout turned MLM expert, made an impression

with his jacked arms, rose face tattoo and belief that God had directed him to help young people get rich.

These salesmen didn’t have any experience with the stock market or appear to show any sign they understood it. But that didn’t matter. They were hot, young and magnetic. By 2017, Rosa, Brown and Morton had become IM’s top salespeople and the company’s biggest influencers. Rosa and Brown eventually earned \$750,000 monthly. Morton, often seen on Instagram wearing his gold Rolex and his Louis Vuitton shoes, was hired as executive vice president. Brown cemented his role as IM’s vice president for field operations, eventually declaring in an IM promotional video that it was “the best company in the world.”

**M**onique Jones discovered IM through a friend’s Instagram posts. In 2018 she was just starting as a law major at the University of Birmingham in the UK when a friend confided that IM had made her rich. Jones began imagining that she, the daughter of a telecommunications technician and a construction worker, could also become an independent business owner and six-figure trader with a passive income. She was 17 at the time, not yet legally old enough to trade, but her friend still encouraged her to sign up and sell subscriptions.

Shortly after her 18th birthday, Jones started trading the \$7,500 she’d saved up as a part-time convenience store clerk. She followed IM’s directions to copy and paste trading ▶

◀ information that traders working with IM would send to her IM app. She could buy a currency at a certain exchange rate, or a stock or an option at a certain price, and sell it when it hit a higher point a few minutes later. Sometimes she made money, but more often than not the price would go the other way and she'd lose her investment. She would ask her IM leaders what she was doing wrong. They told her she was just too slow—by the time she copied and pasted the information to trade on, she'd missed the moment. Jones tried to

and surround herself with millionaires, meaning other IM members. But she was falling behind in school and had negative \$4,000 in her trading account. She tried to quit, but her mentor—the person who'd recruited her friend—convinced her that her luck would turn if she stuck around one more month. In the meantime, she needed to recruit people so she could make up for her trading losses. “I felt like I was in an abusive relationship,” she says. “I couldn't leave, and I always thought it was my fault.”



**AT IM IGNITE BUDAPEST IN FEBRUARY, MEMBERS PHOTOGRAPH DARWIN LOPEZ, A SELF-DESCRIBED**

move faster, but her bank account balance was evaporating. “I didn't understand what I was doing wrong, but every time I brought it up, I was shunned or told it was my mistake somehow,” she says.

After a few months, she'd wake up in the middle of the night to check her phone to see how her trades were doing or would leave lectures to make transactions when she received information from traders. On weekends she'd skip meals with family to join Zoom calls with her IM educators—top salespeople hired by IM to provide lessons on the platform, despite having little trading background. They said she needed to forget about her family, who were “losers,”

Despite fresh recruits like Jones, IM was stalling and might have completely disappeared had it not been for the Covid-19 pandemic. Teenagers and college students stuck at home were reading stories of overnight Bitcoin and GameStop millionaires and discovering the retail investing platform Robinhood Markets Inc., where they could try to cash in on the next meme stock. From his condo at the Waldorf Astoria in Las Vegas, Terry directed his company to pounce on those buzzwords. Soon IM was offering blockchain and cryptocurrency lessons, along with a new app called SwipeCoin, which let members see live crypto price charts and had “expert traders” to suggest trades.

Meanwhile, IM educators posted pictures of themselves on an island near Thailand and at a five-star hotel in Italy, crediting IM with their newfound wealth, though for many of them it was the recruiting that was funding their lifestyles. In March 2020, Guillaume Plas, a tall blond Frenchman—a “Chairman 50” earning \$50,000 in monthly commissions for recruiting close to 2,500 members—posted a picture of himself poolside in Greece with the caption: “These are hard times but for those who know how to work it, they’ll come out of it

that come from God. God’s trying to talk to you,” Terry often said in his thick Bronx accent during company rallies, which seemed like a cross between a rave and a revival. He also preached the “laws of attraction,” the new-age philosophy popularized in the 1980s by self-help author and friend Bob Proctor, in which people could attain wealth simply by visualizing it. The 57-year-old Terry, trying to project an image of being young and cool, started showing up at rallies in a backwards multicolored cap and tracksuit.



#### CHAIRMAN LEADER, AND TAKE IN A TALK ON BECOMING BETTER SALESPEOPLE

better off intellectually and financially. #Trader #Lifestyle #Networking #Positivevibes.” (A year later, Plas posted pictures of himself near a lake in the French Alps dropping more knowledge and hashtags: “The ego creates a wave which sinks its own sandcastle. #Gucci, #Ralph Lauren, #Success.”)

Meanwhile, Terry’s public persona took a religious turn. For years, he’d studied videos of megachurch leader Steven Furtick preaching to his congregants on how to channel God to be successful. Terry started peppering his speeches with references to the divine, crafting metaphors of himself as a Messiah and IM recruits as his God-given followers, who had a religious mission to sign people up. “I listen to messages

By 2021, IM recruits and their charismatic educators were springing up in Colombia, Japan, Mexico, Nigeria, the Philippines and around Europe. A little-known rapper named Neyon Fx had released a song, *Christopher Terry*, with the lyrics: “I make a billion a year, I’m a beast, eight figures a year. Living that chairman life, that Christopher Terry life.” A chant for IM’s CEO was sung at the half-dozen company rallies taking place every year worldwide. IM launched a podcast, several mobile apps and live trading lessons in 13 languages. As their ranks of youthful recruits grew, IM educators sent public thank-you’s to their leader, who pinned them to the top of his Instagram profile. “You have changed my life ▶

◀ in ways I can never thank you enough for,” wrote Chyna Bethley, an IM educator in Atlanta.

By then, IM—whose operations consisted of a post office box in New York and a few dozen virtual contractors developing apps and running IM’s software—was making nearly \$600 million in annual sales. Besides his Las Vegas condo, Terry now owned a \$5.5 million house in Henderson, Nevada, a Miami penthouse neighboring that of soccer star Lionel Messi, a condo in Dubai and a dozen luxury cars, including a \$3 million Bugatti and a \$3 million Pagani. He bought his girlfriend at the time a 20-carat promise ring and a Ferrari 488 and transferred to her the equivalent of \$3.4 million in Bitcoin from 2019 to 2021. He was making millions from IM subscriptions every year, according to his sworn testimony in a later case against that same girlfriend who was found guilty of extortion, and had become a regular at Wynn Las Vegas. When he wasn’t dining at its dark-oak-paneled Red 8 Asian restaurant, he’d hit up the two-Michelin-star Picasso, followed by a Cirque du Soleil show. His preferred mode of transportation: his \$4 million Gulfstream IV private jet.

**M**arco Moukhaiber, a former concert promoter turned YouTube vigilante, was in his condo in Edmonton, Alberta, in the summer of 2020 when he decided IM was his next target. He’d built a 93,000-person YouTube following with the release of video exposés of MLMs including health insurance company Primerica Inc. and telecom company ACN, and he’d already received cease-and-desist letters and threats of legal action from a few. Now his followers were directing him to IM. After weeks of research, Moukhaiber pretended to be interested in the platform and secretly recorded a recruiter telling him what IM had to offer.

Six months later, on Feb. 8, 2021, Moukhaiber released a 40-minute YouTube video, exposing Terry’s MLM history and the unsubstantiated claims IM consistently made about young adults getting rich from it. The video described the hundreds of thousands of young people who’d been left penniless and humiliated. Within a few days, it had clocked 590,000 views.

Terry sued Moukhaiber for defamation. The YouTuber couldn’t afford a drawn-out legal battle, so he settled, agreeing not to make any more videos about IM. But the damage to the company was done. Videos were circulating by former IM subscribers denouncing the harm the company had inflicted on teenagers around the world. Jones posted a TikTok video detailing her IM experience with the hashtag “#mlmscam” that racked up 58,000 views within days. Videos also circulated from people claiming to be independent experts who said the company was as good as it said it was. A screenshot of a *Forbes* story made the rounds in the summer of 2021, portraying Terry as helping “traveling entrepreneurs make money on the go.” The *Forbes* piece, however, appeared to be a fake—a screenshot of an article that didn’t exist online.

With his company under scrutiny, Terry shifted the blame to individual salespeople. IM didn’t sign up any of its recruiters,

they acted on their own, Brown claimed in court testimony as part of a 2020 lawsuit against a former IM member alleging trade secret theft. The recruiters even built their own compensation plans and sold memberships independently of IM’s own directives. Years earlier Terry had already tried to dispel concerns about his company’s structure. “We have the best company in the world, because everyone is linked but also acting as their own independent bosses,” Terry said in a 2017 YouTube video. “I don’t have a pyramid structure. It’s more like a matrix. We’re all intertwined, and everybody is working together synergistically.”

Around the same time, the Federal Trade Commission began looking into IM. From the start of the pandemic, authorities around the world had received complaints that the company—along with other online trading MLMs, such as Kuvera, Melius and Pro Network Vision—was preying on young people. The Commodity Futures Trading Commission received 1,099 complaints about IM in 2020 alone, from people claiming that they’d lost their life savings and that the company had ruined their lives. According to IM’s own 2021 income disclosure, more than 94% of people who became IBOs made less in a year than what they spent on subscriptions. The top 0.05% of earners, including Rosa and Brown, averaged \$1.4 million that year.

Thousands of people also complained that IM was brainwashing and bullying members—and as a result they stayed active even when they’d lost everything. One British woman told authorities she ended up in the hospital after breaking down under the stress of trying to recruit members. A computer science student in Chicago named Mark Mayes sued IM after losing \$38,000 while following IM’s trading advice, money he’d initially planned to spend on starting a business. “I always wanted to be a big Wall Street guy, but this company ruined me,” says Mayes, who’s in mediation with IM. A mother in Madrid says her teenage son left home when she stopped paying his IM subscription. After being recruited by salesmen who showed him fancy watches and promised he’d get rich, he left for four months and dropped out of school. “He’s only back home because I started paying for IM again,” she says. “I worry that if I stop paying or say anything bad about IM, he’ll leave again.” She asked to remain anonymous to avoid further alienating her son.

In early 2021, the FTC contacted Terry and told him it was planning to investigate the company for deceptive acts and unfair methods of competition, a broad term that could encompass anything from false advertising to Ponzi schemes. Civil cases against MLMs are notoriously hard to prove, because they operate in a regulatory gray area. While pyramid schemes are illegal, MLMs aren’t, and the line between the two is often hard to discern. A company is deemed a pyramid scheme if it makes money from recruiting, not from sales. But with IM, as with many MLMs, sales and recruiting are closely linked, since every recruit also brings in a new subscription. That’s how the biggest MLMs in the world, including Amway and Herbalife Ltd., have repeatedly fought

off pyramid accusations. Robert Fitzpatrick, founder of the website Pyramid Scheme Alert, says regulation in the US and globally is essentially nonexistent. “Bankrupt customers are in fact powerless to take on these giants,” he says. Financial education is one of the MLM industry’s fastest-growing categories, according to the Direct Selling Association, racking up close to \$8 billion globally in sales in 2022.

By the time the regulators approached Terry in early 2021, he’d become accustomed to fighting off authorities and suing anyone in his path. Interviews with close friends and former partners reveal how aggressive Terry could get. From 2018 to 2022, he filed 19 lawsuits against 31 competitors. There were suits against former IM salespeople the company claimed had violated its noncompete clauses and against people who trashed IM online. “Loyalty means a lot to him, and IM members are like family,” says Dooly, the former MLM consultant for IM and friend of Terry’s. “If he finds out they venture out on their own, he’s going to do everything he can to stop them.”

Terry would often seek \$75,000 to \$1 million in damages for breach of contract or theft of trade secrets. Less affluent competitors would settle out of court and promise never to speak ill of IM again. When former IM contractor Ruben Dante complained that he wasn’t getting paid for his work developing a tool for the online trading platform and said that he would

following spring, Luxembourg police raided an IM conference in Kirchberg, arrested several leaders and launched an investigation into criminal practices. (All of these investigations are ongoing.) Still, the arrest was focused on local recruiters, not Terry. He didn’t attend the September 2023 rally in Zagreb, Croatia, telling his fans he was working on a bigger project at home. For now, he was going to stay out of Europe.

**T**his February, at the Papp László Sportaréna on the outskirts of Budapest, some 3,500 people gathered for another IM rally. Attendance was less than a quarter of the Rotterdam event’s a year before, and Terry was nowhere to be seen. (Neither was Rechards, who quit IM a few months after the Rotterdam rally, a result of losing thousands of dollars in savings.) The three-day affair included a staged marriage proposal, the unveiling of an IM-branded energy drink and a new batch of IM recruits, some traveling from as far as Japan and Mexico. Speeches from leaders managed to tiptoe around pyramid scheme regulatory traps, avoiding mentions of any dollar figures. One keynote speaker, a self-described mindset mentor, slipped up when she said she was surrounded by millionaires who’d made money from IM. “I forgot we’re not supposed to say the ‘m’ word anymore,” she teased the crowd.

***“We’re gonna get shut down by the feds, I promise you. Come to me if you have any questions. I love you, we’re family”***

blow the whistle to the Securities and Exchange Commission about IM’s fake income claims, Dante says he was reminded that Terry used to work for the mob and was advised against it. “Terry always brings up his mob background,” says Dante.

Still, Terry was becoming anxious. He was in touch with the Nevada-based law firm Preston Sterling and trying to see what the FTC could dig up. Most nights he’d work until 4 a.m., spending hours rummaging through people’s Instagram posts looking for IM salespeople claiming they’d made millions with IM, which could get him in trouble. In April 2021 he posted a video on Instagram urging his top salespeople not to make income claims online. “We’re gonna get shut down by the feds, I promise you,” a sweaty, red-faced Terry said. “Come to me if you have any questions. I love you, we’re family.” (In a strange attempt to reinforce that family vibe, he also publicly pretended to be married to his chief financial officer—something he finally made official in mid-2022 “for business purposes,” according to his sworn testimony in that same extortion case against his ex-girlfriend.)

His luck was also starting to run out in Europe. Worried parents in Spain rallied against IM’s expansion, and 42,500 people signed a petition to stop it from operating in the country. As a result, Spanish police opened an investigation and in March 2022 arrested eight local recruiters for alleged criminal practices. Eight months later, an IM rally at the Coca-Cola Arena in Dubai was canceled after Spanish parents pressured the city to deny IM access to the space. The

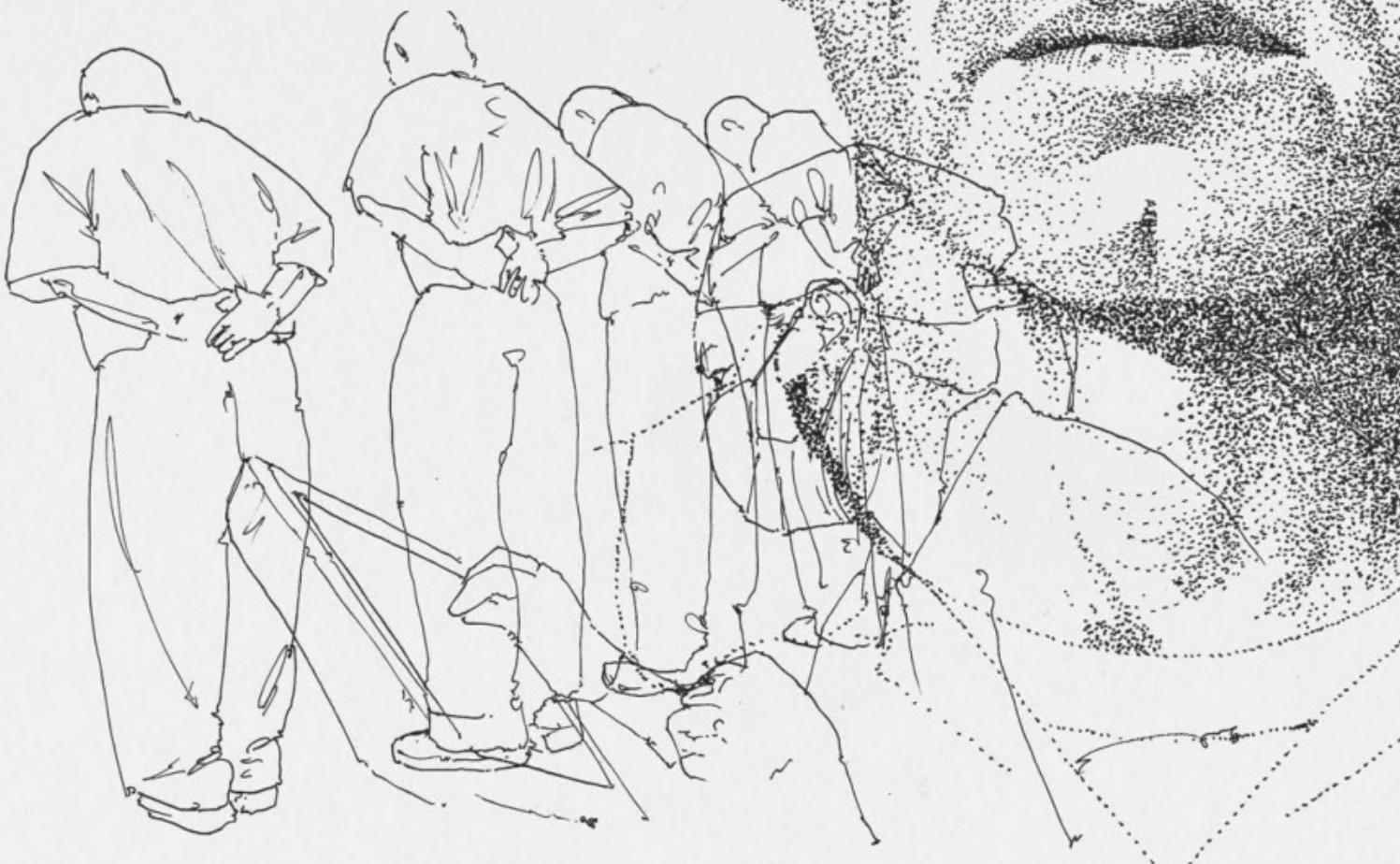
But toning down IM’s claims to avoid a fine as the FTC investigation continues has come at a cost. The company is promoting a three-day trip to Cancun at the end of May, along with a conference in Monterey, California, in November. But these days the young and hungry have been finding other day trading gurus on TikTok. Many people indoctrinated in IM’s ways have since moved on to build their own MLM offerings, despite Terry’s lawsuits. Morton, Rosa and Brown—none of whom have faced legal action for their work with IM—continue to broadcast their high-rolling lifestyles on Instagram and YouTube and promote IM, jetting between Dubai yachts and five-star hotels in Bali. Terry is still CEO but is keeping a lower profile, perhaps to avoid sanctions, perhaps to start other ventures. His personal website has been taken down, his last Instagram post is from August 2023 and his name isn’t mentioned on IM’s website.

At the Budapest arena, new recruits still saw nothing but possibility. Dino Mieviso, a 23-year-old assembly-line worker at a Volvo factory in Aals, Belgium, joined last October, persuaded by his brother, who’s part of a 170-member IM group in their hometown. While he says he initially just wanted to learn about the stock market to earn some extra income for his family, the rally made him see the value in bringing other young people along with him. “With the income I get from recruiting others, I’ll be able to trade using that residual income rather than my earnings from Volvo,” he says. “Soon we’ll be rich.” **E** — *With Chris Dolmetsch and Macarena Munoz Montijano*

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A LANDMARK LAWSUIT ALLEGES  
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BUSINESS IS JUST TOO GOOD

BY JOSH EIDELSON  
ILLUSTRATION BY  
TEJUMOLA BUTLER ADENUGA





Hello  
my name is

#####

# LAKIERA

Walker was lying in her bunk bed a year ago, sick with flu and too weak to stand, when a prison supervisor came in to chastise her for missing the afternoon van to work. Walker's job was on an assembly line at Southeastern Meats Inc., a supermarket supplier. The 12-hour shifts on her feet in 30-some-degree cold made her body ache and turned her fingers a deep red. Southeastern Meats paid about \$13 an hour for Walker's work packaging its frozen peas and corn, but the state pocketed most of that, including two-fifths for the Alabama Department of Corrections to "assist in defraying the cost" of her incarceration.

That afternoon, a fellow inmate would need to carry Walker to a medical ward. But when the ADOC officer found her in her room, she says, her health wasn't his concern.

"I am so sick," she told him.

"Get up and go make us our 40%," he replied.

"It made me feel," Walker recalls, "like he was a pimp."

Now Walker, a 37-year-old recently paroled after 15 years in prison, has teamed up with nine still-incarcerated fellow plaintiffs, as well as some prominent labor lawyers and unions, to file a class action. They're suing Alabama Governor Kay Ivey, the state's attorney general, the prisons commissioner, parole board leaders, and a slew of cities, along with companies they claim rely on forced labor, including Hyundai supplier Ju-Young, beer distributor Bama Budweiser of Montgomery, and franchisees of KFC, McDonald's, and Wendy's. The workers suing are all Black. Their class action accuses the defendants of human trafficking, racketeering and violating the Ku Klux Klan Act, which targets conspiracies to deprive people of their constitutional rights. They argue that the government officials colluded to keep Black people imprisoned and available as cheap labor and that the companies conspired to profit from the coerced work. The

suit, filed right before Christmas, says it seeks "to abolish a modern-day form of slavery."

There are 800,000 incarcerated workers in the US, and they do roughly \$10 billion worth of work a year, more than \$2 billion of it for clients outside the prison system, according to a 2022 study by the American Civil Liberties Union and the University of Chicago. (The lawsuit estimates that the state of Alabama makes over \$450 million off of prisoners' labor.) "We wanted to bring an indictment against the entire system," says one of the plaintiffs, Robert Earl Council, who goes by the moniker Kinetik Justice. That includes the companies they say profit from making inmates build auto parts, haul beer and ring up Big Macs, thanks to a system that ensures people deemed safe enough to work remain incarcerated and working on the cheap.

Prison labor touches almost every corner of American life. Prisoners farm on former slave plantations in Louisiana and upholster high school auditorium furniture in Massachusetts. They produce Russell Stover chocolates in Kansas and handle DMV customer service calls in New York. In 2014 lawyers for Kamala Harris, then California's attorney general, argued against easing the state's parole process because it was so dependent on captive firefighters. During the worst of the Covid-19 pandemic, prisoners washed hospital laundry, made masks and dug mass graves. These days, they're also building more prisons.

Utah's prison labor agency alone has provided goods or services to

hundreds of private clients over the past decade, including the Boy Scouts of America, Cold Stone Creamery, the Nature Conservancy, Smithfield Foods and the Sundance Film Festival, according to documents obtained via a public records request. Earlier this year, an Associated Press investigation found prison labor in the supply chains of dozens of prominent companies including Cargill, Coca-Cola, Kroger, Target and Walmart.

The US government's Federal Prison Industries program, in a brochure advertising inmate-produced dorm furniture, swim trunks and data entry services, tells businesses it represents "homeshoring" and offers a "Made in the USA" marketing advantage" and an alternative to "unstable labor." The brochure notes that it was printed on recycled paper, with ink made of soy and vegetables, at a Virginia prison. A 2010 inspector general report found that FPI management and prison officials had endangered electronic waste workers and perpetrated misconduct, including "disabling a portion of a factory's fire alarm system to prevent alarms that were being caused by excessive dust from glass breaking operations, and disregarding a Safety Manager's directive to halt work." (The acting inspector general later testified that by the time the report came out, FPI's e-waste operations were operating safely, "with limited exceptions.")

Inmates doing work for their own prisons are sometimes paid nothing at all. Those engaged by private companies can get as little as \$2 an hour, after the prison system takes

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its cut. Prisoners are excluded from key employment law protections, including the 13th Amendment to the US Constitution, which otherwise prohibits slavery and involuntary servitude.

Prison labor is “uniquely coercive,” says Jennifer Turner, an ACLU researcher and lead author of its report with UChicago. “Incarcerated workers are effectively barred from complaining.” When several incarcerated sanitation workers at a North Carolina poultry plant suffered chemical burns, the only treatment they were offered by a supervisor was diaper rash cream, according to an investigation by the Southern Poverty Law Center. When an incarcerated lumber worker in Colorado was struck in the head by a saw that punctured her cranium, a shift commander ordered her back to the prison rather than the hospital, according to a 2017 lawsuit.

Most defendants in the Alabama case have filed motions to dismiss it, sometimes suggesting that the workers are treated generously already or that convicts deserve forced labor. Bama Budweiser of Montgomery Inc. stresses in its motion that the case was brought by “two murderers, an attempted murderer, multiple violent felons, robbers, burglars and drug dealers. And they come into this Court complaining about having to work for a beer distributor.” What’s actually unconstitutional, the company argues, is the federal law against human trafficking, because it usurps Alabama’s authority to manage its own inmates, as well as the KKK Act, which it calls a “freakish perversion of federalism” that wrongly imposes a “Good Samaritan duty” on mere bystanders. Bama Budweiser declined to comment to *Bloomberg Businessweek*. Most of the other companies named in the story did the same or didn’t respond to requests for comment.

Smithfield Foods Inc. says it’s not currently a Utah Correctional Industries customer. Cargill Inc. and Coca-Cola Co. both say they’re working with suppliers to prevent forced labor. Hyundai Motor Co. says it requires suppliers to “strictly adhere to the law.”

In their own filing, Alabama officials argue that the state’s policies uphold the law and that “Plaintiffs’ allegations regarding inmate labor are completely unextraordinary.” The trafficking claims, they say, “when stripped of their legal conclusions, allege nothing more than unactionable disagreement” with how various officials advocate for public safety, exercise discretion over parole or use “inmate labor expressly authorized by Alabama law.” Their filing notes that the state legislature has specifically directed the prison system to provide “employment for the vocational training and rehabilitation of the prisoners” of the state. The officials didn’t respond to requests for comment.

The Alabama plaintiffs aren’t asking a judge to end all inmate labor, but rather to ensure it isn’t forced. The lawsuit contends that the terror built into life in an egregiously unsafe prison—“constant danger of being murdered, stabbed or raped”—makes its inmates’ labor inherently coercive. The suit alleges that the state mandates that prisoners work, and that those who refuse can have their parole eligibility pushed back years. The state also punishes people who refuse work by cutting off family visits or imposing solitary confinement, the suit says.

Chris Sullivan, an incarcerated worker who was recently paroled, says he resented seeing the state profit from prison labor, but he has only gratitude toward the company he worked for. “Prison’s prison—it’s supposed to be hard,” he says. Leaving prison each day to work felt “like going home.”

Alabama grants parole to Black inmates at only half the already-low rate of their White counterparts, according to the suit. The parole board often tells rejects, including several of the plaintiffs, that releasing them permanently would show “disrespect for the law.”

On a recent lunch break at one company, incarcerated workers mingle in the parking lot with their “free world” counterparts. “There’s no reason they should be getting paid less,” one of the

free worlders says. “They’re doing the same work.”

A 23-year-old prisoner sits sipping a Sprite that one of his unimprisoned co-workers had brought him because he isn’t allowed off the premises. “Even though I’m in society, I feel like I’m not a part of society,” he says. Spotting the big white bus that carries him back to prison at the end of each shift and watching co-workers get in their own cars to go home, “you just think, ‘Man, I wish, I wish I could,’” says the man, who requested anonymity to avoid endangering his shot at parole. “I’m tired of seeing this bus.”

The company’s factory is located right off Plantation Way.

## THE US

never really quit forced labor. The 13th Amendment, ratified in 1865 in the aftermath of the Civil War, prohibited slavery and involuntary servitude “except as a punishment for a crime.” Over the following decades, many states established “Black codes,” like a prohibition on being homeless or unemployed, that forced many recently liberated Black Americans back into cheap or free labor as sharecroppers or prisoners. In the North as well as the South, inmates sometimes worked 16-hour days. Some died. Alabama’s prison population quickly became overwhelmingly Black, and the state government came to make most of its money from “convict leasing”—renting prisoners out to private companies for work. ADOC’s official history of this period stresses “a few bright spots” for inmates, such as being permitted “to earn extra money for their families by mining extra coal beyond their set quotas” and to watch “harmless vaudeville.”

The 20th century brought some reforms, including the ostensible abolition of convict leasing, but the system remains brutal. According to the ACLU-UChicago report, prisoners have been burned removing asbestos from ▶

◀ a pipe without appropriate gloves in New York, contracted hepatitis C fixing a sewer line after a sewage spill in Michigan and died of hyperthermia after wearing a 75-pound “fight suit” to train attack dogs in Texas. Courts have ruled that inmates have “no enforceable right to be paid for their work”; that Minnesota wasn’t liable when saw blades severed one’s fingers on the job; and that another’s rights weren’t violated when he asked for a face mask to protect him in a room engulfed with mercury fumes and was told by a team leader that he was “shit out of luck.” In the mid-1990s, Oregon voters overwhelmingly passed a ballot measure to require that inmates work full time without pay, and President Bill Clinton signed a law making it harder for inmates to sue over their conditions or set precedents for prisoner treatment if they won.

There is some pressure to change. Since 2020 the federal government has been suing the state of Alabama over prison conditions, calling the state “deliberately indifferent” and accusing it of violating the Constitution by failing to protect inmates from violence, sexual abuse and frequent excessive force. But Alabama has rejected the government’s allegations and, last fall, won a ruling from a federal judge allowing the state to inspect federal prisons as a point of comparison in its defense.

In the meantime, the plaintiffs allege that Governor Ivey has been making it harder for inmates to get permanently released from those

dangerous facilities. In 2018 a recently paroled man named Jimmy Spencer was arrested for murdering two senior citizens and a 7-year-old, fueling a swift backlash against what Ivey argued was an overly lenient parole board. Since then, Ivey has signed a law imposing stricter parole restrictions and expanding her authority over the system; replaced the board’s leadership; and issued an executive order under which prisoners who “encourage” work stoppages could have their parole eligibility set back three years.

Ivey’s new parole board director, Charles Graddick, announced that on his watch, the members “know now that their job isn’t to create space” in the prisons. By 2022 the rate of parole grants plunged from a slight majority of those who had hearings to 12.4% of White inmates considered and 6% of Black ones.

In fiscal 2021 and 2022 only 10% of parole candidates rated “low” risk under the agency’s official guidelines were released.

The state’s attitude is “I’m going to keep as many cattle as I can,” says plaintiff Arthur Ptomey. “You’re not going to get rid of your moneymaker.”

Ptomey, who’s been incarcerated for robbery and burglary since George W. Bush was president, did a stint a few years ago cooking chicken at a KFC, where fellow inmates worked the cash register. He says the job netted him a few dollars an hour after deductions for the state, and one of the franchise’s owners insisted he also load vans for her family’s catering company and make extra chicken strips for that side business for free. The day he told her that he wouldn’t be doing the unpaid

catering work anymore, he worked an otherwise normal shift before learning from a prison supervisor that he’d been fired. When Ptomey’s mother, Carolyn Cox, showed up to advocate for him at a parole hearing in 2022, the state’s attorney cited this firing as evidence that her son “wouldn’t follow the rules.” KFC didn’t respond to requests for comment.

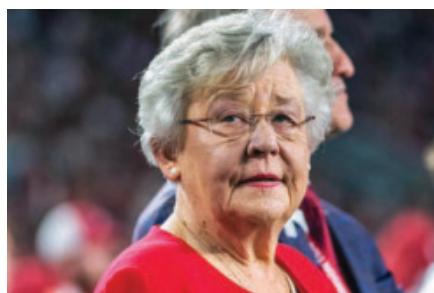
Ptomey shares his story over Cajun chicken and sausage Alfredo at a restaurant an hour away from his prison. It’s one of the two weekends each month when the state releases him for 48 hours to visit his mom—

“YOU NEED  
TO LEARN  
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BE MORE  
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OR WE’RE  
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an arrangement he considers both a welcome reprieve and an admission that he should have been paroled by now. “Only time I’m in the camp is to go to sleep,” says Ptomey, who leaves prison each weekday at 4:30 a.m. to work on an assembly line at the manufacturer Progressive Finishes Inc. and returns to prison around 6 p.m.

“People don’t even know they’re around a person in prison,” Ptomey muses while waiting to be seated at the restaurant, sitting on a bench across from a family of five. “They say when you go up for parole that it’d be a threat to society to let me go, it’d be disrespectful to the law enforcement to let me go. But here I am.” He wears a plaid button-down and a Redskins hat. Once seated, after ordering a lemonade, he asks, “You think the waitress knows I’m in prison?”

Releasing him for weekends is “like teasing a baby with some juice—you let



IVEY



PTOMEY

them taste a little, you take it back,” Ptomey says. “Now he wants more, but you don’t want to give it to him.” Still, even with the state pocketing much of his pay, he likes his current job more than some prior ones, like the one where the incarcerated workers had to wear different color helmets than the others. (There’s no law requiring companies to indicate which employees are incarcerated.)

On the assembly line, Ptomey says, “they treat me like a regular employee.”

The day after the conversation over chicken and sausage, his mom drops him off back at the prison.

## PLAINTIFF

Alimireo English’s first prison job was as a janitor, which included cleaning the facility’s semblance of a shower. In lieu of a showerhead, there was a pipe, English says, that prisoners

used “like a bear who just goes to a waterfall” to rinse. Except along with water, the pipe would sometimes spew sewage. English’s job involved standing on a bucket to attack the mold and getting on his hands and knees to take on feces, semen and vomit—sometimes including his own, when he just couldn’t take it anymore. Most days, prison supervisors refused to give him gloves, which they suggested guys were misusing as condoms. When he asked for better safety gear, he recalls, his supervisor replied, “You need to learn how to be more submissive, or we’re going to teach you how to be submissive.”

Things eventually got better, kind of. English got promoted to be the overseer of a lower-security “faith dorm,” responsible for security, programming, running counseling sessions and ensuring other inmates worked. Sometimes the job meant having knives pulled on him or bandaging slit wrists. “I got paid nothing, not even a soda pop,” English says. And making other men work left him feeling like Samuel L. Jackson’s character in *Django Unchained*, the head house slave. Everybody in the prison system gets “contaminated,” he says. “You’re trying to be the best of an evil.”

Alabama uses levers large and small to force prisoners to submit to work, the plaintiffs allege in their complaint. Inmates get price-gouged in prison for items as basic as deodorant and warm clothing, making them more desperate to get paid. Even doctor visits cost money. Many prisoners are left with little or nothing to support their loved ones on the outside. “It makes me feel less than a man,” says plaintiff Lanair Pritchett, who made a few dollars an hour processing wood for a lumber company.

Fellow plaintiff Lee Moore’s extended family members take turns sending cash to cover his expenses, such as work shoes and soap, though he feels bad about burdening them. Moore gets nothing other than the occasional hot dog from a supervisor for the work he does on the prison’s own premises, including electrical ▶

◀ tasks, yardwork and rehabbing the warden's home. But refusing to do such work, the plaintiffs allege, could get inmates transferred to one of the "ultra-violent" housing units that the US Department of Justice is suing over, as well as dash any hopes of parole. "I have friends that got killed," Moore says.

After plaintiff Toni Cartwright was denied parole despite already working unsupervised six days a week at a McDonald's, she "struggled to find hope to move forward" and "asked for a brief break from work requirements so that she can attend to her mental health needs," she alleges in the complaint. Authorities told her that refusing work would stick her with a disciplinary infraction, putting parole even further out of reach. McDonald's didn't respond to requests for comment.

Walker, the recent parolee, says such leverage was used against her when a supervisor on a roadwork job for a local county pressured her repeatedly for oral sex. She said no, so he pulled out his cellphone in the parking lot, called up prison authorities and told them: "She doesn't want to work."

Workers outside prison have a federally protected right to organize strikes, but inmates who encourage others not to work can be severely punished. Robert Earl Council, who along with suing the state has been a leader of a network called the Free Alabama Movement, says he's spent several years of the past decade in solitary confinement as punishment for trying to organize work stoppages. (ADOC has said it's just "restrictive housing.")

The complaint alleges that Council and another protest leader have been subjected to "physical beatings, strip searches, exposure to chemical agents, harassment and psychological abuse" and that prison officers caused him brain injury and loss of vision in an eye. He's been put in cells that lack lights or are infested with rats or spiders, and he's been prevented from seeing his mom or daughter since 2015. The state also responded to one

of his work stoppages by reducing the amount of food it was giving striking inmates, the complaint says.

In a disciplinary report, a prison sergeant says he was instructed to move Council to "restrictive housing" last October as punishment for "unauthorized participation in social networking," and he pepper-sprayed him in the "facial area" after he "refused all orders to be handcuffed." (The sergeant says Council then elbowed him while being cuffed; Council says he "remained non-violent.") A warden later testified that he'd sent in the sergeant because the Corrections Department saw a TikTok video featuring Council sharing a message with other inmates, raising suspicions he had a contraband cellphone. The video was actually years old, Council says. The message, in which he says "f--- the ADOC because they don't give a f--- about me, they don't give a f--- about you" and urges prisoners to "stand up and man up," was meant to lay groundwork for a work stoppage.

"ADOC officials repeatedly caution incarcerated laborers that a refusal to work will be met with the same punishment meted out to Mr. Council," the complaint alleges. "It's known as the 'Robert Earl Rule.'"

## ON MARCH 15

lawyers gathered in Montgomery, Alabama, to argue the plaintiffs' plea for an injunction that would roll back some of the Ivey-era parole changes while the case proceeds. Reps from some of the businesses and governments also named in the lawsuit filed into the courtroom's cheap seats to watch; one joked to another about not being sure which side of the aisle they were supposed to sit on, "like a wedding." The hallway outside was lined with portraits of past federal judges, whose accompanying bios included highlights such as an "illustrious military career" in the Confederate Army.

The federal judge hearing the case was appointed by former President

Donald Trump. Corey Maze was genially skeptical, especially toward the plaintiffs. Although their stats showed a 2-to-1 White-Black disparity, he said, it was hard to know how much that signified given that so few people were paroled. "Numbers are tricky things," he said.

Gary Willford Jr., the assistant attorney general representing the chair of the parole board, said her decisions were "racially blind." He gestured to the empty space beside him and said it felt like the late Justice Antonin Scalia was there as co-counsel in the case, because a quote from one of his opinions, saying prisoners have no right to expect parole boards not to get tougher over time, was so fitting.

Near the hearing's close, Willford leaned on an extreme example, noting that the notorious Jimmy Spencer was designated "moderate risk" and released under the old parole regime. What the plaintiffs want could "potentially set 800 Jimmy O'Neal Spencers loose a month," he said, ruefully shaking his head. As at the parole hearings, none of the plaintiffs were there in court. Those assembled were almost all White.

Progress won't come easy for the lawsuit's plaintiffs. Appeals of Judge Maze's rulings would be heard by the 11th Circuit, one of the nation's most conservative, and perhaps the Trumpified US Supreme Court. And scholars disagree about whether the federal Trafficking Victims Protection Act even applies to inmates excluded from 13th Amendment protections.

The invocation of Spencer and Scalia underscored the plaintiffs' tough road ahead. Horrifying acts like Spencer's shock the conscience in ways that, for many Americans, nothing that happens inside a prison ever will. Lots of people understandably have an easier time picturing themselves or their loved ones victimized by a crime than locked up for one. "Being denied compassion is one of the risks that the offender knowingly assumes," Scalia wrote in the passage Willford read the court.

But experts say the lawsuit makes a compelling case, one that could also get unexpected traction in the court of public opinion. In 2018, US appeals judges upheld class certification in an ongoing Colorado lawsuit brought by immigrant detainees alleging a private prison company violated the TVPA by using punishments such as solitary confinement to coerce them to do janitorial work. In 2021 a Trump-appointed judge in Ohio rejected a staffing agency's motion to dismiss a class action accusing it of trafficking Filipino nurses by threatening them with five-figure penalties if they tried to quit.

The legal definition of trafficking is much broader than many Americans imagine, and it includes efforts to coerce people to do things by threatening them with serious harm or abuse of the legal process. "You don't need a white van snatching a White girl from the Target parking lot," says Bridgette Carr, a law professor at the University of Michigan. "If you have someone with power over someone with vulnerability, and they use that power to financially benefit themselves, you have a situation ripe for trafficking."

**“WE ARE ALL  
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The Alabama allegations check all the boxes, says Carr, who directs an anti-trafficking litigation program.

Even without prevailing in court, the case could make companies think twice about the legal and reputational risks of relying on prison labor, and eventually help drag the judiciary along. "The story of exploited humans has not caught the public

narrative in the same way as the story of animals being mistreated in our society," Carr says. "We are all kind of in cahoots with traffickers, in that we quickly make humanity invisible in our supply chains."

Some attitudes are already shifting. In 2022 ballot measures banning slavery as a punishment for crimes passed in four states, including Alabama as well as Oregon. Lawmakers in states including California have been pushing to put similar measures on the ballot this November.

In the meantime, Alabama is building a new billion-dollar prison. The incarcerated plaintiffs still hold out hope for parole in the coming years, even as some worry that joining the lawsuit will drive down their chances even more. "They might try to punish you, but you know, I'm already being punished," Moore says.

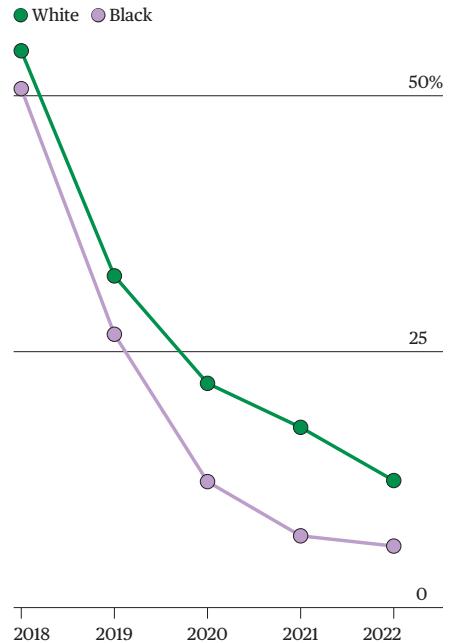
Joining the suit was an easy choice for Walker, who'd been paroled several months prior. She beat the odds thanks to a peculiar twist: The two women she was convicted of assaulting and trying to murder had a change of heart, reached out to her family

and testified on her behalf before the parole board, saying they'd come to believe she hadn't shown up intending to harm them the day of their altercation. (Walker says the incident, which she regrets, was a misunderstanding in which she was trying to avert domestic violence.)

The attorney general's office still opposed her release. At her hearing,

## PAROLE RATES IN ALABAMA

Among incarcerated people who've had parole hearings



DATA: PLAINTIFFS' ANALYSIS OF ALABAMA BUREAU OF PARDONS AND PAROLES AND ALABAMA DEPARTMENT OF CORRECTIONS RECORDS. FIGURES ARE FOR FISCAL YEARS, EXCEPT 2018, WHICH ARE FOR THE FIRST NINE MONTHS OF THE CALENDAR YEAR

one of its "victim service officers" read off a list of Walker's infractions in prison, including the one she says was actually for resisting sexual coercion. The parole board's three members voted 2 to 1 in her favor.

These days Walker lives outside Dallas, where she's raising the 16-year-old son she gave birth to in prison. They got a dog. She still steers clear of Southeastern Meats products—she says the sight of them turns her stomach. She never got her last paycheck from working at a Burger King during her final days in prison, she says, because the franchisee sent the money to the prison, which kept it.

"It still amazes me that I'm here, that I'm able to just do what I want," Walker says in March, sitting by the pool at her apartment complex in a hoodie reading "BLESSED" while her son works out at the gym. She'd just stayed up all night the day she turned 37, marveling at being home. Being asked to join the lawsuit was a godsend. "I was wanting to do something for the girls that are still left behind," she says. "Somebody has to." **E**

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FOR ALL IMMUNIZATION FOR ALL IMMUNIZATION

## HUMANLY POSSIBLE



Lasting Joy Brewery in  
Tivoli, New York

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# The Napa Valley

A farm-focused ale trail  
forms in upstate New York

*By Tony Rehagen*

*Photographs by Ike Edeani*

# Of Beer

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May 20, 2024

Edited by  
Chris Rovzar

Businessweek.com

The sun is just beginning to set over the Hudson River, its waters about 2 miles west of my tasting room perch, when I momentarily forget where I am. The waning light streams through the two-story glass walls and refracts off blond laminated timber beams above. Outside, I see farmland and families, children scampering about the vast landscape. The server walks me through tasting notes for the precious liquids—light yellow to dark burgundy—in the stemless wine glasses arrayed on the polished marble bar. It's not until I take a sip and taste not a riesling but a crisp Czech Pilsner that I'm reminded I'm not at a winery.

I silently toast the owners of Lasting Joy Brewery and say, "Job well done." The brewer, which opened the current facility in 2022 in Tivoli, New York, is part of an area vanguard

creating a Napa Valley in the Hudson Valley, but for beer. Out are the dark, industrial and usually male-dominated spaces typical of brewpub culture, where drinkers swagger through ever-lofty IBUs (international bitterness units—they're a thing). In are modern, warm, whitewashed rooms, walkable gardens and welcoming tastings. There are even bees.

"Wineries are very hospitality-first. It's not just the product they're putting in front of you," says Lasting Joy co-founder Emily Wenner. "You have to offer the experience." As the once-booming craft industry starts to stagnate, in part because of saturation, merely having good beer is no longer enough.

To Wenner that means immersing guests in terroir like any good wine country would. From my stool on this late April Saturday, the windows frame hills blossoming with cherry, apple and peach orchards. I also see rows of corn and barley, all future ingredients in a grain-to-glass drinking session.

Others echo this approach on an emerging, if still unofficial, ale trail. The state-supported Hudson Valley Tourism agency, which covers the 10-county, 150-mile stretch from New York City to Albany, mentions some 90 breweries in a print brochure, but only two per county online. So area entrepreneurs are doing their best to make it easier to connect the dots.

ReginaRose Lott, owner of the Brew Bus, has shuttled people among the region's various distilleries, wineries and cideries since 2018 and says multistop beer tour requests now outweigh others, particularly to those outfits that emphasize atmosphere. "The wineries have been in place for a while, and whether traditional or newer with a hipster vibe, they have these beautiful and romantic locations," Lott says. "Breweries have managed to do the same thing. They've created these gorgeous venues, and others have taken beautiful old buildings and given them life. It's a big draw."

The tipping point came in 2013, according to Lott, when the state passed legislation allowing brewers to serve consumers directly if their beers were largely local by 2019: At least 60% of all hops and other ingredients would need to



come from New York. This official "farm brewery" designation threw beermakers an economic lifeline, but it also gave these establishments in the agri-rich Hudson Valley an opportunity to showcase the region, both individually and collectively.

Arrowood Farms, in Ulster County across the river from Lasting Joy, takes the designation to its earthy, authentic extreme. It not only grows an acre of Cascade, Chinook and centennial hop vines in rows of 18-foot-tall trellises like some sort of giant's vineyard, but it also strives for 100% New York-grown ingredients, much of which are harvested on the 48 acres around its rustic taproom and the surrounding counties.

Those hops join cherries from its orchards, gooseberries and currants from its garden, honey from its beehives and even foraged mushrooms from its wooded land in seasonal, wild-fermented offerings. Arrowood says its on-site spring has a mineral profile reminiscent of water in the Czech Republic's famous beer-making Plzeň region, and I believe it when tasting its Spring-Fed kölsch.

"We love connecting people with the natural world that enables their beer to exist," says head brewer Matt Schulze, noting on-premise sales have doubled since 2018. "That's the best way to weave those things into our story."

Guests are invited to tour the farm and see and touch the roots of their products, which on my visit entails a tart Porch Beer: Grape, a wild-fermented ale made with Concord grapes and aged in an oak foeder (wooden vat), as well as the light and bubbly farmhouse table beer, aged in white wine barrels and then bottle-conditioned with a neighbor's maple syrup.

You don't make ambitious beers such as these without a sense of adventure, which translates into fun for curious drinkers. Brewers might be using sophisticated techniques, yes, but taproom education doesn't come across as inaccessible. And it's that shared openness that's helped create an ad hoc





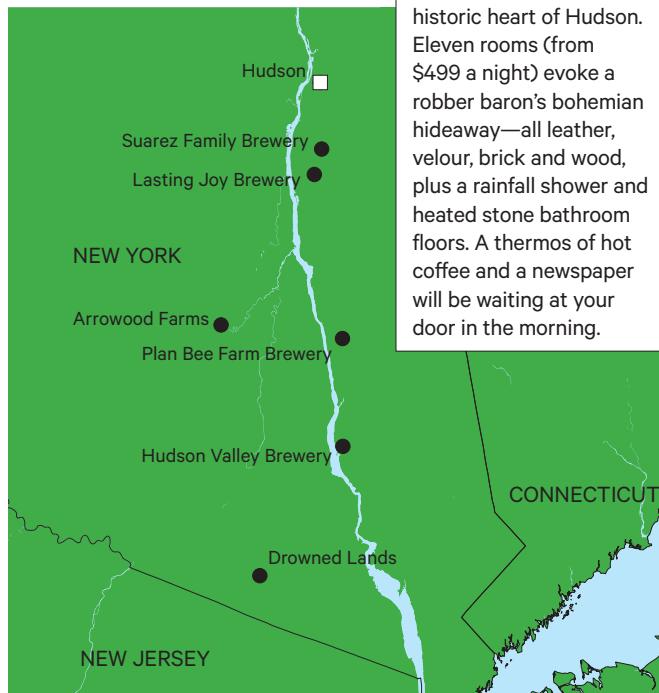
Clockwise from left: Hudson Valley Brewery's outdoor beer garden; ferments sampling during the Arrowood Farms tour; Lasting Joy's tasting room; another round at the Drowned Lands

route among Hudson Valley taprooms, much like the Kentucky Bourbon Trail and the broader Napa-Sonoma

network that sprouted from tourists seeking second stops.

Schulze recommends I visit his friends at Plan Bee Farm Brewery, in a secluded corner of Poughkeepsie back on the other side of the river. There, couples congregate in a spare, barnlike taproom around a list long on yeasts isolated from their homemade honey. The most popular order this day—including mine—seems to be the soft, lemony sour Barn Beer wild ale. Earlier at Lasting Joy, Wenner nudged me just up the road to Suarez Family Brewery, a literal mom and pop joint that retains all the back-road charm of its building's Depression-era heritage, first a tractor dealership then a 1970s lamp factory. Here, extended families sit at long tables and sample local ingenuity, such as the Domain Fruit (Blend 5), a funky saison made from a combination of two botanical country beers and two maltier brews. The roasty Bones Shirt is one of the best German-style black lagers I've quaffed anywhere.

Everyone will direct you to the Drowned Lands brewery, so named for the postglacial flooding that gave the Warwick area its famous rich, dark farm soil. Set up in a defunct reform school for boys, the elegantly reimaged grounds conjure



#### WHERE TO STAY

After a day of brewery hopping, the Maker is a keen base in the historic heart of Hudson. Eleven rooms (from \$499 a night) evoke a robber baron's bohemian hideaway—all leather, velour, brick and wood, plus a rainfall shower and heated stone bathroom floors. A thermos of hot coffee and a newspaper will be waiting at your door in the morning.

a bustling winery, with a 3,000-square-foot patio and a 1,000-square-foot deck, both overlooking nearby Wawayanda Creek and the distant Appalachian Mountains. Inside, one end of the taproom offers a windowed view of the brewery's oak foeders, in which my exquisitely light and breadly Ploughshare altbier fermented.

The seven-year-old Hudson Valley Brewery may not be set on acres of upstate farmland, but its heart is, having built its national reputation for sour farmhouse ales and fruit-forward amalgam sour India pale ales, or IPAs, that utilize 100% New York-sourced wheat. The beer itself is made in an old mill in the middle of Beacon, a 19th century factory town that attracts weekenders from the city to the Dia Art Foundation museum. It's one of 16 breweries here in Dutchess County, more than double the number since the farm brewery legislation passed.

Following a renovation last year, the brewery's modern white taproom is flooded with natural light. Leatherbound tap lists, complete with tasting notes, wait on the bar. Patrons sip from stemware, and parents pull tables together for their kids to color on. Lines often stretch out the door.

Just as a sour IPA is a means to connect the traditional hop-head with the even crazier world of wild ales, Hudson Valley Brewery's tasting notes are welcoming and easy to understand; a mixed-berry variant of the wildly popular Silhouette sour IPA gets compared to a Nutri-Grain cereal bar and pink lemonade Fun Dip. The overall vibe, like in many Hudson Valley breweries, is distinctly refined but not rarefied.

"Having fun with the tasting notes works better than things like 'fresh-cut grass' that's harder to pin down," says Harry Manning, the brewery's marketing and sales manager. "We do make a higher-end product, and I think we market ourselves that way. But we want to break down the pretension." After all, it's still beer. **B**

# Ten Exhibitions To See in Venice

During the Biennale, contemporary art crams into pavilions, churches and palazzos across the canal city. It can be a lot. Here's a handy digest

By James Tarmy

You can take Venice's version of a bus, a boat called a *vaporetto*, to visit the city's Biennale, the massive art exhibition headquartered in the Giardini park. But it's better to walk.

On foot you'll stumble across one of the many pop-up exhibitions that have been organized throughout the city alongside the official Biennale, running until Nov. 24. Some are from superstar artists, including South African William Kentridge, who's showing a new video series, *Self-Portrait as a Coffee-Pot*; the American Sarah Sze, who installed a mosaic of panels in a tiny gallery, onto which dozens of separate videos are projected; and the figurative Chinese painter Yu Hong, who's done a massive installation in a former church, featuring 11 large gold panels that (mostly) depict women and children in states of anguish.

This is part of what makes the Biennale such an important event. Technically, it's a 331-artist show called *Foreigners Everywhere*, which is split into two parts: a huge Giardini pavilion and a sprawling showcase inside the nearby Arsenale, the city's former shipbuilding factory. The main show is augmented by exhibitions put on by about 30 countries in their permanent national pavilions, also in the Giardini.

Ancillary events insert art into every nook and cranny of the city, including grand palazzos, tiny churches and impromptu exhibition spaces on the outlying islands—which is where it gets really fun. For a few months, the city becomes a showcase for the world's best new art, which all helps to set the tone of

the art world (and market) for the next two years. Try to catch these 10 exhibits:

## Invisible Questions That Fill the Air: James Lee Byars and Seung-Taek Lee

At the Istituto Veneto di Scienze, Lettere ed Arti

Inside the historic Palazzo Loredan, overlooking Campo Santo Stefano, you'll find the exhibition that is the talk of the Biennale. It juxtaposes the ornate interiors of the 16th century palace with the spare sculptures of Byars and Lee—artists who didn't know each other, though their sculpture and conceptual work often combine unusual materials. Among the works produced over each artist's long career, there's a sculpture by Lee that looks like massive wooden beads, hanging from a painted ceiling alongside a double-tier Murano chandelier. In another room, what appears to be a giant gold bar in a vitrine, by Byars, sparkles underneath cotton-candy-colored ceiling frescoes. The works themselves are often hard to parse, though in this exhibition it's easy to draw parallels between the artists' creations.

## Berlinde De Bruyckere: City of Refuge III

At the Abbazia di San Giorgio Maggiore

Set just off the eastern end of Giudecca, the island of San Giorgio Maggiore is marked by its church by 16th century starchitect Andrea Palladio. Inside the church, which features towering columns and (for Venice at least) a spare interior, there are two colossal Tintoretto's. It's the perfect setting for De Bruyckere's large sculptures of shrouded, grayed-out figures, who are placed atop metal pedestals that appear to be made from hunks of scrap.

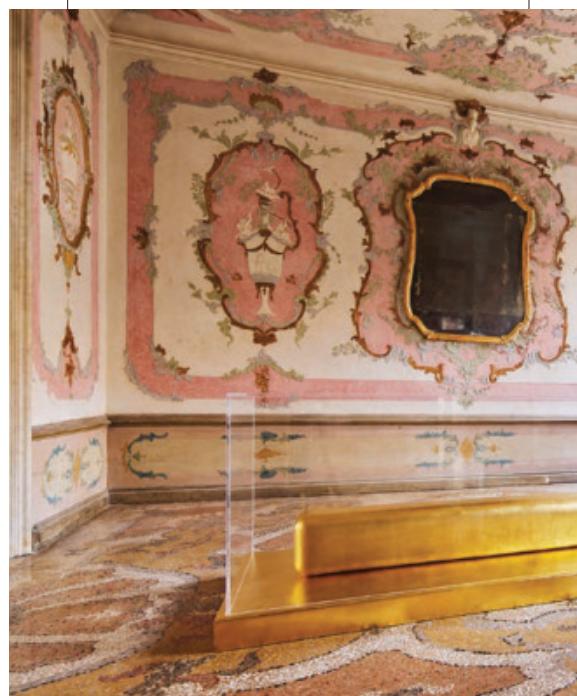


A De Bruyckere sculpture at the Abbazia di San Giorgio Maggiore

## 1912-1930 Murano Glass and the Venice Biennale

At Le Stanze del Vetro

Walk behind the church, and you'll encounter a cultural center (with exhibition spaces designed by a more recent starchitect, Annabelle Selldorf) devoted to the study and promotion of the art of glassmaking in the 20th and 21st centuries. The center has put on a buzzy show devoted to artworks made on the Venetian island of Murano, famous for its glass studios that churn out everything from paperweights to tutti-frutti-colored



chandeliers. This exhibition highlights pieces from the Biennales of a century ago, from its 10th to 17th editions. (We're now on No. 60.) The 135 pieces offer a master class in Venice's most enduring craft.

### Janus

*At Palazzo Diedo, Berggruen Arts & Culture*

The paint is barely dry on billionaire Nicolas Berggruen's new art center, which fills the 18th century Palazzo Diedo in the Cannaregio neighborhood. Berggruen, the son of a famous art dealer, created a foundation that's commissioned site-specific pieces from 11 artists to display in the palazzo. (Other parts of the building will be devoted to an artists' residency.) In cavernous room after cavernous room, visitors will find pieces by market stars such as Lee Ufan, who mounted a wavy abstract painting on the ceiling, and Hiroshi Sugimoto, whose primary-colored photographs echo the frescoes above.

### Glasstress

*At the Berengo Studio*

This year, your visit to the island of Murano will include more than just browsing the usual glass tchotchkes. That's thanks to glassmaker Adriano Berengo, who regularly works with some of the world's most famous contemporary artists to fabricate their work. At his studio, set just off Murano's main drag and near the Berengo factory, visitors can see a wildly complicated chandelier by Ai Weiwei, a room-size installation of glass birds by

Laure Prouvost and a small army of glass wrestlers by Robert Wilson.

### Pierre Huyghe: Liminal

*At the Punta della Dogana*

Set at the very tip of Dorsoduro, the former customs house has been turned into a sophisticated exhibition space by billionaire François Pinault. There, visitors will see work by Huyghe, who's renowned for creating difficult yet oddly compelling art. (In one piece, he placed a replica of a sculpture by Brancusi inside a fish tank and let a hermit crab turn it into a home.) Visitors walk through a nearly pitch-black series of rooms. There's an uncanny projection of a human figure without a face in one; in another, there's an equally disturbing film, shot in Fukushima, Japan, the site of the 2011 nuclear disaster, in which a monkey, wearing a white mask and a wig, wanders about a restaurant. Not to worry: There's also a room with those famous fish tanks.

### Reza Aramesh: Number 207

*At the Chiesa di San Fantin*

Just across from the iconic facade of La Fenice Opera House is a comparatively obscure church that's been filled with 207 pieces of discarded underwear hand-carved in Carrara marble. These lead to a series of glistening white, larger-than-life marble sculptures of figures who appear to be detainees (there are bags over their heads, and they're posed as if they're being forced to undress). Aramesh is explicitly interested in imagery from war reportage from the 1960s to the present, though he's coy enough not to specify whom he's depicting. The sculptures echo, and complicate, the agony and ecstasy of the religious figures depicted on the church's walls.

### The Best National Pavilions to Visit in the Giardini

Seeing every country's pavilion can easily be a daylong commitment—and it's not necessarily a rewarding one. Instead, narrow it down to the very best.

**EGYPT** During the opening week, Wael Shawky's work was a clear fan favorite. On one end of the pavilion, he has screened a film of a (riveting) opera, *Drama 1882*, that he composed, choreographed and directed, which re-creates Egypt's nationalist Urabi Revolution against the imperial powers of England and France. The rest of the structure is filled with physical artworks that speak to Egyptian cultural history, including a sculpture of a hulking, photogenic crab.



Photographs by Sugimoto echo the palazzo's ceiling at Berggruen Arts & Culture

**JAPAN** On the other end of the spectrum, the artist Yuko Mohri has filled the Japanese pavilion with playful experiments in light, water and sound. Part of the space is devoted to her work *Decomposition*, wherein she inserts electrodes into fruit, thereby generating electric signals that are channeled to lights and speakers as it rots. The ever-changing experimental symphony is the perfect companion to her other installation, *Moré Moré (Leaky)*, a kinetic sculpture made up of found objects intended to divert, and stop up, various water leaks.

**AUSTRALIA** Artist Archie Moore won the well-deserved Golden Lion, the Biennale's top prize, for his installation, where he covered much of the walls and ceiling of a dimly lit room with thousands of names, written in chalk. They make up his *Kamilaroi, Bigambul and British lineage*, stretching back approximately 65,000 years, charting his community's history and its decline. In the center of the room a table, suspended over a pool of water, is covered in 576 stacks of documents, most of which contain colonial inquiries into the deaths of Indigenous Australians in police custody. Simultaneously fanciful and straightforwardly political, the room demonstrates profoundly how great art can combine theory, concepts, aesthetics and ideology in a single package.



A piece by Byars at the Istituto Veneto di Scienze, Lettere ed Arti

# Past Forward

Sales of cassette tapes are getting a boost from an unexpected source: The young.

By Matthew Kronsberg  
Photograph by Naila Ruechel

When Breakaway Records opened almost 16 years ago in Austin, the vinyl revival had barely begun. Back then, to stock shelves, the store had to find and buy up old vintage record collections, says owner Joshua LaRue. New vinyl albums soon became an important part of the business.

Not long after, analog fans began clamoring for another old format: cassette tapes. Although the resurgence of tapes didn't totally surprise LaRue, the people seeking them out did. "There are some older folks who buy cassettes here," he says, "but I'd say the majority is younger people." For Generation Z, it's partly a bit of secondhand nostalgia. But also, because it has lower reproduction costs and DIY cachet, emerging artists have embraced the format for smaller releases.

Cassettes remain an important format for mainstream acts as well. In its first week of sales, Taylor Swift's *The Tortured Poets Department* sold 1.64 million physical units, according to *Billboard*: 759,500 CDs, 859,000 vinyl LPs and about 21,500 cassettes. No matter how modest, physical units still weigh heavily in how the music industry generates charts. During a conference in the UK, Dave Rowntree, the drummer for Blur, said the band's 2023 album, *The Ballad of Darren*, sold 3,000 cassettes in its first week, against "tens of millions of streams on Spotify alone—but the cassette sales had a bigger impact on our chart position."

There's another, even more important reason the likes of Billie Eilish and Kendrick Lamar are still releasing music on cassette, and that's to satisfy the insatiable desires of superfans. When Dua Lipa posted animated GIFs of herself playfully holding the cassette version of her album *Radical Optimism*, she was targeting her most ardent fans, who are willing to spend more than the average listener to own albums on physical formats.

The format's lower production costs don't hurt either, and these savings are reflected in retail prices. New releases on vinyl often cost as much as \$35, whereas a cassette provides a similar analog experience for as low as \$10. It may be lower fidelity, but it's also more playful and more portable. "It's a really nice price point for young kids who want to collect a physical item to support their favorite artists but don't want to buy a \$30 or \$40 record," says Shelly Worcel, director of physical account strategy for Secretly Distribution. "One of our bestsellers last year was Phoebe Bridgers, because she tends to have a younger audience."



Clockwise, from top left: The We Are Rewind, Retrospekt CP-81 and FiiO CP13 portable cassette players. Also pictured: We Are Rewind EQ-001 wireless headphones

The trend toward tapes began with shows and films, including *Stranger Things* and *Guardians of the Galaxy*, which has an extended bit featuring a Sony TPS-L2 Walkman owned by the main character, Peter Quill. During the pandemic, it was goosed along when rising demand for vinyl, coupled with supply chain backlogs at pressing plants, caused artists and fans to turn to tapes to make up the difference, says Andy Osborn, the artist and label operations manager for music platform Bandcamp.

Last year music industry sales tracker Luminate Data LLC tallied cassette sales of 436,400 units, about the same as 2022. That's still a long way from 1988, when 450 million were sold in the US, but it's up from the 81,000 sold in



2015. It's enough interest to attract entrepreneurs. Romain Boudruche, a former advertising copywriter, read an article about the *Guardians of the Galaxy*-inspired spike in demand for vintage Walkmans and realized there was an opening in the market for a stylishly updated portable cassette deck. After a successful 2020 Kickstarter, he and partner Matthieu Mazières began selling players under the name We Are Rewind in late 2022. Guangzhou FiiO Electronics Technology Co., a Chinese audio company, entered the "retro products" market in March with the CP13.

The economics have changed, but the idiosyncratic sound quality hasn't, and that remains key to the cassette's appeal. Rod Thomas, who's opened for the likes of Cher

and Elton John as Bright Light Bright Light, is issuing an edition of his latest album on cassette, as he's done with all his previous releases. Even more than the physical format itself, he likes the sound quality of tapes, which he says "feels like squinting. It's one step away from your ears. It's a really warm sound."

Even audiophiles such as LaRue are embracing tape's hiss and warble. He's a partner in Austin's Equipment Room, a high-fidelity listening bar in the Hotel Magdalena. The sound system features vintage Technics direct drive turntables, Klipsch speakers, coveted McIntosh amplifiers and a Nakamichi cassette deck from 1975. "While we're setting up for the night or breaking down, we'll put a tape on—Blood, Sweat & Tears or Tower of Power. It's fun," LaRue says. The deck is also used to record sets as souvenirs for the DJs who play there.

A surprise bestseller at Breakaway has been blank tapes. "Obviously, anyone can make a Spotify playlist," LaRue says. "The idea of curating a little music selection is not new, but I think the idea of doing it on a physical format is appealing to people. There are young people buying blank cassettes and making mixtapes, like I did when I was 20."

## The Tale of the Tape

Sony sold more than 200 million Walkman cassette players between the device's introduction in 1979 and its discontinuation in the US in 2010. A small crop of brands has arisen to take its place. Here are three favorites.

### NEW AND IMPROVED

Like the first-generation Walkman, the We Are Rewind player is crisply rectangular and slightly smaller than a paperback book. Unlike the original, it has a rechargeable battery and Bluetooth 5.1 for wireless listening. There's also an output jack for wired headphones (sold separately) and an input jack for recording mixtapes. The aluminum-bodied player comes in orange, blue, gray and, most recently, black-and-yellow. All are puckishly packaged with a small pencil for reeling in unspooled tapes. *From \$159*

### A SOUND BUY

FiiO's CP13 has the same blocky design as We Are Rewind's player, but without

the recording or Bluetooth functions. Available in red, white or blue, it's got a slightly brighter, punchier sound and a 13-hour battery life. At less than 5 inches long, it's somewhat more pocketable than We Are Rewind's, which is almost an inch longer. *\$100*

### A CLEAR CHOICE

Retrospekt's CP-81 has essentially the same dimensions as the CP13, but its transparent plastic body cuts down on weight: It clocks in at 7.7 oz, including its two AA batteries, compared with 11 oz for the FiiO and 14 oz for the We Are Rewind. Like the latter, the CP-81 can record. It also comes with a pair of orange-padded, wired Koss headphones. *\$99*



# When Great May Not Be Good Enough

The new Vantage needs to change the game for Aston Martin. It merely hits its marks. *By Hannah Elliott*

I was inclined to love the 2025 Aston Martin Vantage at first sight when I met it on a damp April day in Seville, Spain. The \$191,000 coupe's welterweight body is more chiseled than its predecessor's, with hypercar-inspired LED headlamps and 21-inch wheels split into spokes, plus new air vents on the side and hood. It's wider, too, with the grille stretched into the grin of a Guy Ritchie bruiser.

Even better, as I discovered when I jumped inside for laps at the Circuito Montebancho racetrack before winding about 100 miles through Andalusia: Aston has at last overhauled its poorly designed infotainment system in favor of a single instrument display. And in the old cars, you had to push different buttons to change gears. It was not intuitive and a bit infantilizing. Now there's a single lever, as God intended.

But it's going to take more than a pretty new face and a gearshift to reverse the fortunes of Aston Martin Lagonda Global Holdings Plc, which since the company's 2018 initial public offering have wavered between measured optimism and abject despair. Aston hasn't reached profitability since then and has faced high executive turnover. It misjudged production volumes on uncompetitive products, failed to scale and suffered from supply chain defects and a precarious cash balance, Bloomberg analyses show. The carmaker

needs something drivers will choose over the segment-topping \$197,200 Porsche 911 Turbo and \$177,050 Mercedes AMG GT 63.

That's a steep hill to climb, I thought as I pushed the car into Turn 1 of the track. I could feel its rear end agitating, the wheels working to stay planted on pavement wet from a surprise deluge. Maybe it's all too little, too late.

Now, I should note the company still has plenty going for it: a charismatic billionaire boss in Lawrence Stroll, plus a Formula One racing team and a prestigious 113-year heritage. The last is an especially valuable marketing tool and offers a font of institutional knowledge that money can't buy. Wealthy shareholders in Saudi Arabia's Public Investment Fund, which owns 20.5% of the company, have pledged £200 million (\$250.5 million) in funding and gobs of patience. Its handsome sports cars are synonymous with James Bond himself.

New products such as this third-generation Vantage could be the final piece of the puzzle to get the brand back in the black. The car's improved performance over the previous generation and strategically elevated pricing (up 9%) are intended to nudge average sales margins to 40%.

After driving the car for a day on the track and off, there's no doubt it surpasses its predecessor in attitude and grit. The 4.0-liter twin-turbo V-8 gets 656 horsepower, up 30% from the previous model, and 590 pound-feet of torque, 15% more. It's stiffer and has less propensity to understeer; a new suspension keeps it relatively agile.

Top speed is 202 mph, with a 0-to-60 sprint time of 3.4 seconds. I hit 143 mph on the front straight at Montebancho. That convinced me this car could handle itself on the starting line—but it still wasn't as fast as that 911 Turbo (2.7 seconds 0 to 60) or AMG GT 63 (3.1 seconds).

On the raceway, I felt like I wasn't driving the Vantage so much as it was driving me, and I realized somewhere around my third lap it's because I've grown so used to cars with rear-wheel steering. That setup makes me feel like a better driver than I am, because it keeps the car on rails. This mid-engine rabble-rouser lacks it and thus feels analog—wild, even. It barks and plunges midturn; it dives into corners like an adolescent pit bull still learning its own body. It's fun, but it gets tiring.

Three hours later, I was happy to hit the highway. In the Vantage, fat A-pillars flanking the front windshield created such massive blind spots that Montebancho's famous coils became a chore of craning my neck. The turns also revealed the car's considerable heft of 1,605 kilograms (3,538 pounds). It felt like trying to figure-skate while wearing a backpack.

The Vantage settled into a more relaxed stance as I wound through rust-colored Iberian hills; its 50-50 weight distribution and shortened drive ratio on the eight-speed transmission kept me engaged even as jet lag began to catch up to me.

This rolling rural tract is where the car excelled with its big, comfortable cabin—and I paused to snap photographs of its taut curves against the slate sky. The Vantage needs to surpass its German rivals for driving pleasure and engagement. It doesn't. But its clear improvements hint at brighter times for Aston Martin. I could see that even on a rainy day in Spain. **B**



# None Too Shady

Sunglasses that don't hide your eyes are the latest revelation in summer shades. *By Max Berlinger*  
*Photograph by Steph Martyniuk*

If the eyes are indeed the windows to the soul, what good is completely blocking the view? And yet fully darkened or reflective lenses have been the industry standard for ages. Thankfully a new movement in eyewear champions lenses that are just slightly tinted—translucent enough for others to see through while still providing the necessary level of shade and ultraviolet protection for the person wearing them. Prime examples were everywhere at this year's Oscars, where Robert Downey Jr., Matthew McConaughey and Jeffrey Wright wore them on the red carpet with their dapper tuxedos. These rectangular beauties are from the Los Angeles-based brand Jacques Marie Mage. Called the Sandro (\$820 in birch, pictured), they've got swagger while offering 100% UV protection.

## THE COMPETITION

- Brunello Cucinelli recently introduced the brand's first in-house eyewear collection, including an aviator-style pair (\$813). It's part of a Sartorial Sunset line with medium-dark tinted lenses that are meant to evoke the light in Umbria at dusk.
- New York institution Moscot offers its popular Lemtosh frames with a variety of lenses on the less-dark end of the spectrum, sometimes in colors such as yellow and red or subtler styles in darker green (\$370).
- Trendy and youthful, Akila makes eyewear in an array of styles and lens colors—and they're priced for serial sunglasses-misplacers. The ever-popular Apollo (\$140) is a chunky, rounded model that's particularly sharp in classic tortoiseshell with a mysterious and sexy blue-green tinted lens.

## THE CASE

Dainty these are not. The Sandro, based on a '90s silhouette, is made from a substantial chunk of cellulose acetate and includes a tension-secured seven-barrel hinge. It's the brainchild of French vintage enthusiast Jerome Mage, who makes his specs in Italy and Japan, usually in small runs of no more than 500. He seeks out manufacturing equipment that dates to right after World War II, so the product doesn't look like it just rolled off the assembly line. The slightly tinted brown lenses are made using an anti-reflective process that ensures they won't completely obscure your eyes. The result is a pair worthy of admiration, which is good, because these sit right at the center of your face. \$820; [jacquesmariemage.com](http://jacquesmariemage.com)

# LAST THING

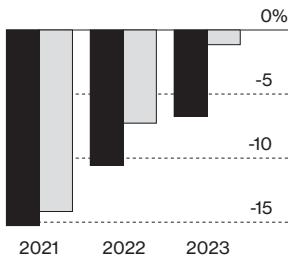


## The Food Court Is Back

After a long day at the mall, the aroma of a buttery pretzel has always been hard to resist. Now it's getting harder. Across the US, restaurants are taking over more floor space in malls as in-store shopping declines and consumers seek experiences rather than goods, says Emily Arft, an analyst at Green Street, a real estate research firm. Formats are changing: "A lot of landlords are thinking about making a more cohesive retail experience where you have dining throughout, not just in one dedicated center," Arft says. Still, that's been good for food court newcomers and stalwarts, including everyone's favorite auntie. —*Dorothy Gambrell and Laura Bliss*

Change in yearly visits to shopping centers from 2019

■ Indoor malls  
□ Open-air shopping centers



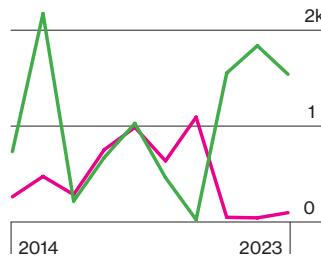
Shopping centers, all stores

✓ Announced openings  
✗ Announced closings

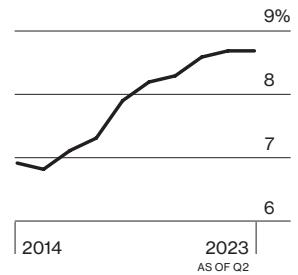


Shopping center restaurants

✓ Announced openings  
✗ Announced closings

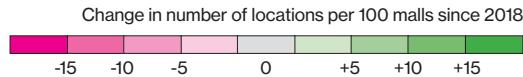


Leasable area in shopping centers devoted to food



### Good Smells

Dining establishments with the greatest number of locations in Simon Property Group malls\*



Cinnabon 42 locations per 100 malls	Nori Japan 10	Gregorys Coffee 11	Popeyes 26	Charley's Cheesesteaks 54	Sbarro 28	Läderach 11	Jamba 17
Auntie Anne's 104	P.F. Chang's 18	Nordstrom eBar 20	Buffalo Wild Wings 10	Dave & Buster's 10	Shake Shack 20	Dippin' Dots 10	True Food Kitchen 12
	Asian Chao 11	Starbucks Coffee 58	Chick-fil-A 35	Cheesecake Factory 37	Red Robin 15	Häagen-Dazs 18	Longhorn Steakhouse 11
	Panda Express 17						Chipotle Mexican Grill 25
	Ruby Thai 14						
Great American Cookies 25	Sarku Japan 23						
Wetzel's Pretzels 23							
				Parera Bread 11	Bu's Restaurant 14	California Pizza Kitchen 12	
					Five Guys 11		

Change in number of restaurants per 100 malls, 2018-24

- Bubble tea **+59**
- Korean corn dogs **+14**
- Mexican **+10**
- Acai bowls **+8**
- Pretzels **0**
- Cookies **-12**
- Frozen yogurt **-14**
- Burgers **-22**
- Pizza **-27**

\*DOES NOT INCLUDE OUTLET CENTERS. DATA: PLACER.AI, ICSC, COSTAR, BLOOMBERG ANALYSIS OF SIMON PROPERTY GROUP DOCUMENTS

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