Bloomberg Businessweek

March 13, 2023

DAWN OF THE INDUCTION AGE

Will Americans leave their prized gas stoves behind for a better, flameless technology? 36

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◀ If only Prometheus had given our ancestors powerful magnets instead of fire...

PHOTOGRAPHS BY SARAH ANNE WARD FOR BLOOMBERG BUSINESSWEEK; PROPS: PAOLA ANDREA; GROOMING: STELLA BOUZAKIS

FEATURES

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■ COVER TRAIL

How the cover gets made

1

"This week we're talking about a really hot topic: stoves."

"I think this is what my friend was screaming about last weekend over the sound of his contractor installing a $15,000 eight-burner luxury range."

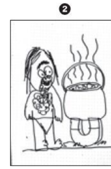
"Yes. It's another fiery culture war!"

"What's the solution?"

"Induction. Which uses powerful magnets."

"So primal! So elemental! I have an idea."

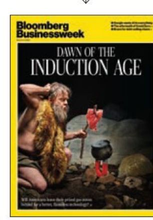
2



"That is so dumb it's… brilliant?"

"Will this guy work?"

"If you can put him in the world's worst natural history museum setting, we've got ourselves a cover."



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IN BRIEF

By Mark Leydorf, with Bloomberg News

● March 11 marked the third anniversary of the WHO declaring Covid-19 a pandemic. There have been about 677 million cases and

6.9m

deaths. The true mortality figure is likely much higher: A December study by the WHO estimated there had been almost 15 million "excess deaths" during the outbreak. The economic impact continues to be felt. In the first quarter of 2020, at the outset of the Covid-induced recession, global GDP contracted

3.4%

according to the OECD, as economies went into hibernation. China, the last major nation to come out of lockdown, has seen thousands die in the past few months. ▷ 42

With the global death rate declining, In Brief will no longer provide a weekly Covid update, though *Bloomberg Businessweek* and Bloomberg News will continue to cover this world-changing story.

● War in Ukraine

► NATO Secretary General Jens Stoltenberg said Bakhmut could fall "in the coming days," but insisted that wouldn't indicate a shift in the war.

► EU defense ministers on March 8 gave their support to a plan to speed the delivery of ammunition to Ukraine. The bloc "needs to move into an 'economy of war' mode," said European Commissioner Thierry Breton.

► Kyiv swapped 90 Russian prisoners for 130 Ukrainians on March 7. Most of the Ukrainian soldiers, captured in Bakhmut, Mariupol and Soledar, had serious injuries.

● Women threw empty cartons into the Iveco industrial vehicle factory—which recently laid off many women—in Turin on March 8, International Women's Day.

● Larry Jackson, a former Apple exec, is starting Gamma, a music company.

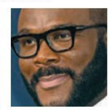
Jackson has about $1 billion in available capital to invest in the business, say people familiar with his finances. In addition to Apple, his backers include Todd Boehly's Eldridge and A24. Jackson has already signed Rick Ross, Snoop Dogg and Usher—and forged a joint venture with Dogg to distribute the catalog of hip-hop pioneer Death Row Records.

● South Africa's GDP contracted

1.3%

in the fourth quarter of 2022, according to Statistics South Africa, a sharp drop from the 1.8% expansion of the previous quarter. Blackouts are the main cause: Eskom, which produces most of South Africa's electricity, cut power on all but three days during the period to protect the grid from collapse.

● Byron Allen and Tyler Perry are both considering buying a majority stake in BET from Paramount.



The studio aims to refocus on its film and TV business and Paramount+ streaming service. BET runs Black Entertainment Television and VH1. Perry, one of the most successful Black filmmakers, is already an investor in its BET+ streaming service. Allen owns the Weather Channel and other properties.

● "I hate him passionately."

Tucker Carlson, texting about former President Donald Trump to an unknown co-worker on Jan. 4, 2021, two days before the Capitol riot, according to newly released digital communications in Dominion Voting Systems' $1.6 billion defamation lawsuit against Fox News. Carlson went on: "Admitting what a disaster it's been is too tough to digest. But come on. There really isn't an upside to Trump."

● Silvergate says it will wind down operations and liquidate its bank after the crypto industry's meltdown. It's the first US bank failure since 2020, the first year of the pandemic, according to the FDIC's website.

● Governor Gavin Newsom said on March 6 that California would no longer do business with Walgreens.

Activists nationwide called for a boycott of the drugstore chain after it decided on March 3 that it wouldn't sell the mifepristone abortion pill in 20 states where Republican leaders have raised objections.

TURIN: STEFANO GUIDI/GETTY IMAGES. ALLEN: NOAM GALAI/BLOOMBERG. PERRY: PATRICK T. FALLON/GETTY IMAGES. CARLSON: BRIAN CAHN/ALAMY

Afghan Women Need the World's Spotlight Again

When Afghanistan's universities began reopening in March, they were half-empty. The same goes for its aid offices, roads, parks, gyms and bathhouses. A little more than 18 months after the Taliban regained power in Kabul, they have effectively erased Afghan women and girls from public life—again.

This appalling reality should weigh heavily on US President Joe Biden's administration, whose botched withdrawal allowed the Taliban to sweep into the capital in August 2021. The US and other donor nations have limited ability to change Taliban behavior, but having long championed the cause of Afghan women, they have an obligation to keep trying. That includes avoiding policies that could make a terrible situation worse.

Any hope that Taliban leaders might have learned moderation during their years out of power has proved illusory. Last March they banned girls from secondary schools on the very day classes started. They've since reimposed many of the same medieval rules they promulgated before the US invasion, forcing women to cover themselves head to toe, limiting their ability to leave the house without a male chaperone and flogging those accused of adultery. In December the regime prohibited women from attending university or working for nongovernmental organizations.

The United Nations has issued an appeal, its largest ever, for $4.6 billion in aid to Afghanistan this year. Some Western officials, however, have debated imposing more aggressive sanctions against the Taliban or even cutting off all but emergency aid. With needs dire in Syria, Ukraine, Yemen and elsewhere, donor money might seem better spent in other places.

Yet slashing support for Afghanistan would do more harm than good. The regime has shown little regard for the suffering of ordinary Afghans and zero inclination to respond to financial pressure. And any aid cutoff would primarily hurt women—who are twice as likely as men to skip meals so their children can eat—and girls, many of whom will be sold or married off to reduce the burden on families.

What else can be done? At a minimum, the world should keep a spotlight on the fate of Afghan women, and not only on occasions such as International Women's Day. The Taliban's clampdown has drawn global condemnation, including from conservative Islamic nations such as Saudi Arabia and Iran, as well as leading Muslim clerics. These messages should be repeated in public and private, and countries should make clear to Taliban leaders that no sanctions will be lifted, or diplomatic recognition offered, until their policies change.

Meanwhile, donors should do what they can to ease the crisis of hunger and poverty, which hits Afghan women hardest. Almost half the population faces emergency levels of food insecurity; 84% of households headed by women aren't getting enough to eat. Donors shouldn't attach excessive conditions on aid, so humanitarian organizations have the flexibility to stop and start operations depending on the Taliban's behavior. More money should also be steered toward development, particularly to complete half-finished irrigation and electricity projects that could improve living conditions for women.

Finally, it would be good for countries to look for creative ways around the Taliban's education ban. Funds could be channeled to underground schools in parts of the country where they're able to operate safely. More overseas scholarships and online courses could be offered to university-level students.

The US in particular can do more, especially to help women's rights activists emigrate if they wish. Americans' long involvement in Afghanistan gave many women and girls hope for a better future. They shouldn't be forgotten now. Ⓑ

For more commentary, go to bloomberg.com/opinion

■ AGENDA

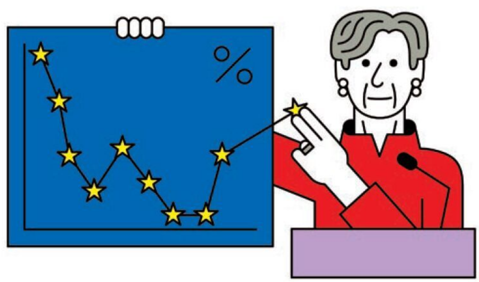


ILLUSTRATION BY RAÚL SORIA

► Your Move, Frankfurt

The European Central Bank sets interest rates for the euro zone on March 16. The ECB on March 7 said consumer expectations for inflation had receded "significantly," bolstering calls to slow the pace of rate increases.

► The Bureau of Labor Statistics reports the US inflation rate for February on March 14. Analysts expect the annual rate to decline only slightly from January's 6.4%.

► In the UK, the Office for National Statistics releases its unemployment figures on March 14. The jobless rate, lodged at 3.7% for months, isn't likely to budge.

► Bank Indonesia makes its interest rate decision on March 16. With inflation easing in the country and growth prospects high, analysts believe the bank will leave rates unchanged.

► BioLife, BuzzFeed and GitLab report quarterly earnings on March 13; Adobe, Lennar and Williams-Sonoma on March 15; Dollar General, FedEx and GameStop on March 16.

► March Madness is here. The NCAA tournaments begin on March 14. Last year's winners—Kansas for the men, South Carolina for the women—are looking strong again in 2023.

► Le 20 mars est la journée internationale de la langue française. The UN introduced Language Days in 2010 to celebrate cultural diversity.

Defaults Are Coming to a Downtown Near You

Facing rising interest rates and empty buildings, even wealthy landlords are skipping payments on office space

By Natalie Wong and John Gittelsohn

ILLUSTRATION BY SARATTA CHUENGSATIANSUP

Wall Street titans pride themselves on knowing when to take risks, especially in moments of uncertainty. But as borrowing costs soar and the work-from-home trend leaves downtown offices half empty, even the biggest players are quickly realizing they miscalculated.

Take Pacific Investment Management Co. In 2021, even after offices emptied during the pandemic, funds managed by the $1.7 trillion asset manager paid $3.9 billion for Columbia Property Trust, which owned at least 15 office buildings in New York, San Francisco, Boston and Washington, DC. "High-quality office buildings in major US cities offer long-term value for our clients," Pimco's global head of private commercial real estate, John Murray, said at the time.

Or not. Last month, Columbia Property Trust defaulted on about $1.7 billion worth of mortgages on seven of its trophy buildings, including a San Francisco tower leased to Elon Musk's Twitter and the former New York Times headquarters, now home to Snap. The finance behemoth wasn't alone: Brookfield Corp., one of the biggest property owners in the world, also defaulted on two downtown Los Angeles skyscrapers, one of them crowned with the name of accounting firm Deloitte.

Anyone who recalls the 2008 financial crisis and the housing bubble bursting also might remember the scorn heaped on homeowners who stopped paying mortgages because their houses were hopelessly under water. They may now find it ironic to see some of Wall Street's most prestigious companies threatening similar behavior. Yet for institutional investors, defaults can be a strategy to open the door for debt restructuring. Debtors with commercial-mortgage-backed securities must at least technically default on their loans before they can renegotiate terms. CMBS is nonrecourse debt, which means borrowers can walk away and creditors can't go after other assets they own.

Some of the recent defaults are a strategic play to extend payment periods or otherwise improve the terms of the loans. In other cases, owners are giving up on buildings entirely and returning them to lenders. Either way, the moves portend a bleak unraveling for the rest of the market: If even the most well-capitalized money managers are balking at paying for properties with premier tenants in prime locations, where does that leave cash-strapped owners of emptier, older buildings? "You were dealing with a work-from-home earthquake, and now you have a financial tsunami," says David Bitner, executive managing director of global research at Newmark Group Inc.

Over the past decade, investors treated offices as though they were bonds. They saw high-quality buildings with long-term leases and ever-rising rents as supersafe. Giants such as Amazon and Facebook were splurging on space in costly cities, decking them out with plant walls and espresso machines. While office buildings aren't immune to economic trends, even the biggest money managers couldn't predict just how quickly the remote-work phenomenon would render thousands of them superfluous. The uncertainty around the future of work has turned office space, an inherently long-term, fixed asset, into an increasingly risky, volatile one.

Analysts and investors liken struggling office buildings to dying malls; just as e-commerce hastened the demise of older suburban shopping centers, remote work will decimate business districts. One brokerage estimates there will be about 330 million square feet of excess office space by the end of the decade. Today, average office usage is about 50% of pre-pandemic levels—which could be the new norm. The market certainly isn't betting on a rebound. The stock of New York's largest office real estate investment trust, Vornado Realty Trust, has dropped to 1997 levels; those of SL Green Realty and Boston Properties are below 2020 lows.

Most landlords were able to hold on to their buildings without defaulting on loans during the pandemic, because near-zero interest rates made it easier to keep making payments or get new financing. Like Pimco's Murray, investors were hopeful that more people would return to the office once pandemic concerns subsided. Some won't be able to hold on long enough to see that happen. Almost $92 billion of non-bank office debt is maturing this year, and it needs refinancing, according to the Mortgage Bankers Association. Office building values have already fallen 25% from just a year ago, according to real estate analytics firm Green Street.

Another problem is that investors simply paid too much. The fundamentals of offices had been deteriorating before the pandemic. Even with the strong job market and booming corporate profits, landlords had to boost concessions, such as free rent, to attract tenants. "The underwriting that people made when they bought buildings had no relation to reality," says David Lipson, president of Savills North America. "There was fundamentally unsound economics behind the deals."

The outlook is far grimmer today than in 2021, with the Federal Reserve forecasting that the unemployment rate will climb to 4.6% by yearend. Even when the economy recovers, it's clear that many buildings never will. Owners are exploring conversions to housing, but those deals won't make a dent in office supply in the short term because of zoning, exorbitant costs and the complexities of engineering.

Short sellers are betting that more debt tied to offices will go into default. Hedge funds, including Bruce Richards's Marathon Asset Management and Dan McNamara's Polpo Capital Management LLC, are using credit-default swap indexes known as CMBX to wager against bonds tied to office buildings, similar to previously successful bets against shopping mall debt by Carl Icahn and the US housing market by Michael Burry. "I don't think this is *The Big Short*," McNamara says. "But there's going to be a lot of distress in office."

That could be an opportunity for many of the biggest investors, which still have piles of money and are poised to pounce. "They're waiting for a lot of these buildings to go back to the banks," says Ruth Colp-Haber, chief executive officer of brokerage firm Wharton Property Advisors. The banks "will then presumably have to sell them quickly at a very low price compared to where they're on the books now." Ⓑ

The Trouble
Quitting Ch

● The country has specialized machinery and skilled workers difficult to find elsewhere

When Lanny Smith founded Actively Black Inc. in 2020, he hired factories in China to produce the brand's athletic wear. But last year, concerned about production delays caused by China's Covid lockdowns, Smith explored buying elsewhere. He shipped samples to a supply chain agent who'd assured him there were alternatives in Latin America. "He hit me back the next day and said, 'You're not going to find anybody who can do this in the Western Hemisphere,'" says Smith, 38, a former basketball star at the University of Houston.

For American companies like Actively Black, buying from China has become more challenging in recent years because of increased tariffs, snarled supply chains, factory shutdowns under Beijing's Covid Zero policy and rising geopolitical tensions that have forced America Inc. to contemplate the fallout from a possible invasion of Taiwan.

Those concerns have led to a surge in pledges by executives to reduce their reliance on Chinese suppliers. But quitting China isn't easy, and most progress has been concentrated in industries such as semiconductors that US lawmakers consider vital to national security. Producers of lower-tech, lower-margin products such as clothing, shoes, housewares and luggage are finding that few factories outside China have the machinery or the skilled workforce to, for instance, sew what's known as a six-needle, flat-seam stitch—needed for Actively Black gear like sports bras and shorts because it doesn't chafe skin.

Since the 1990s, China has spent hundreds of billions of dollars transforming itself into the world's premier location for manufacturing. Its factories have the machinery and expertise needed to produce quality products at a volume and pace that's difficult to match. Along the 80-mile stretch from Shenzhen to Guangzhou, companies can weave,

Edited by David Rocks

PHOTOGRAPH BY MICHAEL TYRONE DELANEY FOR BLOOMBERG BUSINESSWEEK. DATA: US OFFICE OF TEXTILES AND APPAREL

◄ Smith

dye, sew, trim, label and package anything from T-shirts to tuxedos. And China's investment in highways, railroads, air hubs and seaports has created a smooth path from factory gate to consumers worldwide. "Twenty years of concentration of manufacturing has created this, and busting it apart and moving it to other places on the planet is really hard," says Kurt Cavano, chief executive officer of Nimbly Inc., a software platform that connects clothing brands with factories and suppliers.

Despite growing tensions, US-China trade continues to thrive. In 2022 the US imported $537 billion in goods from China, slightly below the record $539 billion in 2018. For apparel, China remains the largest exporter to the US, topping 10 billion units last year alone, about double what came from No. 2 Vietnam, according to the US Department of Commerce. A majority of suppliers for Levi Strauss, Nike and North Face owner VF Corp. are in China. And the country remains the top source of furniture, bedding, lamps, toys and sports equipment that Americans buy, according to the most recent US government data.

China's advantages are so great that some US companies that have tried to move away have returned at least a portion of their production there. Shoe and accessories maker Steven Madden Ltd. shifted about half its handbag manufacturing from China to Cambodia in recent years to diversify sourcing and take advantage of lower duties. But those tariff advantages expired in 2020, and Congress hasn't renewed the program. "It's caused us to slow and in some cases even reverse the shift of production out of China," says Madden CEO Ed Rosenfeld.

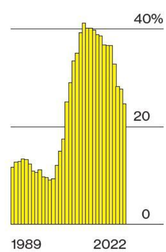
While lawmakers have a record of eventually reinstating lapsed tariff reductions, the uncertainty makes it more difficult for businesses to commit to leaving China. "Congress has started the conversation about diversification, but they haven't provided any sort of clear, predictable guidance or policy prescriptions on how to continue it," says Steve Lamar, CEO of the American Apparel & Footwear Association, an industry group of nearly 600 retailers and suppliers.

And when companies move manufacturing out of China, they often end up working with Chinese-owned suppliers or sourcing components and materials from the country. Thomas Nichols, president of Pretika Corp., which makes skin-care devices, has shifted production of some electric facial brushes from China to Malaysia for a trial run. But the batteries, motor and other parts for the brushes still come from China. Even though the cost per item will likely be higher because of the extra step of bringing parts in from China, he aims to start shipping Malaysia-made brushes to the US this summer. "China has just done a very effective job of ensuring world-class production and having the component supplies within the country," Nichols says.

The dominance of some Chinese suppliers can make it difficult to find alternatives. Textile manufacturer Texhong International Group and its dozens of subsidiaries account for almost two-thirds of global trade in certain grades of cotton-spandex materials, according to researcher Altana Technologies. That is further complicated by US and European regulations restricting the use of cotton from China's northwestern Xinjiang region because of human-rights abuses there. But it's often difficult to figure out where materials come from, and alternatives aren't always readily available, says Leo Bonnani, CEO of supply chain consultant Sourcemap. "The actual task of redesigning supply chains to meet these standards can take many months after the initial discovery of a risk," Bonnani says.

Part of the difficulty is that many Chinese companies have set up shop abroad to diversify their ▶

▼ Share of US textile and apparel imports from China, by value



◀ own production and benefit from lower labor costs. Garment manufacturing giant Shenzhou International Group Holdings has invested heavily in Vietnam and Cambodia, and today only about half its factories are in China, down from 90% in 2013. But Chinese manufacturers more typically rely on the same dense web of suppliers that keeps US companies there. “Imagine you want sequins to put on 100 T-shirts,” says Vicky Wu, owner of an apparel factory with more than 60 workers in downtown Guangzhou. “You can just get them in a store on the same street.” Despite lower labor costs elsewhere, “we just can’t afford to leave this ecosystem,” she says.

US Vice President Kamala Harris is trying to boost investment in Central America to counter China’s dominance and to create jobs that would help stem migration from the region to the US. The White House says her efforts have yielded more than $4 billion in investment commitments. Columbia Sportswear Co. has pledged to buy up to $200 million of products from factories in Central America over the next five years. That will likely be simple sportswear such as fishing shirts, says Peter Bragdon, Columbia’s chief administrative officer, because the region lacks the diversity of fabrics, threads and other materials available in Asia. Growth there “happened over the course of decades,” he says. “It’s not going to happen overnight anywhere else.”

And alternatives come with their own political and economic complexities. Haggar Clothing Co., a top seller of men’s trousers in the US, moved about 5% of its production from Asia to Kenya and Ethiopia several years ago. But the Kenyan factories took too long to source fabrics, and Ethiopia lost its duty-free status with the US in 2022 because of human-rights violations during the country’s civil war, so Haggar stopped producing in both countries. Still, Tony Anzovino, the company’s sourcing chief, says he was impressed with Ethiopian factories: “I’ll be back there as soon as duty-free status is put back.”

While Haggar assembles only a small percentage of its products in China, it gets about 20% of its raw materials from the country. That’s down from the 60% to 70% five years ago, but Chinese fabrics remain essential for Haggar’s dress pants and suits. “China is still the workhorse with regards to fabric,” Anzovino says. “Everyone is finding it difficult to move a lot of things out of China because China does so many things so well. The expertise is there, the equipment is there.” —*Jeannette Neumann, Olivia Rockeman and Daniela Wei*

THE BOTTOM LINE Despite growing barriers to trade, sellers of low-margin goods such as clothing have found that few factories outside China can produce at the volume and quality they require.

A Luxury Reset in Paris

● The owner of Gucci is seeking to rekindle interest as it falls further behind rival LVMH

Runway shows for the Balenciaga fashion house are typically lurid extravaganzas featuring theatrics such as mud-splattered catwalks, artificial snowstorms and thrumming techno beats. This year’s event on March 5 at a venue below the Louvre pyramid in Paris, by contrast, was a study in restraint, with scant decoration and a quiet, calming soundtrack.

The shift underscores the challenges facing Kering SA, the holding company that owns Balenciaga and more than a half-dozen other luxury labels. Balenciaga has been in crisis mode since November, when it unveiled an ad campaign showing young children with teddy bears that were wearing what appeared to be bondage gear. And Kering’s flagship brand, Gucci, has seen tepid sales even as rivals Hermès, Louis Vuitton and Prada prosper.

By some measures, Kering is doing OK. It had comparable revenue growth of 9% last year, helped by strong performance at Yves Saint Laurent, and it booked operating profit of €5.6 billion ($6 billion). But the numbers pale next to those of its larger rival LVMH Moët Hennessy Louis Vuitton SE, whose sales jumped 17%, yielding profit of €21 billion. Since 2018, Kering’s share price has climbed almost 60%, while LVMH’s has more than tripled, making it Europe’s most valuable company and its founder, Bernard Arnault, the world’s richest person. “I’m not going to pretend the results we are presenting today are up to our ambitions, or that I’m satisfied,” Chief Executive Officer François-Henri Pinault said when releasing Kering’s financial results in February.

● De Sarno

Gucci, which accounts for two-thirds of Kering’s profit, is the biggest problem. The label prospered for years under designer Alessandro Michele, but the brand didn’t bounce back from the pandemic as robustly as some competitors did, and revenue grew only 1% last year. After more than seven years at the creative helm, Michele left Gucci in November, saying he and the company had “different perspectives.”

In January, Pinault named a new Gucci creative director, Sabato De Sarno, a little-known designer from Valentino SpA. Pinault has said De Sarno

DE SARNO: RICCARDO RASPA/GUCCI. COURTESY BALENCIAGA can re-create Gucci's appeal with timeless products drawing on the brand's heritage. His choice indicates "Gucci is headed toward more elegant and more formal looks, and moving away from casual designs," says Jean Vigneron, a consultant who specializes in creative industries at executive search firm Egon Zehnder. "Valentino is more associated with tailoring and couture."

But De Sarno's creations for Gucci won't hit stores until early next year, so 2023 will be "a year of transition," says Carole Madjo, an analyst at Barclays Plc. "You can't expect some miracle to happen here, to see a change overnight in terms of the brand momentum," she says. "It will take time."

There's evidence Gucci is making headway. With China reopening, the company is looking to the country and its wealthy shoppers for growth, and Pinault has said sales over the Lunar New Year beat expectations. The CEO wants to generate a greater sense of exclusivity with an initiative called Gucci Salon, aimed at wooing wealthy shoppers to dedicated stores where prices for custom-made clothing, handbags and furnishings will start at €40,000 and rise into the millions for high-end jewelry. Balenciaga, meanwhile, is still reeling from the hit it took last fall, though sales have started to recover after slumping over the holidays.

◀ On the runway at Balenciaga's March 5 show in Paris

Under artistic director Demna (who uses a single name), appointed in 2015, Balenciaga had sparkled with blockbuster offerings such as Triple S sneakers and Le Cagole handbags. But the ads with the bondage teddy bears, as well as one that showed a handbag resting on a US court document discussing child pornography, triggered social media blowback and outraged headlines in newspapers worldwide. Demna, brand CEO Cédric Charbit and Pinault all apologized. The March show, Balenciaga's first since the controversy blew up, was intended "to move on and do what I do best, which is making clothes," Demna told reporters after the event.

"I'm not going to pretend the results we are presenting today are up to our ambitions, or that I'm satisfied"

Balenciaga has since reorganized its internal controls and appointed an agency to oversee marketing content. To avoid similar missteps at other labels, Kering's managing director, Jean-François Palus, says the company is considering the creation of a "brand safety" role at the group level. But while Kering wrestles with those issues, LVMH is powering ahead. Louis Vuitton alone crossed the €20 billion sales milestone last year—about twice Gucci's. And in February, Louis Vuitton named superstar Pharrell Williams as its new menswear designer. He'll unveil his first collection in June, three months before De Sarno's September debut for Gucci. —*Angelina Rascouet*

THE BOTTOM LINE Despite growing 9% last year and turning a profit of $6 billion, Kering is overshadowed by LVMH, which saw 2022 sales growth of 17% and profit topping $22 billion.

Prying Open the Insurance Black Box

● Rule changes give companies tools to control health spending—and a legal responsibility

US employers spend more than $1 trillion a year on health insurance for workers and their families. While they've long had a fiduciary duty to ensure that those funds are spent prudently, most have relied on insurers and other middlemen to define benefits, negotiate prices with physicians and hospitals, and pay claims. Now new federal policies are adding pressure to companies to make sure they're not squandering employees' health benefit money.

That won't be easy in a health-care system where a quarter of spending is wasted and the cost and quality of care vary wildly. The details of prices and fees have long been hidden from employers, kept secret in contracts worked out by insurers, hospitals and benefits consultants. New measures aim to force them into the open, making it easier for companies to understand where their money is going.

Rules introduced during the Trump ▶

◀ administration ordered hospitals and insurers to disclose prices they negotiate. Congress later added the requirement that brokers and consultants that design health benefits programs tell employers whether they're getting compensation from companies whose products and services they recommend. "It's a double-edged sword," says Elizabeth Mitchell, chief executive officer of the Purchaser Business Group on Health, which represents dozens of employers such as Apple, Boeing and Walmart. "They now have the information they couldn't access before, but they also have to act on that."

The policies are meant to spur the kind of oversight that's become common with retirement plans since the mid-2000s, when companies faced waves of lawsuits from retirees over their 401(k) plans. As plaintiffs began suing companies for high fees or bad investment choices in the funds, "all of a sudden employers started paying attention," says Karen Handorf, a former US Department of Labor attorney now at Berger Montague in Washington, DC.

Health-care companies are increasingly mashups of insurers with clinics, prescription benefit managers, pharmacies and physicians' groups. The consolidation hurts competition and increases the potential for conflicts of interest, in part because claims paid by insurance companies often go to corporate brethren, says Michael Thompson, CEO of the National Alliance of Healthcare Purchaser Coalitions, which represents employers. "When you lift the covers of what's happening, you start realizing, 'Oh my God, this thing is a mess,'" Thompson says.

In 2021 a school district in Osceola County, Florida, sued a consultant that had advised it on choosing an insurer. The district said the consultant, a unit of insurance brokerage Arthur J. Gallagher & Co., was secretly taking commissions from insurance company Cigna. Gallagher disputed the allegations in court, and the case was settled in January. Gallagher and Cigna declined to comment. Also in 2021, the state of New Jersey discovered its employee health plan sometimes paid hospitals triple the list price for care. Its insurer, Horizon Blue Cross Blue Shield, denied it was violating its contract, and the state says it's still in talks to resolve the matter. America's Health Insurance Plans, a lobbying group, says that it endorses greater transparency and that insurers' progress in implementing the new policies will improve over time.

Some plans have proven that close oversight of health costs can yield savings. The 32BJ Health Fund spends $1.5 billion annually on benefits for 210,000 workers and families affiliated with the Service Employees International Union. The fund, jointly governed by representatives from the

union and various companies, last year removed NewYork-Presbyterian hospitals from its network after determining the system's prices were higher than others. The hospital group didn't respond to a request for comment.

The new transparency rules will give plan sponsors even greater visibility into how the prices they pay compare in the marketplace, says Cora Opsahl, director of the health fund. Opsahl estimates that removing NewYork-Presbyterian saved $30 million in 2022, and she says other employers have been trying similar strategies as the new disclosure policies take effect. "Ultimately, you as the employer are now responsible for these decisions," she says.

The new policies were little noticed when they passed in the waning days of the Trump administration, and compliance has been halting, says James Gelfand, president of the Erisa Industry Committee, a lobbying group for large companies. "Every piece of this has some hiccup," he says. But eventually, companies should use the data to demand more competitive rates. Employers that "keep doing exactly what we're doing" will face lawsuits, Gelfand says. "Plan sponsors always had the responsibility not to waste the employees' money. But all the health-care prices were secret." —*John Tozzi*

THE BOTTOM LINE New measures requiring greater disclosure of fees for health insurance plans are intended to spur the kind of oversight that's become common with retirement plans.

▼ Spending on US employer-sponsored health insurance

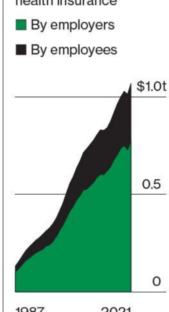
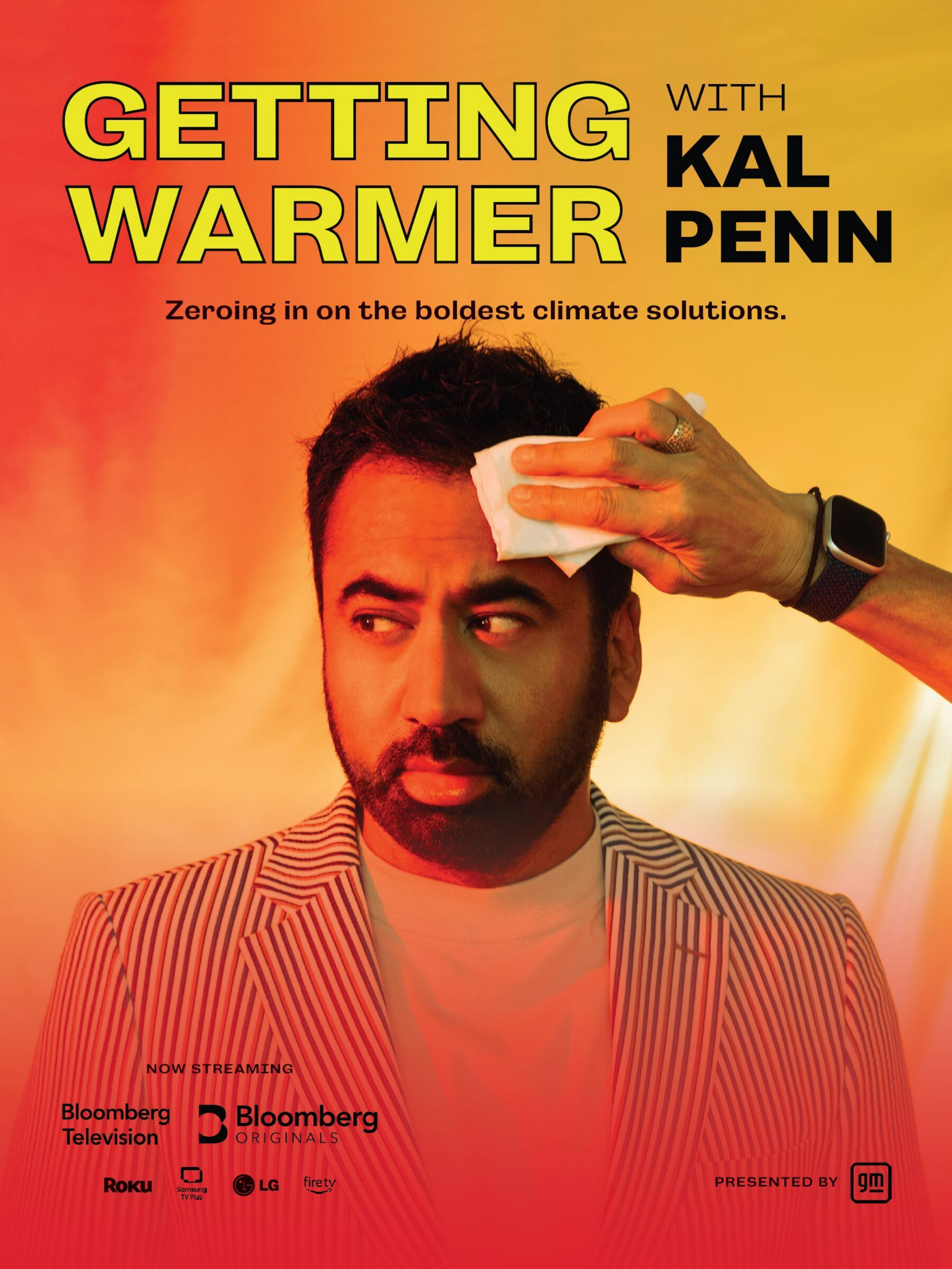


ILLUSTRATION BY MICHELLE KWON. DATA: CENTERS FOR MEDICARE & MEDICAID SERVICES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Google's ChatGPT Response? Stuff AI Into Everything

● A company widely seen as a leader in the field scrambles to regain the initiative

Artificial intelligence was supposed to be Google's thing. The company has cultivated a reputation for making long-term bets on all kinds of far-off technologies, and much of the research underpinning the current generation of AI-powered chatbots took place in its labs. Yet a startup called OpenAI has emerged as an early leader in so-called generative AI—software that can produce its own text, images or videos—by launching ChatGPT in November. Its sudden success has left Google parent company Alphabet Inc. sprinting to catch up in a key subfield of the technology that Chief Executive Officer Sundar Pichai has said will be "more profound than fire or electricity."

ChatGPT, which some see as an eventual challenger to Google's traditional search engine, seems doubly threatening given OpenAI's close ties to Microsoft Corp. The feeling that Google may be falling behind in an area that it's considered a key strength has led to no small measure of anxiety in Mountain View, California, according to current and former employees as well as others close to the company, many of whom asked to remain anonymous because they weren't allowed to speak publicly. As one current employee puts it: "There is an unhealthy combination of abnormally high expectations and great insecurity about any AI-related initiative."

The effort has Pichai reliving his days as a product manager, as he's taken to weighing in directly on the details of product features, a task that would usually fall far below his pay grade, according to one former employee. Google co-founders Larry Page and Sergey Brin have also gotten more involved in the company than they've been in years, with Brin even submitting code changes to Bard, Google's ChatGPT-esque chatbot. Senior management has declared a "code red" that comes with a directive that all of its most important products—those with more than a billion users—must incorporate generative AI within months, according to a person with knowledge of the matter. In an early example, the company announced in March that creators on its YouTube video platform would soon be able to use the technology to virtually swap outfits.

Some Google alumni have been reminded of the last time the company implemented an internal mandate to infuse every key product with a new idea: the effort beginning in 2011 to promote the ill-fated social network Google+. It's not a perfect comparison—Google was never seen as a leader in social networking, while its expertise in AI is undisputed. Still, there's a similar feeling. Employee bonuses were once hitched to the success of Google+. Current and former employees say at least some Googlers' ratings and reviews will likely be influenced by their ability to integrate generative AI into their work. The code red has already resulted in dozens of planned generative AI integrations. "We're throwing spaghetti at the wall," says one employee. "But it's not even close to what's needed to transform the company and be competitive."

In the end, the mobilization around Google+ failed. The social network struggled to find traction with users, and Google ultimately said in 2018 that it would shutter the product for consumers. One former Google executive sees the flop as a cautionary tale. "The mandate from Larry was that every product has to have a social component," this person says. "It ended quite poorly."

A Google spokesperson pushes back against the comparison between the code red and the Google+ campaign. While the Google+ mandate touched all products, the current AI effort has largely consisted of Googlers being encouraged to test out the company's AI tools internally, the spokesperson says: a common practice in tech nicknamed "dogfooding." Most Googlers haven't been pivoting to spend extra time on AI, only those working on relevant projects, according to the spokesperson.

Edited by Joshua Brustein

ILLUSTRATION BY NICK LITTLE. PICHAI: KYLE GRILLOT/BLOOMBERG

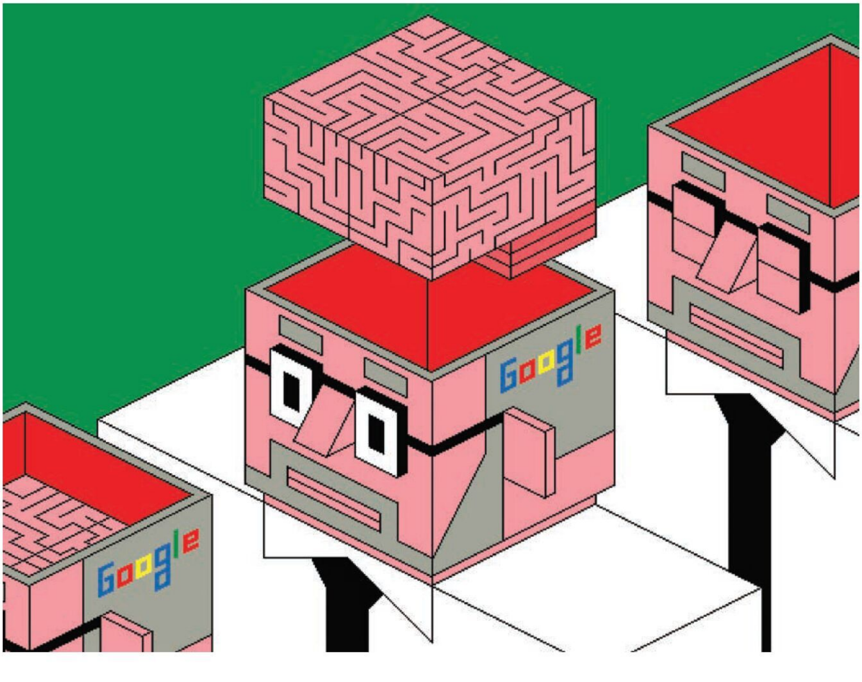
Google isn't alone in its conviction that AI is now everything. Silicon Valley has entered a full-on hype cycle, with venture capitalists and entrepreneurs suddenly proclaiming themselves AI visionaries, shifting away from recent fixations such as the blockchain, and companies seeing their stock prices soar after announcing AI integrations. In recent weeks, Meta Platforms Inc. CEO Mark Zuckerberg has been focused on AI rather than the metaverse—a technology he recently declared so foundational to the company that it required changing its name, according to two people familiar with the matter.

The new marching orders are welcome news for some people at Google, who are well aware of its history of diving into speculative research only to stumble when it comes to commercializing it. Members of some teams already working on generative AI projects are hopeful that they'll now be able to "ship more and have more product sway, as opposed to just being some research thing," according to one of the people with knowledge of the matter.

In the long run it may not matter much that OpenAI sucked all the air out of the public conversation for a few months, given how much work Google has already done. Pichai began referring to Google as an "AI-first" company in 2016. It's used machine learning to drive its ad business for years while also weaving AI into key consumer products such as Gmail and Google Photos, where it uses the technology to help users compose emails and organize images. In a recent analysis, research company Zeta Alpha examined the top 100 most cited AI research papers from 2020 to 2022 and found that Google dominated the field. "The way it has ended up appearing is that Google was kind of the sleeping giant who is behind and playing catch-up now. I think the reality is actually not quite that," says Amin Ahmad, a former AI researcher at Google who co-founded Vectara, a startup that offers conversational search tools to businesses. "Google was actually very good, I think, at applying this technology into some of their core products years and years ahead of the rest of the industry."

Google has also wrestled with the tension between its commercial priorities and the need to handle emerging technology responsibly. There's a well-documented tendency of automated tools to reflect biases that exist in the datasets they've been trained on, as well as concerns about the implications of testing tools on the public before they're ready. Generative AI in particular comes with risks that have kept Google from rushing to market. In search, for instance, a chatbot could deliver a ▶

● Pichai



◀ single answer that seems to come straight from the company that made it, similar to the way ChatGPT appears to be the voice of OpenAI. This is a fundamentally riskier proposition than providing a list of links to other websites.

Google's code red seems to have scrambled its risk-reward calculations in ways that concern some experts in the field. Emily Bender, a professor of computational linguistics at the University of Washington, says Google and other companies hopping onto the generative AI trend may not be able to steer their AI products away "from the most egregious examples of bias, let alone the pervasive but slightly subtler cases." The spokesperson says Google's efforts are governed by its AI principles, a set of guidelines announced in 2018 for developing the technology responsibly, adding that the company is still taking a cautious approach.

Other outfits have already shown they're willing to push ahead, whether Google does or not. One of the most important contributions its researchers have made to the field was a landmark paper titled "Attention Is All You Need," in which the authors introduced transformers: systems that help AI models zero in on the most important pieces of information in the data they're analyzing. Transformers are now key building blocks for large language models, the tech powering the current crop of chatbots—the "T" in ChatGPT stands for "transformer." Five years after the paper's publication, all but one of the authors have left Google, with some citing a desire to break free of the strictures of a large, slow-moving company.

They're among dozens of AI researchers who've jumped to OpenAI as well as a host of smaller startups. That only a few key places have the knowledge and ability to build large language models makes the competition for that talent "much more intense than in other fields where the ways of training models are not as specialized," says Sara Hooker, a Google Brain alumna now working at AI startup Cohere Inc.

"We're throwing spaghetti at the wall. But it's not even close to what's needed to transform the company"

It's not unheard of for people or organizations to contribute significantly to the development of one breakthrough technology or another, only to see someone else realize stupefying financial gains without them. Keval Desai, a former Googler who's now managing director of venture capital firm Shakti, cites the example of Xerox Parc, the research lab that laid the groundwork for much of the personal computing era, before Apple Inc. and Microsoft came along and built their trillion-dollar empires on its back. "Google wants to make sure that it's not the Xerox Parc of its era," Desai says. "All the innovation happened there, but none of the execution." —*Julia Love and Davey Alba, with Sarah Frier, Mark Bergen and Lynn Doan*

THE BOTTOM LINE Google, which has often been slow to commercialize research, was being cautious about its AI products until a key rival's advances changed its risk-reward calculations.

Instagram's Founders Say It's Time for a New Social App

● The rise of AI and the fall of Twitter could create opportunities for upstarts

● Systrom

PHOTOGRAPH BY CASSIDY ARAIZA FOR BLOOMBERG BUSINESSWEEK

When Kevin Systrom and Mike Krieger created the app that would become Instagram, they rode the wave of a major technological shift by building a simple utility. The iPhone had led to the rapid rise of smartphone photography, so the duo made an app that offered free software filters to improve the way those snapshots looked. The social networking features that would turn Instagram into one of the most successful consumer products of all time came later. "Instagram to a lot of people was a filter app first and a social network second," Systrom says. "It's pretty clear to me that the best social networks usually start as a utility doing something else and kind of grow into a social network over time."

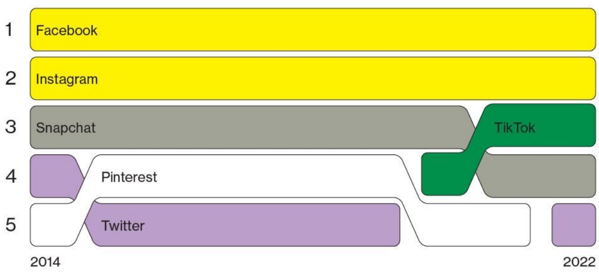
The founders outmaneuvered a handful of similar photography apps and became prominent within tech circles—not to mention rich—by selling Instagram to Facebook in 2012. Almost four years after walking away following disagreements with Meta Platforms Inc. Chief Executive Officer Mark Zuckerberg over Instagram's direction, Systrom, now 39, and Krieger, 37, are back together to create something new: a news-reader app called Artifact.

The long-term hope is to replicate Instagram's success as a social network, but Artifact is also based on the idea that laying the foundation means building a simple, useful tool first. The app is centered on a scrollable feed of news articles, personalized to each reader's taste. Users are required to enter at least 10 categories of news that they're interested in (e.g., US politics, the NFL, space) and the publications they care about. Algorithms then track users' behavior and determine which articles to show them. The app asks readers to click on at least 25 articles over two weeks so it can personalize its offerings, displaying their progress on the bottom right-hand corner of the page. Eventually, Artifact will incorporate social features so people can discuss what they're reading with others. "Hopefully it will grow into a social network," Systrom says, "if that's the direction we choose to take it."

This kind of app isn't a particularly novel idea. An obvious—and daunting—competitor is Apple News, which has the distinct advantage of coming installed on every iPhone. Building a big social network is also hard, largely because of the dominance of Meta and other incumbents. But there's a sense of opportunity in the air. Meta's Facebook has been stumbling and is pulling back from news on its app, ending deals with publishers and pushing more people toward short videos to compete with TikTok. Meanwhile, Twitter, which has the reputation of being the preferred social network for news addicts, has been in a tailspin since Elon Musk purchased it in October, giving rise to a handful of look-alikes hoping to attract disenchanted users searching for an alternative. This may be the best time in recent memory to start a social network, especially one centered on news.

An Exclusive Club

Top US social platforms by average monthly users



DATA: DATA.AI

Systrom says he's less focused on the drama at Twitter Inc. than on another story captivating Silicon Valley: the rise of new artificial intelligence tools. Recent advancements in AI software have dramatically improved how computers can understand and produce text, which could prove useful for an app like Artifact.

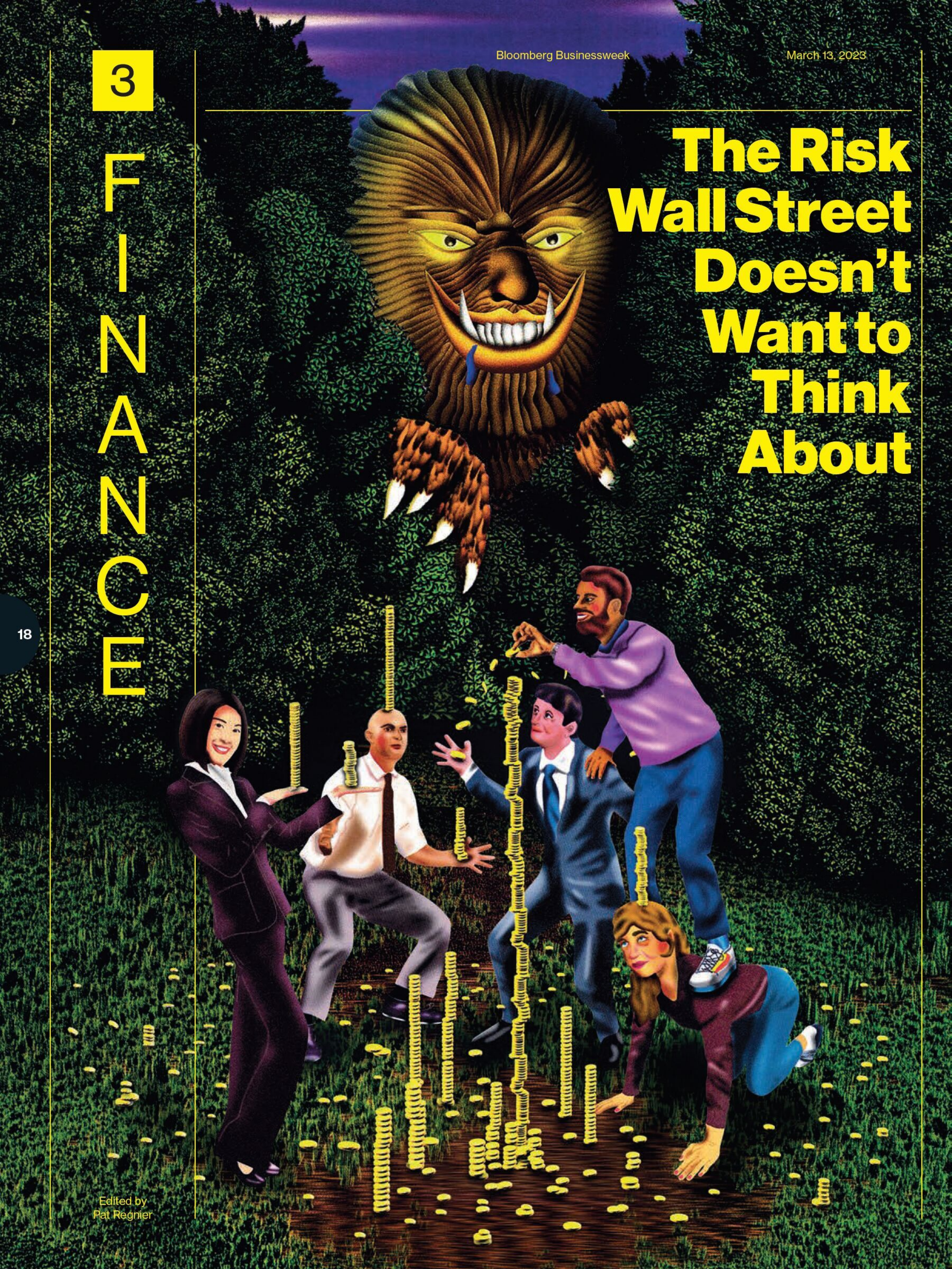
Although AI has been a staple of the tech industry for years, the current crop of so-called generative AI tools, which create their own writing, photos or videos, has convinced many people that a transformation is under way. Systrom says that advanced improvements to language modeling could produce a slew of startups, just as the iPhone ushered in the broader mobile app economy. "Doors typically open when fundamental technology shifts happen," he says.

At first, Systrom sees Artifact using such technology to sift through a sea of headlines to decide which stories each person will want to read. In the future, he says, his company could create its own content, perhaps using text-generation software to summarize or analyze major news events.

Building the technology is just the first step. Artifact will need to come up with a sustainable business model and, most likely, a compelling pitch to media partners if the app continues to expand. Systrom and Krieger do have some natural advantages, including their personal wealth—they're funding Artifact on their own for now—and name recognition, which will get many people in and around the tech industry to pay attention. Even as he says the timing couldn't be better, Systrom acknowledges the chances for a new social media venture are never great. "It's really hard to build one of these things from scratch," he says. —*Kurt Wagner*

THE BOTTOM LINE A new app called Artifact aims to attract users with a news reader, then build a social network with the audience it draws in.

The Risk Wall Street Doesn't Want to Think About



Edited by
Pat Regnier

● The consequences of not raising the debt ceiling are so awful that Congress is sure to do it in time—right?

Conventional wisdom says the US will avoid a devastating federal payments default later this year. But conventional wisdom has proved spectacularly wrong preceding shocks that upended the world in recent years: the failure of Lehman Brothers, the 2016 US election, the global spread of Covid-19.

The source of the potential shock is a procedural quirk of the US government that's intersected with soaring partisan hostility. The federal debt has hit a legal limit imposed by Congress, and Republicans in the House of Representatives say they want concessions from Democrats and the White House before raising it. Such standoffs aren't new. But lawmakers have never failed to pass an increase or suspension of the debt ceiling before the Department of the Treasury ran out of cash to make good on US obligations.

"If something has not happened for a long period of time, most people simply forget about it," says Tyler Cowen, an economist at George Mason University. He trained under Thomas Schelling, a pioneer in game theory–the study of how people vie for advantage or decide to cooperate. "We simply start assuming: 'Can't happen; it won't happen.' It's not even within the set of our consciousness," says Cowen, who's also a Bloomberg Opinion columnist.

Financial markets are showing little sign of concern, and economists are shrugging off the risk that lawmakers might fail to make a deal. Most assume that in this game, the consequences of not raising the $13.4 trillion ceiling are ultimately intolerable to both sides. "The market is quite complacent," says Tracy Chen, a portfolio manager at Brandywine Global Investment Management. But the so-called X date–the day the government won't be able to pay all its bills–is only months away. And the politics driving negotiations this time around are shaping up to be more perilous than in previous episodes.

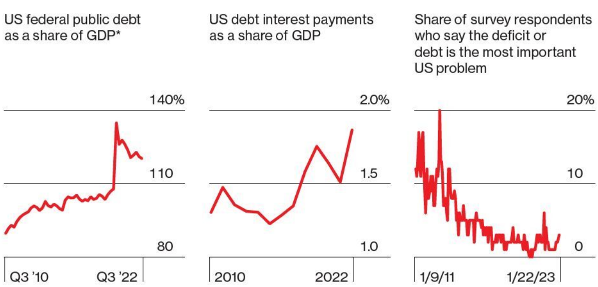
The debt ceiling restricts the government's ability to borrow to meet spending commitments Congress has already made. A default on such payments would pose the biggest shock to the US financial system since the Lehman Brothers bankruptcy. Americans already struggling with high interest rates would see borrowing costs rise for everything, whether mortgages, credit card balances or auto loans. Beaten-down 401(k) portfolios are in danger of further damage. The 2011 partisan showdown over the debt ceiling ended with a compromise that averted default but still sent the S&P 500 down 17%. "Investors should be very cautious," Chen says.

Traders and regulators learned some lessons from the 2011 fight, but nobody truly knows if the procedures in place to muddle through after the X date would be sufficient to avert a financial meltdown. The Treasury's first decision would be whether to prioritize some obligations over others, though some experts warn that it's not possible to cherry-pick payments. Former officials assume the Treasury would keep making payments on the $24 trillion of publicly held government securities. Defaulting on those would undermine the bonds whose yields serve as benchmarks for the cost of borrowing around the world. Treasuries also serve as collateral for trillions of dollars of short-term money-market loans. They're so built into the basic plumbing of the global economy that the damage from missed payments can only be guessed at.

"We do tabletop exercises, but it's never actually been tested," says Robert Toomey, a managing director at the Securities Industry and Financial Markets Association, the top US association for broker-dealers, investment banks and asset managers. "Our opening premise is that we believe that the full faith and credit of the US government should not be compromised," he says. "We should raise the debt limit, period, end of story."

Prioritizing Treasuries would be politically challenging, because the government would be making good on payments to wealthy investors and the likes of China's government, while delaying indefinitely payments to millions of federal employees, contractors, military personnel, Social Security beneficiaries and others. But it could also affect how investors perceive US creditworthiness, potentially undermining the value of Treasuries and raising issues similar to an outright default on government bonds. ▶

The Debt Burden Is Up But Draws Less Concern



*SEASONALLY ADJUSTED GDP. SURVEY FIGURE AS OF SURVEY END DATE. DATA: FEDERAL RESERVE BANK OF ST. LOUIS, GALLUP POLL

ILLUSTRATION BY LUCA SCHENARDI

◀ What if a Treasury payment had to be delayed? Key participants in the market have assembled contingency procedures over the years, aiming to allow for the Treasury each evening to roll over the maturity date of a security by one day if it had insufficient funds to pay off that obligation. In other words, it would delay paying the principal. Still, it's unknown whether all systems would be able to process a transaction on, say, Aug. 10 for a security that was supposed to have matured and been paid off on Aug. 9.

Federal Reserve Chair Jerome Powell has warned that "no one should assume that the Fed can protect the economy from the consequences of failing to act in a timely manner" on the debt limit. One key danger that Powell homed in on a decade ago, when he was a Fed board member during another debt ceiling showdown in 2013, was that investors would be scared away from buying all of the securities being offered at a Treasury auction. "The real risk is of a failed auction," Powell said at the time, according to a Fed transcript of policymakers' discussions. With an auction failure, the Treasury might not be able to raise enough cash to pay off maturing debt, causing a cascade of problems.

There's still time to act: Goldman Sachs Group Inc. estimates the X date will come in early to mid-August. But the intricacies of legislative procedure and the narrow partisan split in Washington aren't helping. GOP House Speaker Kevin McCarthy has a tenuous hold over a group of Republicans who say they're determined not to compromise. He fell short of winning the speakership in 14 votes in January before ultimately winning on the 15th vote. One of McCarthy's concessions in the process was allowing a single lawmaker to force a snap vote to remove him as speaker. That will give leverage to a small group of hardliners who can force changes to legislation by imperiling McCarthy's speakership. Even without such a threat, McCarthy can afford only four Republican "noes" on any party-line vote.

For conservatives, the debt ceiling debate offers a key pre-2024 election chance to paint Democrats as wasteful, inflation-inducing government spenders. They may need something dramatic, given that only 3% of Americans named the federal debt or deficits as the nation's most pressing problem in a Gallup Poll in February, compared with as many as 17% in 2011. "It is an opportunity to raise awareness," says Representative Scott Perry, who chairs the conservative Freedom Caucus. "You have to be able to use the moment to effect the changes so you don't keep bankrupting the country."

There is palpable glee among some of Perry's allies about the chance to slash the size of government. Representative Thomas Massie of Kentucky, an engineer and hardline conservative, beamed with delight as he left the House floor recently, showing off a suit-pocket debt clock he made from copper roofing materials. "Already, 20 members of Congress have asked me to make them one," he said.

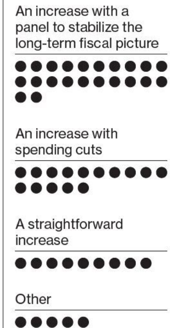
At the White House, President Joe Biden is clinging closely to lessons from the 2011 debt standoff. Many Democrats see the ultimate deal as having undermined the nation's rebound from the global financial crisis, which may make them less willing to negotiate around deficits this time. For Democrats, the idea that Republicans are willing to engage in a game of chicken over the nation's creditworthiness reinforces their efforts to portray the GOP as erratic, extremist and aligned with former President Donald Trump. "They're playing Russian roulette with the economy," says John Anzalone, who conducts polls for Biden. "The American people are going to punish them for it."

Legislative solutions, apart from a grand fiscal deal between Biden and Republicans that now seems unlikely, include the potential for a number of moderate Republicans to join with the House minority to push through a "clean" debt limit increase, one without any conditions. But it's a complex process that requires so much time it may be impossible. The Senate also faces challenges, with 24 GOP members having warned Biden that "structural" fiscal changes are needed to raise the debt limit. A down-to-the-wire solution could still involve major strains. As then-New York Fed President William Dudley put it in the Fed's discussion in 2013, there's "a risk of something going wrong even if you have more runway than you think."

In the worst-case scenario of a Treasuries default, "the burden on the US economy would take years to go away," says Jack Malvey, who's been watching the bond market since the 1970s and is now a special counselor at the Center for Financial Stability. Any short-lived halt in payments by the Treasury—interest owed to bondholders, salaries for federal workers, benefits to Social Security recipients—"would elicit a swift and potentially devastating market reaction," wrote David Wilcox, director of US economic research at Bloomberg Economics.

Even if Treasuries were protected, cutting off millions of federal employees and entitlement beneficiaries would almost certainly trigger an instant recession. Recent war-gaming by Barclays Plc analysts showed the Treasury would need to cut about $200 billion of spending in the month of August if its borrowing needs were the same as recorded in August 2021. If it took weeks for the government to

▼ Number of surveyed economists who say the following is the most likely outcome of the debt limit fight



"We should raise the debt limit, period, end of story"

resume spending and make up for those delayed payments, "there could be a sharp drop" in gross domestic product of as much as 15% at an annualized rate, the bank's team wrote in a note to clients.

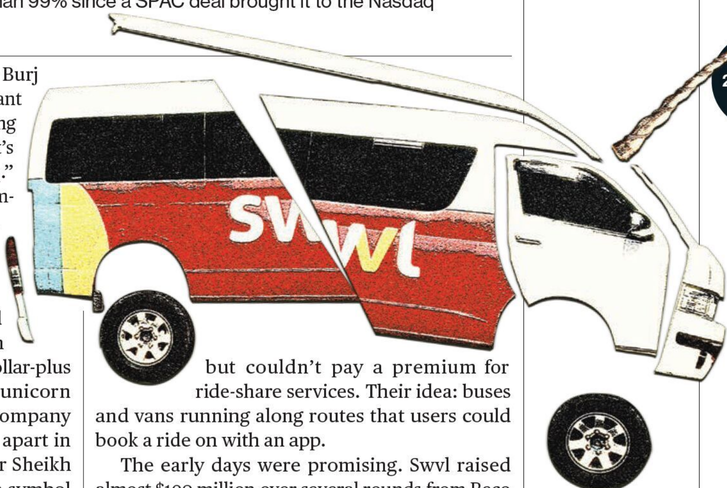
It might take some sort of market turmoil to force Congress's hand. That was the case in the financial crisis of 2008, when the House in late September rejected a $700 billion bailout plan, only to clear a slightly revised version days later after markets plunged. For now, there are limited signs of concern. Economists surveyed by Bloomberg are convinced that the risk of default is very low—under 10%—and that the politicians will ultimately secure some kind of fiscal deal. And although the price of certain financial contracts that insure against nonpayment of US debts has gone up, investor concern has been softened by the lack of a precise deadline.

The sanguine outlook might work against a deal: If no one thinks the worst will happen, they may be more willing to hold out. Economist Cowen says things might be "fine" this time, as in the past. But going through another tense process escalates the dangers. "Look, if you run the experiment enough times, sooner or later it's not fine," he says. *—Liz Capo McCormick, Erik Wasson, Josh Wingrove and Mike Dorning*

THE BOTTOM LINE If the debt ceiling isn't raised so the US government can pay its bills, this procedural quirk could throw a wrench into the global financial system and the US economy.

The Fall of a Middle East Unicorn

● The value of Swvl has dropped more than 99% since a SPAC deal brought it to the Nasdaq



In July 2021 the world's tallest tower, the Burj Khalifa in Dubai, was briefly lit up in brilliant red, with animated electronic text scrolling up its height announcing "the Middle East's first $1.5 billion unicorn to list on Nasdaq." The splashy marketing was for Swvl, a company with lofty ambitions to become a hybrid of a ride-hailing app and bus service in cities across the globe.

Twenty months later, the Dubai-based company's shares have dropped more than 99%. Its roughly $9 million market value is a shadow of the billion-dollar-plus valuation that once gave it so-called unicorn status. A deal to buy Turkish transit company Volt Lines largely using Swvl shares fell apart in January. Once trumpeted by Dubai ruler Sheikh Mohammed bin Rashid Al Maktoum as a symbol of the Middle East's startup spirit, Swvl Holdings Corp. has become another example of tech-sector overreach—and how quickly investor money dried up once superlow interest rates went away. It also shows the perils of trying to build a business that straddles emerging markets vulnerable to currency shocks as the dollar rises.

Swvl was co-founded in Cairo in 2017 by former Rocket Internet SE executive Mostafa Kandil along with Ahmed Sabbah and Mahmoud Nouh. The trio started the company as a solution for commuters who didn't want to rely on public transit but couldn't pay a premium for ride-share services. Their idea: buses and vans running along routes that users could book a ride on with an app.

The early days were promising. Swvl raised almost $100 million over several rounds from Beco Capital, VNV Global, Digame Investment, Armistice Capital and other investors. The first one, putting in $500,000, was Dubai-based Careem, a ride-hailing company that Uber Technologies Inc. later acquired.

In 2019, Swvl opened an office in Dubai to spearhead its international expansion, though it kept its technology and operational base in Egypt. It rented space in an upscale building whose other tenants include BMW and Rolls-Royce. Along the way, Kandil's co-founders departed. (Nouh left to start a business-to-business marketplace company, ▶

PHOTO ILLUSTRATION BY 731; PHOTO: SHUTTERSTOCK. DATA: BLOOMBERG SURVEY OF ECONOMISTS, JAN. 24-27

◀ Capiter, that's now restructuring; Sabbah, to co-found the fintech startup Telda.)

When Swvl wanted to go public, it struck a deal to merge with Queen's Gambit Growth Capital, a special purpose acquisition company. At the time, SPACs were a hot way for companies to get listed. SPACs are public companies with no business other than to identify a private company to merge with; afterward, the target company inherits the SPAC's listing. Swvl's deal valued it at $1.5 billion, suddenly making it one of the region's biggest startups, and brought the company gross proceeds of more than $160 million in addition to Nasdaq status.

Swvl was out to span continents. It was operating in Kenya and Pakistan, and it moved into Mexico last year. After unveiling the arrangement with Queen's Gambit, the company—then earning $55 million in annual gross revenue—said it expected to bring in $1 billion a year within four years. Salaries were generous, and job postings boasted of opportunities for extensive travel, says a former executive at the company who asked not to be identified because of a nondisclosure agreement. Swvl brought in Youssef Salem, a highly regarded banker from Moelis & Co., as its chief financial officer.

In 2021, Swvl purchased the Argentina-based corporate transport platform ViaPool for its Latin America expansion. The following year it bought Berlin-based mobility company Door2door. It expanded operations in Neom, Saudi Arabia's nascent $500 billion high-tech city. The expansion was "supersmart," says Volt Lines founder Ali Halabi. "There was an Uber-for-bus in the making."

But while Swvl was on its way up, economic forces were gathering to bring it down. Inflation in the US prompted the Federal Reserve to begin raising interest rates in March 2022, and the higher cost of money discouraged investors from backing risky startups. A currency devaluation in Egypt, where Swvl did a lot of business, made things worse.

In May, Swvl said it was cutting its workforce by 32% to help its cash flow turn positive. Last summer, the shares went into free fall; on Nov. 25, Kandil announced plans to cut more than half the workforce and to sell, discontinue or scale back some operations in "smaller countries" to focus mainly on Egypt and Mexico.

It wasn't enough. Five weeks later, Swvl formed a special committee of independent directors to explore potential sales, mergers and other options. The company's stock briefly soared on the news, but the boost didn't last. Even the company's Nasdaq listing has been a source of drama. It risked losing it because the stock consistently traded below $1. After solving that with a "reverse split" that turned every 25 shares into one, the company now has stock that trades at around $1.70 per share.

"With the benefit of hindsight, this company shouldn't have gone public," said Per Brilioth, managing director of VNV Global, one of Swvl's principal shareholders, in a yearend call with his firm's investors. "Swvl, as you may have noticed, has completely fallen out of bed in terms of its stock price," he observed in a separate annual report. Still, Brilioth added, he remained "enthusiastic about its core business in emerging markets."

Swvl is now looking to raise fresh capital from investors while remaining a publicly listed entity, according to a person familiar with the matter who asked not to be named because the information is confidential. Until recently, the company had been sounding out regional financiers to potentially take the company private.

Swvl's fall was unusually sharp, but it isn't the only Middle Eastern startup that's failed to live up to high expectations. Dubai-based courier app Fetchr faded after a promising beginning almost a decade ago and shut down in 2021. Voice-chat startup Yalla Group Ltd., also based in the emirate, went public in the US in 2020 but has seen its market value fall to about $600 million from a high of almost $6 billion.

● Swvl's current market value

$9.2m

The investment climate has gotten more chilly in the Middle East and North Africa. Even though venture capital funding was up 8% overall in 2022, to almost $3.15 billion, according to data platform Magnitt, the year ended on a decline. Philip Bahoshy, founder and chief executive officer of Magnitt, says, "Valuations in the region are likely to decline to pre-pandemic levels, while funding is likely to shift toward countries where governments have a clear focus on innovation."

Fadi Ghandour, co-founder of Aramex PJSC, which in 1997 was the first Arab company to list on the Nasdaq, says the past year should serve as a warning about what can happen when valuations get frothy. "When there's liquidity, there's generally hype," he says. "But liquidity might always go at some point." This moment could be an opportunity for Middle Eastern founders to reconsider their strategies. "Why do Middle Eastern companies need to go public in the West?" he asks. "This might serve as a wake-up call for local exchanges to do more to attract local startups." *—Samuel Gebre, Nicolas Parasie and Farah Elbahrawy*

THE BOTTOM LINE Swvl came to the stock market with big plans to combine ride-hailing and bus service in major global cities. But it went public just as investors were about to flee from tech.

So Many Jobs, So Few Workers

● In Ohio, America's push to construct a slew of chip plants is running headlong into a labor shortage

If you want to see what Joe Biden has called his "field of dreams," head to the intersection of Clover Valley Road and Miller Road in Licking County, Ohio. Once you get there, you peer through a chain-link fence and around grassy berms at what on a recent gray winter morning looked like a sea of mud with a few bulldozers and some construction workers in hard hats and high-visibility vests. The cows in the nearby barn seemed more interested in their feed than the economic revolution unfolding next door.

Within a few months, those few dozen workers will grow into thousands, all assembling what the US president in his most recent State of the Union address promoted as one the most advanced semiconductor fabrication plants on the planet. The $20 billion Intel Corp. is pouring into that farm field is the fruit of a bipartisan federal effort. It aims to revive domestic chip production to ease what's become a dependence on Asian imports and also to counter China's drive to displace the US as the world's tech superpower.

Plans for Intel's complex in Ohio, its first major stateside project in 40 years, call for as many as 10 fabs to be built over a decade or more. An initial pair, due to be completed by 2025, will employ 3,000 workers. Putting up those buildings will require even more bodies: 7,000, give or take, according to company projections.

America's biggest foray into industrial policy since World War II faces one big hurdle that hasn't gotten much attention but is becoming apparent at Intel's Ohio outpost. Historically, the US has thrived because it's had ample pools ▶

● A training class at Central Ohio Technical College

PHOTOGRAPH BY MADDIE MCGARVEY FOR BLOOMBERG BUSINESSWEEK

Edited by Cristina Lindblad

◀ of labor—for reasons good (immigration) and bad (slavery). But the time has arrived when America's demographics are conspiring against its economic ambitions.

It's been only six months since the groundbreaking ceremony, but Intel's lead contractor is already scrambling to find workers. Catherine Hunt Ryan, president of manufacturing and technology at Bechtel Corp., says the project's need for electricians and pipe fitters "is significantly outstripping the supply of labor in the local area." Bechtel expects to import at least 40% of the workers it needs from outside the Columbus area, including other states. An additional 30% will be apprentices working their way through union programs.

Intel isn't alone. Right now the US doesn't have enough cooks, assembly line workers, nurses, teachers, truck drivers, police officers, firemen, welders—the list goes on. Unemployment is the lowest it's been in more than half a century, while the number of job openings is near an all-time high. The upshot: In January there were 5.1 million more positions available than people to fill them, according to researchers at the St. Louis Fed.

The ultratight labor market is often treated as a pandemic-driven aberration. But there's a strong case to be made that it's really the product of demographic trends that predated, and accelerated with, Covid-19. Experts say that without meaningful government intervention, America's worker deficit could become a tax on growth and trigger a new wave of offshoring, like the one the Chips and Science Act of 2022 is trying to reverse.

The US working-age population shrank in 2018 for the first time since at least 1960, as baby boomer retirements picked up and fewer young people entered the labor force. The cohort, which covers those aged 15 to 64, also contracted in the two years that followed and has edged up since only because of a bounceback in international

"It's like a tsunami of work"

A Growing Worker Deficit

*NUMBER OF PEOPLE EMPLOYED PLUS TOTAL NONFARM JOB OPENINGS. DATA: FEDERAL RESERVE BANK OF ST. LOUIS

◀ Hager

PHOTOGRAPHS BY MADDIE MCGARVEY FOR BLOOMBERG BUSINESSWEEK. RENDERING: COURTESY INTEL CORPORATION immigration. (The jump was largely a product of the easing of travel restrictions instituted at the height of the pandemic.)

Add it all up, and the results are striking: From 2017 to 2022 the US working-age population grew by just 1.7 million people, versus 11.9 million in 2000-05.

What was once a preoccupation for a narrow group of demographers and actuaries is now a concern for everyone from small-business owners to policymakers at the Federal Reserve. In a November speech, Fed Chair Jerome Powell cited pandemic deaths, a pickup in retirements and a drop in labor participation as key forces behind a widening worker shortfall. Because of the gap, wage growth has been running well above historical trends, complicating the Fed's task of bringing inflation to heel, he noted.

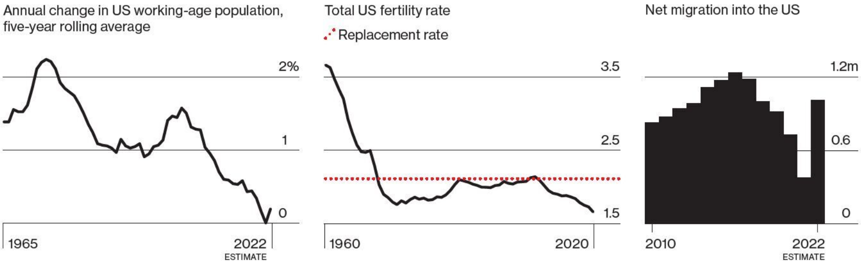
Of course, too many jobs isn't the worst problem for an economy to have. Talk to union chiefs in Ohio, and they speak in awe of a once-in-a-lifetime boom in demand for members' skills, thanks to Intel and other projects, such as a new Honda Motor Co. electric vehicle plant and an expansion of a Facebook data center. "It's like a tsunami of work," says Mike Knisley, who leads the Ohio State Building & Construction Trades Council. Yet he acknowledges the challenge ahead. One in five of his members is a baby boomer hitting retirement age in the next five years—and doing so after what was already a pandemic wave of retirements by their peers.

To recruit replacements, Dorsey Hager, head of the Central Ohio Building Trades Council, is now a regular visitor to middle schools, where he tries to get preteens to envision lucrative careers as electricians and plumbers. "We're not only talking to the kids, but we're also talking to the teachers," Hager says. "We're talking to the principals. We're talking to the guidance counselors. We're talking to the moms and dads." Five years ago he could promise them six to nine months of steady work at the end of a four-year apprenticeship, Hager says. Now, "I can honestly tell you that the work outlook is good for the next 22 to 25 years."

An increasingly contentious rivalry between US and China focused largely on technological innovation is already fueling a global war for talent in such strategic industries as semiconductors. ▶

▲ A rendering of the Intel complex in Ohio; the construction site

Anatomy of a Shrinking Workforce



DATA: FEDERAL RESERVE BANK OF ST. LOUIS, US CENSUS BUREAU

◀ Hager is engaging in the domestic version of that battle for bodies, which experts say will only get more intense in the coming years. A competition between states and municipalities that for decades has been about luring investors and factories has been "shifting in a significant way to availability of talent," says J.P. Nauseef, president and chief executive officer of JobsOhio, the state's economic development body.

It's a competition that can get snarky. Especially when you're a state with an aging workforce and a declining population. During the pandemic, JobsOhio launched an ad campaign targeting major US cities, promising a job and an affordable middle-class lifestyle to anyone courageous enough to move. "Work from 'home,' not 'overpriced studio apartment,'" read one billboard in New York. "Keep Austin weird. Like very high cost of living weird," blared another in the Texas capital.

◀ Training equipment at Central Ohio Tech

If all goes according to plan, Maddix Curliss will graduate from Central Ohio Technical College with a two-year associate degree in electrical engineering technology this May. The 20-year old isn't worried about landing a job. "I feel just overwhelmed by how many opportunities" there are, he says, adding that the robotics company where he now interns part time is already trying to recruit him.

Curliss and many of his classmates have their eyes on that Licking County farm field where Intel's plant is going up. "Not very often does a company like that land in Ohio, especially in what's basically my backyard," says Curliss, who grew up in nearby Newark. "Normally, companies like that, they go overseas."

The promise of $52 billion in subsidies offered in the Chips Act has already led to at least 40 projects and some $200 billion in private-sector investment, according to the semiconductor industry. To staff those plants, Secretary of Commerce Gina Raimondo says the industry will need 100,000 new technicians on top of the 277,000 it already employs. "It's such a different moment in history compared to the last 20, 40 or 50 years," says Gabriela Cruz Thompson, the Intel executive who has a $50 million budget to fund training programs at universities and technical colleges in Ohio. "We've never had so many companies building so much."

Incentives created by last year's Inflation Reduction Act are also motivating investment: New electric vehicle and battery plants are being announced almost weekly. The $1.2 trillion Congress approved for infrastructure in 2021 is also boosting demand for workers. Celebrating a Baltimore tunnel project in late January, Biden hailed the 20,000 jobs it would bring. The next day he was in New York City touting the Hudson Tunnel project and promising 72,000 "good jobs you can raise a family on" for "laborers, electricians, carpenters, cement masons, ironworkers, operating engineers and more."

The Biden administration argues that the overarching objective of all these pieces of legislation is to shore up America's competitiveness, but it's never been coy about the employment creation component. The president's advisers see the tight labor market as a tool for bringing those left behind by forces like globalization back into well-paid work and ensuring a brighter future for communities that missed out on past booms.

● Shortage of workers, as of January 2023

5.1m

Todd Tucker, director of industrial policy and trade at the Roosevelt Institute, a think tank, argues that many of the current worker shortages in industries such as manufacturing are the result of the very deindustrialization that these policies are trying to undo. "Once you lose capacity in certain industries or in certain geographies, it's hard to build that back," he says.

Anirban Basu, chief economist for Associated Builders & Contractors, a trade group, argues that the shortage of construction workers, which he says is the worst in more than 20 years, is a liability for the economy. "Imagine two countries, one with a significant construction workforce and one without," Basu says. "They're alike in all other facets. Except for that one has a body of workers available

PHOTOGRAPHS BY MADDIE MCGARVEY FOR BLOOMBERG BUSINESSWEEK to engage in construction, whether it relates to infrastructure or the commercial real estate market or building homes, and one doesn't. Which nation is going to grow faster? Which nation's going to be more dynamic? Which nation is going to offer a better-built environment and therefore a higher quality of life? Obviously the one with construction workers."

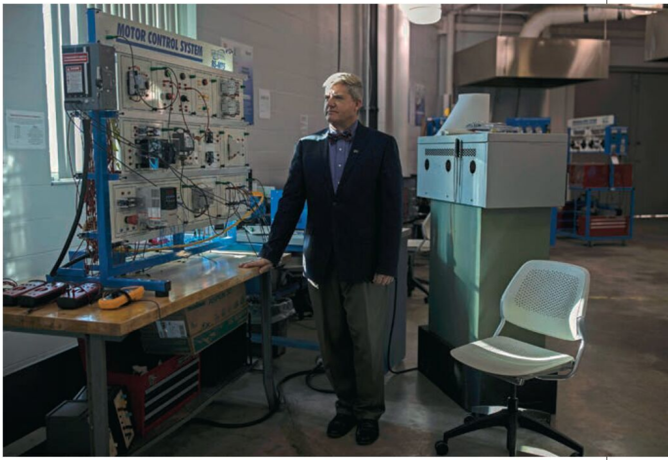
Cruz Thompson, the Intel executive in charge of finding the workforce the chipmaker needs, says some of the solutions to America's demographic problem will inevitably come from technology and automation. Programs Intel is funding now at universities in Ohio should produce 9,000 students in the next few years, she says. Equally comforting for Intel, though, is that "a fab has less people today than it did 20 years ago."

But robots get you only so far. Sujai Shivakumar, a senior fellow at the Center for Strategic and International Studies, says the US needs a national human resources strategy. In his view, the labor shortages Intel and other chipmakers face are just a preview of a crunch facing the broader economy. "In many ways the semiconductor industry is the first major industry to be pushed through that challenge," says Shivakumar, who until 2018 directed the innovation forum at the National Academies of Sciences, Engineering & Medicine.

One idea policy wonks embrace is revamping US immigration policy so it's geared more toward plugging workforce deficits, as it is in Canada and Australia. That could mean offering an expedited path to citizenship to those in specific occupations and those getting graduate degrees from US universities in such subjects as engineering.

Another possible fix would be to keep people in the workforce longer, by raising the age at which workers can begin collecting Social Security or tapping into their pensions or 401(k)s. Yet Harry Holzer, a former US Department of Labor chief economist now at Georgetown University, says that neither feels politically feasible right now. Immigration has been a toxic issue in American politics for years, and Social Security has long been an untouchable entitlement. "None of that is doable," Holzer says, which means "our labor force growth is going to continue to be modest."

To boost US women's labor force participation closer to levels in European countries, Washington and local governments could enact more policies that expand the availability of child care. Under rules announced at the end of February, for example, companies that receive $150 million or more in grants under the Chips Act will be required to make affordable care available to employees.



▲ Berry

Businesses may also need to work with universities and technical programs to ensure they're graduating students with the right set of skills. At Central Ohio Technical College, which is one of a coalition of community colleges that Intel is collaborating with, administrators are ramping up the technology program. It now has only about 150 students, and most are part-time.

John Berry, the college's president, says his institution should be able to provide 400 to 500 of the 2,300 technicians Intel will need to open its Ohio plant. But he's looking at an economy that also wants more nurses, radiology technicians and emergency medical technicians at a time when the population of college-age Americans is declining.

If anything, the problem is going to get worse. In 2021, 3.6 million babies were born in the US, the second-lowest number since the mid-1980s, after 2020. It was also 500,000 fewer babies than were born in 2005, when those turning 18 this year came into the world. Which means 500,000 fewer people entering the workforce or going to college 18 years from now.

Like Hager, the union boss, Berry is doing outreach at middle schools. He and his staff are also recruiting in rural Appalachia and courting refugee populations. But Berry knows that when you can make $18 to $20 an hour at the local Starbucks or driving for Uber, it's hard to get high school grads to commit to spending a few more years in a classroom. "Today's world order is just bizarre," he says. "There is just no other way to describe it." *—Shawn Donnan*

THE BOTTOM LINE A shrinking US workforce is complicating the Fed's efforts to tame inflation and presents a hurdle to Washington's ambitions to reverse decades of job offshoring.

MBAs

Tech Layoffs Rattle B-School Grads

Contraction in the industry could mean less recruiting of MBAs

Up to the very end, Jose Granados held out hope that he'd get a job at Meta Platforms Inc. A 32-year-old pursuing an MBA at Indiana University's Kelley School of Business, he'd won a summer internship at the social media giant. Such 12-week stints are often steppingstones to full-time positions after graduation. Granados had heard "rumblings" among colleagues about financial uncertainty in the industry, but he kept his head down and kept working.

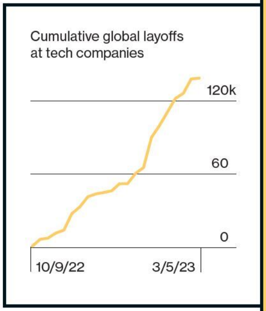
As his internship wound down in mid-August, his recruiter said the company would need until December to decide about a full-time offer, rather than the customary two or three weeks. "They were like, 'Listen, we understand if you have other opportunities.'" But, he says, "I wasn't super concerned, because I did a very good job, everybody seemed to like me, and I was growing in my role." Meta's announcement in November that it would lay off 11,000 workers and extend a hiring freeze through March was a blow. "I wasn't completely dissuaded," Granados says. But when he finally received word a month later that he wouldn't return to California, he says, he'd already dealt with his disappointment. "Now I have to commit time to recruiting," he says.

Granados isn't alone. Amazon.com Inc. has announced layoffs totaling 18,000 people. Alphabet Inc. has excised 12,000, and Microsoft Corp. cut 10,000. In all, the global ▶

ILLUSTRATION BY JAMES CLAPHAM

Edited by Dimitra Kessenides

◀ tech industry has shed 137,000 jobs since October, according to data collected by Bloomberg. The contraction has caused unease at business schools nationwide. Over the past several years, the US tech sector has absorbed about a fifth of newly minted MBAs, more than any other industry except consulting. Students at many schools join tech clubs to strategize breaking into the industry. At top schools, at least one leading tech company typically ranks among the largest individual recruiters.



It isn't yet clear how much the industry's contraction will curb recruiting at B-schools. Tech hiring slowed in 2022—for example, the share of job-seeking graduates from Northwestern's Kellogg School of Management going into tech fell five percentage points to 21%. Kelley at Indiana, Fisher at Ohio State, the Leeds School of Business at the University of Colorado and other schools posted even sharper declines—and lower starting salaries, too.

Unlike other industries, tech companies recruit graduating MBAs twice a year. Bigger players with longer planning horizons hire in the fall alongside traditional financial and consulting companies. More entrepreneurial-minded businesses recruit in the spring, in what's often called the "just-in-time" season. Career counselors at half a dozen schools say it's too soon to know what offers were made or accepted in the fall drive, before the layoffs began. At Kelley, MBA candidate Thai Gun says of her friends pursuing tech careers, "they were expecting to have more offers in the market and also more interviews. But they're not finding a lot of these. They're struggling." (Gun, for her part, accepted an offer at Amazon after wrapping up an internship at a warehouse in Pennsylvania. When the company announced its layoffs, she says, "I had this week not knowing what was going to happen.")

Some career counselors expect less just-in-time recruiting this spring. Students hoping to land a tech job must be nimble: "You need to look at adjacencies," says Liza Kirkpatrick, assistant dean of Kellogg's Career Management Center. "For example, there is a lot of tech at nontech companies." A higher share of Kellogg MBAs appear to take jobs that deal directly with technology than at many other schools, where graduates often gravitate to management and marketing positions.

The stakes are higher for international students, who depend on special STEM visas to work in the US for three years instead of just one, says John Helmers, director of graduate career management at Leeds. "They're feeling their prospects diminish dramatically." Helmers recommends those students do a three-pronged search: in the US, in their home country and in a third country friendly to skilled immigrants. "In recent years that's been Canada."

Counselors point out that tech companies are still hiring, despite the headlines. At Kelley, Amazon extended more offers last fall than it did a year earlier, says Rebecca Cook, executive director of Kelley Career Services, though it did push back start dates for those meant to begin in June—about half the students—to the end of the year. And Meta has told some schools that it plans to hire this spring, suggesting its freeze will lapse at the end of March, despite a new report of more layoffs. A Meta spokesperson didn't respond to a request for comment.

The current contraction "is kind of just a level-setting," Cook says. Tech companies "overhired—they hired for the amount of business they had in 2021 and early 2022." She and other counselors expect hiring to rebound by 2024 if it drops sharply this year.

Meanwhile, Granados is preparing to market himself. His fiancé has family in Washington, and he's had informal conversations with Microsoft reps. He's applied to other Big Tech companies, so far without success. Now he'll cast a wider net. "Whatever's a good culture fit, has a good philosophy and a good work life balance, that's what I'm for," he says. —*Robb Mandelbaum*

THE BOTTOM LINE The US tech sector has absorbed about a fifth of newly minted MBAs in recent years, but layoffs at its biggest players have left many soon-to-be graduates in limbo.

Wooing the Unemployed

Business schools see a crowded pool of applicants in laid-off (or worried) tech workers

Layoffs in the technology industry may have raised the anxiety levels of job-hunting MBA graduates. But they've led many business schools to try to tap into what they see as a growing pool of prospective students. In mid-November, Northwestern University's Kellogg School of Management said it would waive its standardized test requirement for laid-off tech workers who apply. Almost a dozen other MBA programs have put forth similar

ILLUSTRATION BY JAMES CLAPHAM; DATA: COMPILED BY BLOOMBERG incentives—such as waiving GMAT/GRE test scores or application fees—for newly unemployed workers.

"We wanted to provide a pathway for some very talented individuals who now find themselves at a crossroads and don't have much time to prepare for the GMAT or the application process in general," says Lawrence Mur'ray, executive director for admissions and financial aid at Dartmouth College's Tuck School of Business. Under Tuck's new rules, applicants can request a test waiver if they were laid off from a job in any industry after Aug. 1, 2022.

The offers have elicited lots of reactions in the world of MBA admissions. Some school leaders, MBA consultants and even students have praised the schools for what they describe as flexible and savvy moves. Other program watchers say the accommodations are unfair to applicants with jobs and smack of desperation at a time when B-school applications are declining. Domestic applications fell 25% at US programs that responded to the Graduate Management Admission Council's Application Trends Survey in 2021 and 2022. The losses were partly offset by a 19% increase in international applications.

"For students who had to take the tests," says Barbara Coward of the consulting firm MBA 360 Admissions, "these waivers are like when you buy an airplane seat and you're like, 'How did that person get it for $30 when I had to pay $250?'"

Business school applications tend to drop when the job market is strong, a dynamic that affects even the top MBA programs. In 2021-22, MIT Sloan School of Management, the Stanford Graduate School of Business, Harvard Business School and the Wharton School at the University of Pennsylvania all saw double-digit declines.

Admissions requirement waivers have caught prospective students' attention. "We have definitely seen an uptick in the total number of inquiries we've had," says Nydia MacGregor, associate dean of graduate programs at Santa Clara University's Leavey School of Business, in the heart of Silicon Valley. In addition to eliminating testing requirements and application fees for recently unemployed tech workers, Leavey is awarding scholarships of up to $5,000.

Easing application requirements for 2023 classes, selected major programs

Annoucement date		Exam waivers	Application fee waivers	Deadline extensions
11/14/22	Northwestern (Kellogg)*	●		
11/21/22	Indiana (Kelley)*	●	●	
11/21/22	MIT (Sloan)			●
11/22/22	NYU (Stern)	●		
11/28/22	Georgia Tech (Scheller)	●	●	
11/28/22	UC at Berkeley (Haas)		●	●
11/30/22	Cornell (Johnson)	●	●	
12/01/22	UCLA (Anderson)		●	●
12/08/22	Santa Clara (Leavey)*	●	●	●
01/09/23	Duke (Fuqua)			●
01/20/23	Dartmouth (Tuck)	●		

*ACCOMMODATIONS FOR LAID-OFF TECH EMPLOYEES SPECIFICALLY
DATA: ACCEPTED.COM, MBA PROGRAMS, POETS & QUANTS

Preparing a business school application can mean more than a year of writing essays, gathering letters of recommendation and taking standardized tests. Waiving the testing requirement shortens that timeline substantially.

Many schools were struggling with low application rates in the early rounds of 2022-23, says Caroline Diarte Edwards of Fortuna Admissions, an MBA consulting and counseling firm. For those, "why not try to pull some of those fall applicants forward to the current season?"

Part of the B-school sales pitch is that having a graduate degree might help you keep your job during a round of layoffs. "That's why a lot of people go to business school in the first place," says Coward. "They're like, 'Hey, I wanna get in the room where they make the decisions.' That's a real key. An MBA can make you more valuable."

For some, the high cost of full-time business school—hundreds of thousands of dollars in tuition and lost income—means trying to get the highest return on that investment by applying to the most prestigious institutions, even if testing is required. Allen Liu, who was laid off from a San Francisco software firm in February, wants the best possible shot at a new career in finance. He's studying eight hours a day, seven days a week, hoping to score high on the GMAT later this month and get into at least one of his top choices: Wharton, Columbia Business School or the University of Chicago's Booth School of Business.

"I thought about this, and decided I definitely need to take the GMAT, because I want to be as competitive as possible," Liu says. "If I was not laid off, it would be downright impossible to prepare an application in a month. So I don't view the test as an obstacle. It's just about putting in the hard work, and your results will be there." —*Paul Keegan*

THE BOTTOM LINE B-schools are being criticized and praised for manipulating their admissions criteria to tap into the growing ranks of unemployed tech workers.

Basic Knife Skills

A chef and social media star set his sights on business school. Turns out, real life has been a great classroom

Nick DiGiovanni has packed a lot into his 26 years. The chef and food personality auditioned for Gordon Ramsay's *MasterChef* TV competition in 2018 during his senior year at Harvard College. He made it onto the show, finishing in third and building a huge fan base along the way—today, he has more than 20 million followers and subscribers collectively on Instagram, TikTok and YouTube, where many of his culinary feats and high jinks play out. He's an entrepreneur, too, as co-founder of the specialty salt business Osmo. We caught up with DiGiovanni recently to talk about what's motivated his choices in and out of the kitchen.

I learned recently that you were accepted into Harvard's MBA program. Why did you apply?

I've always thought a lot about the intersection between business and food. And since college I knew I wanted to pursue that combination. I saw that in a lot of restaurants, you have two people—a chef who knows the kitchen and the person on the business side who handles everything else. My master plan was to go into restaurants and work and learn everything, and really get good at the food part. Then use the MBA to become a restaurateur.

● DiGiovanni

How long have you been cooking?

Since I was 7 or 8, really ever since I could read through a recipe. I worked in restaurants in high school and college. The first was a place called Al Forno. In Providence, where I'm from, everybody has heard of it, not because it's the fanciest, but it's such a fantastic, iconic place. It was famous for its grilled pizza. I worked in the kitchen. It was fast-paced and a lot of fun. It was booked out every night. Over time, they let me do more and more—I finally was prepping dishes, simple ones, where nobody else was touching it. It was a great feeling, to prep something that looks nice and goes out to someone in the dining room.

Ultimately, you decided not to go to business school. What changed?

Harvard has this 2+2 deferral program—I had the option of deferring between two and four years. I worked after college. And then the last year of the deferral just ran out. I had to make a final choice for September—it was one or the other, school or my work. I'm learning so much. I've worked to build out a team around me. I couldn't see a path where all of that would be able to move forward and continue, so I made what I think was one of the hardest decisions ever.

ILLUSTRATION BY JAMES CLAPHAM. PHOTOGRAPH BY TONY LUONG FOR BLOOMBERG BUSINESSWEEK

Your first cookbook, *Knife Drop*, will publish in June. The title seems perfect given how adept you are with chef's knives. I find them a bit scary.

Part of cooking for me, and becoming good in the kitchen, is confidence and not being scared. Some people are scared. There's hot oil and knives and all sorts of hazards. You have to build that confidence and not be scared. It's knowing exactly when the hot oil is going to jump at you. That's second nature to me now.

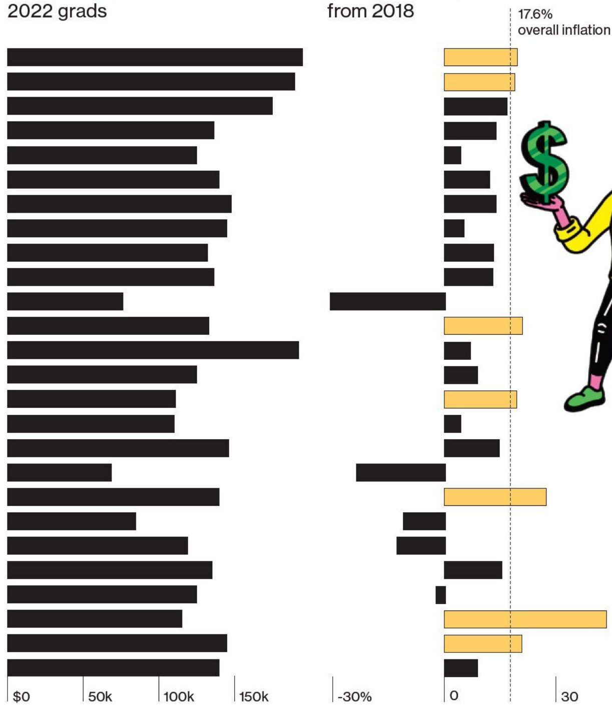
This could apply in business, too. So your career is multifaceted—the book, the videos, the salt business. What wisdom can you share that one might not get from B-school?

The truth is it all happens with a team. I just happen to be the face of a lot of stuff that we do, but it's a big operation behind the scenes. I've been so happy with the salt company—I found a really great partner to work with on that, and we organized our roles very early on. I've matured over time, and I've become better at slowing down and saying no. I'm learning how to consolidate things.
—*Dimitra Kessenides*

What MBAs Earn

Students consistently say better pay is their top reason for attending business school. The data below sheds light on 2022 MBA grads. Over the past four years, increases in median starting salaries for MBA grads in most industries have failed to match, or barely beaten, inflation. —*Alexander McIntyre*

Top industries for grads	Share of new hires
Consulting	29.8%
Technology	19.7%
Financial Services/Accounting	17.2%
Health Care/Medical	4.9%
Consumer products	3.8%
Real estate	3.2%
Pharmaceuticals/Biotech	2.3%
Retail	1.9%
Manufacturing	1.7%
Energy	1.6%
Advertising/Marketing/PR	1.2%
Defense/Aerospace	1.2%
Legal	0.9%
Transportation	0.9%
Government/Politics/Lobbying	0.7%
Hospitality/Food/Beverage	0.7%
Insurance	0.7%
Nonprofit	0.7%
Telecommunications	0.6%
Engineering	0.5%
Media/Publishing/Broadcasting	0.5%
Agriculture/Forestry/Mining	0.4%
Chemicals	0.4%
Education	0.4%
Construction	0.3%
Utilities	0.2%



FIGURES ARE FOR NEW GRADUATES OF ALL US MBA SCHOOLS IN BLOOMBERG BUSINESSWEEK'S BEST B-SCHOOLS RANKING WITH US-BASED JOBS. COMPENSATION IS THE SUM OF BASE SALARY PLUS OTHER GUARANTEED COMPENSATION. INFLATION FIGURE IS THE CPI CHANGE AS MEASURED FROM JUNE 2018 TO JUNE 2022. DATA: COMPILED BY BLOOMBERG

KEEPERS OF THE FLAME

Culture warriors, foodies and affluent homeowners are clutching their gas stoves. Can Americans finally be persuaded to switch to induction?

By Aaron Gell Photograph by Sarah Anne Ward

One night in early February, several thousand homebuilders, interior designers, general contractors and property flippers assembled in a Las Vegas hotel ballroom for the closing-night festivities of the annual Design + Construction Week, a smorgasbord of trade shows that includes the International Builders' Show (IBS) and the Kitchen & Bath Industry Show (KBIS). For three days attendees wandered the floors of the Las Vegas Convention Center, many sporting fleece vests and branded ball caps, taking in the very latest in drawer pulls and engineered hardwoods, slip-resistant tiles and rain showerheads.

To cap off the events, rocker Sheryl Crow led her band through a dutiful set as residential construction professionals mingled in the rear of the Westgate Las Vegas Resort & Casino ballroom, talking shop. The chatter touched on mortgage interest rates and material costs and the dismal work ethic of a younger generation. But most alarming of all was the possible intrusion of federal bureaucrats into a deeply fraught and intensely personal decision many couples prefer to make in the privacy of their own home.

Gas or induction?

Just weeks before, Richard Trumka Jr., one of the Consumer Product Safety Commission's five members, ignited a national frenzy with his stark warning to a Bloomberg News reporter that the humble gas stove—a central feature of some 40% of US kitchens—poses a serious health risk, especially to children, and might therefore be a candidate for government regulation. "Any option is on the table," he declared. "Products that can't be made safe can be banned."

Within hours of the interview's publication, a new culture war was under way. Republican Representative Ronny Jackson of Texas dared someone to pry his stove from his "cold dead hands," while fellow Republican Representative Jim Jordan of Ohio found traction with the pithier "God. Guns. Gas stoves." Even as some liberals were laughing off the right-wing panic about jackbooted "gastapo," others no doubt quietly fretted that their gleaming culinary flamethrower from **Viking** or Wolf was about to become next year's bloated monument to conspicuous consumption.

The outrage cycle was sufficient to prompt an immediate diplomatic walk-back by the head of the CPSC and another by the White House. Over the following weeks, Florida Republican Governor Ron DeSantis leaped into the fray, proposing a permanent tax deduction for gas appliances. (Never mind that the vast majority of Floridians don't have access to residential gas.) And on the same day, Republican Senator Ted Cruz of Texas and Democratic Senator Joe Manchin of West Virginia introduced a bill called the Gas Stove Protection and Freedom Act, which aims to bar the CPSC from implementing any rule that would so much as "substantially increase the average price" of a gas stove.

If the move to exempt a single category of home appliances from federal safety oversight seems drastic, it nonetheless carries a certain visceral appeal. "There's this kind of understandable knee-jerk reaction, like 'Oh, what now?'" concedes Matt Casale, director of environment campaigns for US Public Interest Research Group (US PIRG).

That was largely the sentiment of Sheryl Crow concertgoers waiting at the cash bar. An informal poll revealed that some 90% were ride-or-die for gas. One Illinois builder in his early 60s, who said he was a member of the state's Energy Code Advisory Council, viewed the possibility of new federal regulations as a dark plot by what "some people call the cabal" to impose its will on the populace. But most went with a far less politically loaded reason, a truth most Americans hold to be self-evident: gas's superiority in the kitchen.

Unsurprisingly, many were quick to denounce old-school electric stoves, with their telltale glowing coils, which are slow to heat up and slower to cool down, difficult to control and a beast to clean. Just a lonely handful extolled the benefits of induction, a technology that, despite its widespread popularity in parts of Europe and Asia, has captured less than 5% of the US market. Unlike conventional electric, induction burners, known as "hobs," don't actually generate heat. Instead, they create a magnetic field, exciting the ferrous molecules in the bottom of a pot or pan on the glass cooktop. Induction stoves are fast, convenient, precise, safe and sleek. And more than a century after the first induction patents were issued—and 50 years after Westinghouse unveiled the first commercial version—they're still virtually unknown to most American consumers. "From a performance standpoint, induction is just awesome," says Sue Bailey, a former Viking executive who for years helped sell consumers on gas. "It's better than gas at high heat, it simmers, the responsiveness is the same. There are so many benefits to it from the cooking side. People have no idea whatsoever."

But a home appliance that summons gorgeous blue flames with the twist of a knob still induces a bit of wonder, and people aren't likely to give it up without a fight. "I mean, gas has the UX [user experience]," says Sam D'Amico of Impulse Labs, a Silicon Valley startup gearing up to pitch its new induction stove to the masses. "The UX is, literally, you're turning the valve and gas is burning. That's going to be tough to defeat." There's a reason that nearly all competitive cooking shows—with the notable exception of *The Great British Bake Off*, which uses induction—feature chefs frantically turning out dishes on commercial gas stoves. "It's kind of sexy," says Stacy Jones, founder and chief executive officer of product placement agency Hollywood Branded. "You see the flames licking up into the pan, and you can almost feel the heat coming off of it even though you're on the other side of the television."

While a federal ban on gas stoves is highly unlikely, environmental advocates say Commissioner Trumka's stark warning has prompted a long-overdue conversation about America's attachment to gas and the benefits of electrification. The moment could spur for stoves an accelerated version of the decades-long, heel-dragging US shift from gas guzzlers to electric vehicles. "It's definitely been the best thing that could ever happen for this issue," says Sage Canchola-Welch, an environmental communications ▶

PROP STYLIST: PAOLA ANDREA. COURTESY VIKING

“The last thing you can tell the American

◀ consultant. “I think it’s probably fair to say that it worked out better than he [Trumka] ever could have dreamed of.” (The commissioner didn’t reply to *Bloomberg Businessweek*’s request for comment.)

Then again, turning the kitchen into the next battlefield for politics, consumerism and the planet may just lead people to dig in their heels. “The last thing you can tell the American people is that they can’t have something,” says James Ramsey, a New Orleans-based developer focused on sustainable construction who’s also an induction fan. “The goal is to get the consumer to want something different.”

The American obsession with cooking on gas can be chalked up, at least in part, to one of the most effective persuasion campaigns of the 20th century. For decades gas producers have aggressively promoted their fuel as the key to culinary excellence. Back in the 1930s, a PR man for the American Gas Association coined the slogan “Now we’re cooking with gas!” and persuaded writers for Bob Hope and Jack Benny to sprinkle it into the stars’ radio scripts. Before long it made its way into a Daffy Duck cartoon, and in 1964 a Pennsylvania gas utility enlisted Marlene Dietrich to star in a print campaign. “I can cook on an electric stove,” the ad read, “but it is not a happy union.”

The recent anti-gas crusade isn’t without scientific basis. Studies show natural gas is less benign than it sounds. Composed mostly of methane, it produces a host of deleterious byproducts when burned, including nitrogen oxides, carbon monoxide, fine particulate matter, formaldehyde and benzene, a major carcinogen. Research has also shown that many gas stoves leak methane even when turned off. One 2022 study, published by the *International Journal of Environmental Research and Public Health*, found that more than 12% of childhood asthma in the US is “attributable to gas stove use.” When the American Gas Association attempted to discredit the research, arguing that a 2013 analysis of some 47 countries had found no such correlation, the scientist behind that effort pushed back, insisting that the industry group was misinterpreting his work and that the risk was indeed all too genuine.

In an email to *Businessweek*, the AGA tried another approach, suggesting the government’s long-standing failure to address the issue was itself an indication that gas stoves must be safe. “The [CPSC] and EPA do not present gas ranges as a significant contributor to adverse air quality or health hazard in their technical or public information literature, guidance, or requirements,” the letter stated. US PIRG’s Casale says: “The idea that because no government agency has regulated something so far means we shouldn’t regulate it now is not a very compelling argument. Should we have done it before? Yeah. We probably should have.”

For some observers, however, the furor over indoor gas emissions may overstate the risk for the typical family, since even the most passionate gas partisans tend to use their cooktops less than they might realize. According to Christoph Milz, the chef-turned-cooking technologist responsible for sous vide’s popularity, the vast majority of meals today are prepared in toasters, microwaves, ovens, slow cookers, electric tea kettles and Instant Pots. “That is the difference between perception and reality,” he says. “People are busy. They always stick to, you know, ‘Put it in, close the door, press a button,’ worry-free, no interaction.”

But issues with gas go beyond air quality. For instance, there’s the fuel’s notable tendency to burst into flame unexpectedly, which has resulted in more than 122 fatalities and 600 injuries since 2010, according to a US PIRG study. Methane’s warming effect is known to be 80 times more powerful than carbon dioxide during its first 20 years in the atmosphere. And a growing body of evidence suggests its propensity for leaking makes it even more environmentally destructive than coal. That hasn’t stopped a collection of dark money groups from pushing to classify it alongside solar and wind as a “green energy,” an effort that notched its first win when Ohio Republican Governor Mike DeWine signed legislation to that effect in January. (A similar impulse seems to have inspired one eager US Department of Energy official who dubbed it “freedom gas” in a 2019 press release.)

Arguably the gas lobby’s biggest cultural victory in the kitchen didn’t come from one of its own campaigns, but from a building contractor in Greenwood, Mississippi. In the early 1980s, entrepreneur Fred Carl Jr. began fielding requests from clients coveting the heavy-duty industrial look of commercial stoves. He spent years designing a home appliance with the appropriately rugged appeal, selling the first Viking range in 1986 and setting off a high-performance culinary arms race among luxury appliance makers for the ultimate trophy stove.

Today the fetish for high-powered stoves has endured, especially among affluent Americans, whether they cook or not. “Honestly, my clients only want gas,” says Dee Ann Federico, an interior designer whose contribution to the latest Hampton Designer Showhouse is a “coastal moderne” kitchen featuring a 48-inch JennAir gas range with a starting price of $10,699. “They don’t want to talk about anything else.” If today’s wannabe Ina Garten isn’t satisfied with an industrial-chic standby from JennAir or Thermador or a handful of other appliance makers, she can always spring for a masterwork from the Paris-based La Cornue, which offers its handcrafted **Grand Palais 180**, measuring a “stately” 71 inches and boasting no fewer than seven cooktop configurations, for upwards of $70,000.

“That gas flame has all kinds of meaning to a lot of cooks,” says Carl, who sold Viking to Middleby Corp., based in Elgin, Illinois, for a reported $380 million in 2013. “It’s an emotional thing—almost spiritual.”

Rachelle Boucher was a private chef whose clients included George Lucas and Metallica before she shifted to the corporate world, where she conducted cooking demos for architects, developers and salespeople on

COURTESY LA CORNUE USA

behalf of high-end appliance makers such as Sub-Zero Wolf. It was a dream job, she says, that afforded her enviable access to the top-of-the-line gas “fire-breathing dragons.”

Then, in 2015, she joined Miele & Cie., the appliance company based in Germany, where today less than 3% of people cook on gas, according to Eurostat. After the oil price shocks of the 1970s, energy independence and efficiency became a priority for many European countries. They largely invested in alternatives to fossil fuels, while the US developed shale gas resources. So when induction came along in the ’80s and fewer European homes were connected to the gas grid, it took off. Boucher recalls chatting with Miele’s top scientists when they made a trip to the US to study the American market. “One of the engineers was like, ‘I don’t understand, why are people wanting to cook on fire in their home?’ ” she recalls. “He was flabbergasted.”

By 2019, when the city of Berkeley, California, announced the first ordinance forbidding gas hookups in new buildings, Boucher was an induction convert. She started a consulting firm to promote the technology, then joined the Building Decarbonization Coalition, becoming something of a one-woman hype team for the wonders of cooking with magnets. Like many advocates, Boucher says induction’s lack of traction in the US is largely an education issue. And indeed, most consumers still can’t distinguish induction from old-school electric.

“It’s really cool technology, and I think it is the future, but a lot of people don’t even have kind of a basic awareness of what it is,” says Jill Notini, vice president in charge of communications and marketing for the Association of Home Appliance Manufacturers (AHAM). Bailey, the former Viking executive, who now heads product development for LG’s Signature line, acknowledges that even her own family isn’t entirely clear on the distinction. “We have an induction cooktop in our house,” Bailey says. “In January my daughter moved into an apartment with an electric cooktop. She called me. ‘The cooktop doesn’t work! I’m burning everything!’ So I’m explaining to her the difference between induction and electric.” (The difference: Induction’s hobs can get hot or cold almost instantly, whereas electric’s heating elements take longer to cool down.)

America’s obliviousness to induction has a lot to do with the appliance industry’s general indifference. Take GE Appliances, which offers induction ranges in each of its four product lines but seems to put most of its promotional juice behind the gas-burning showstoppers in its upscale Cafe collection. It recently touted the line at KBIS and on a lavish gatefold ad in *Vogue* that described the stoves as “inspired by the runway” in partnership with accessories designer Rebecca Minkoff. “Our manufacturers make all technologies—they make gas, they make electric, they make induction, OK?” says AHAM’s Notini. “So we don’t favor one technology more than another.”

Boucher thinks the solution is bringing appliance sales teams on board. Who better to enlighten the masses about a spectacular new technology than that glad-handing army of commission-incentivized pitch people? Few are motivated to steer would-be customers from their beloved rings of fire. “If clients come in and want gas, it’s a done deal, easy sale,” Boucher says. “No matter how fabulous a salesperson is, they don’t always have the time, the resources and the bandwidth to be like, ‘Oh my God, you guys, but have you tried this?’ ”

In other words, why bother to even learn about an alternative when it’s just as financially rewarding to cater to existing tastes. “It’s a stalemate” among the appliance makers, says chef and cooking technology consultant Andrew Forlines. “Like, are you going to put in the money to educate? Or am I? They’re all playing chicken with each other.”

A quick Uber ride away from Design + Construction Week, the brigade de cuisine at Las Vegas’s only dining establishment to be awarded three Michelin stars was deep into dinner service. Joël Robuchon’s poissonnier was preparing a pan-seared sea bass with lemongrass foam, while the rôtisseur expertly caramelized a plume of Iberico pork with black truffle and the entremetier whipped up a saffron risotto with pimientos and cauliflower—all of it on induction-powered hobs.

The restaurant’s executive chef, Christophe De Lellis, says his adoption of induction cooking has been “life-changing.” In addition to being faster and easier to control, De Lellis says, induction has vastly improved working conditions for his staff. Induction hobs, by heating the cookware directly, rather than the air beneath and around it, make the cooktop three times more efficient than gas stoves, resulting in a cooler, more comfortable environment. Induction stoves also reduce the margin of error. “When you use gas and you tell somebody, ‘Put on medium heat,’ my medium might be different from your medium,” he says. “With induction it’s much easier to have consistency all across the board.” Sauces and bisques, in particular, are easier to prepare. “You know sometimes when the flame burns on the side and they get crusty?” De Lellis asks. “You don’t get this with induction.” And then there’s the cleaning issue—rather than scrubbing away at iron grates, his crew simply wipes down the glass cooktops.

Still, induction has plenty of skeptics. Specialists in Asian cuisine have expressed concern about achieving the ineffable *wok hei*—“that complex charred aroma that fleetingly cloaks ▶

Induction 101

1. An electric coil creates an electromagnetic field passing through a glass cooktop
2. The pot or cookware heats up
3. Now you’re cooking with magnets!

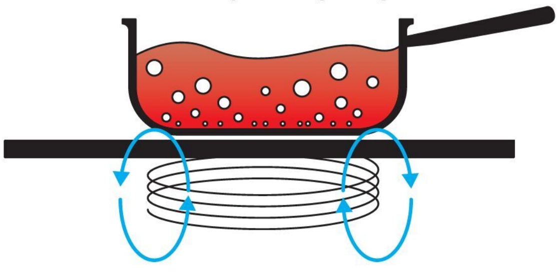


ILLUSTRATION BY 731

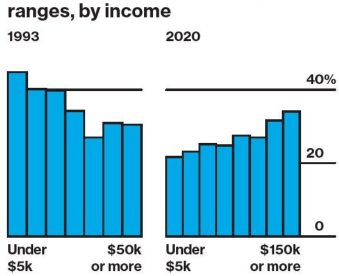
◀ the piping-hot stir-fries," as defined by the Michelin Guide. But induction hobs built especially for woks, featuring concave cooking surfaces, are in widespread use in parts of Asia and increasingly available in the US. As for the anxiety over whether induction cooktops can produce enough heat to create a good sear, the truth is that despite their industrial aesthetic, home gas ranges offer only a fraction of the power of their commercial counterparts. Induction actually produces twice as much heat as the typical gas burner, more than enough to caramelize that wagyu black tomahawk rib-eye to perfection. After safety, perhaps the most compelling benefit to busy parents everywhere: Induction boils water in about half the time of gas.

According to Energy Star, the Environmental Protection Agency and Department of Energy's efficiency standard, if all new cooktops sold in 2021 had been induction, consumers would've saved $125 million in energy costs. But the savings varies considerably by region, since, as the AGA is quick to point out, in many areas, gas is currently cheaper than electricity. Induction ranges also tend to be somewhat pricier than their gas counterparts—around $1,000 for a decent low-end model, compared with $600 for gas. Consumers making the switch are often faced with the additional cost of an upgrade to their electrical panel, and they also fret about the compatibility issue, having heard that induction works only with "special" pots and pans. (The reality: Cast-iron, stainless-steel and carbon-steel skillets all work, while aluminum and copper don't.) Of course, as renewables increasingly gain traction, electricity prices will continue to decline. And as more consumers buy induction, the economies of scale should bring appliance costs down, too.

Practical arguments aside, perhaps what induction really needs is its Tesla moment. There was once a time—back when X Æ A-XII was just a gleam in his father's eye, back before a Roadster was launched into space or there was such a thing as a Chief Twit—when the market for EVs was basically nonexistent. They were generally viewed as slow, stodgy and painfully uncool, the carob-studded trail mix of the open road. Whatever one makes of Elon Musk's subsequent antics and the damage he's done to Tesla Inc.'s brand today, it's hard to deny that he almost single-handedly transformed the EV market.

One possible contender for a Silicon Valley-style jab to the category is Sam D'Amico, the founder and CEO of Impulse Labs in San Francisco. A former member of Stanford University's solar car racing team, D'Amico spent time as a hardware engineer for Google X and Oculus before deciding to start his own company. He knew he'd never be able to compete with the likes of Apple Inc. and Meta Platforms Inc. in the field of virtual-reality headsets, his specialty at the time, but he saw an opening in induction cooking. He and a handful of friends thought they could solve one of induction's biggest barriers—the need for 220-volt electrical hookups, which can require additional breakers and sometimes a larger electrical panel—by adding a battery. "I saw this area where we can just use off-the-shelf components that already exist and are mature to do something novel," says D'Amico, who raised $20 million in October. "And that's like the best kind of hardware startup."

US households with natural gas ranges, by income



DATA: US ENERGY INFORMATION ADMINISTRATION

Impulse Labs' forthcoming premium range and a competing offering by Berkeley startup Channing Street Copper Co. will plug right into a standard outlet when they both hit the market next year. By drawing power when usage is slow and storing it for when it's needed, such devices could help improve the resiliency of the electrical grid. And if the power does go out, the ranges can even act as a backup for refrigerators and other devices.

One-upping D'Amico as induction's new pitchman is Curtis Ceballos, a computer engineer and former restaurateur who founded a cooking appliance startup in Florida called Invisacook Inc. Ceballos is seeking to undermine the dominance of the trophy stove by offering its precise aesthetic antithesis. With Invisacook, an idea that came to him in a dream, induction coils are concealed under a countertop instead of a glass cooktop, allowing the cooking to happen directly on granite or porcelain. On first glance the product looks like nothing at all, which admittedly might make it a tough sell for those who like their trophies to shine. But during a demo at KBIS, it was clear that while fire has a certain theatrical appeal, sautéing a salmon fillet directly on a smooth stone surface is a magical experience in its own right. "People can't wrap their head around it," Ceballos says. "They're like, 'Oh, I like that. My next-door neighbor doesn't have it—I want it.'"

In truth, gas companies don't much care whether Americans use their product or not. What's essential from a profit standpoint is that consumers retain the option to do so. "We don't sell gas, which I know might sound ridiculous," AGA spokesperson Adam Kay says. "What utilities are paid to do is to provide the infrastructure that brings that energy." As long as the gas industry can keep building and maintaining networks of pipes, they're good. That's why even though cooking represents less than 3% of total gas usage in US homes, the industry still regards the American kitchen as critical real estate. Consumers are generally indifferent about how they heat their homes or their bathwater, but when it comes to roasting the occasional pepper, fossil fuels have held Americans emotionally hostage.

COURTESY IMPULSE LABS

This also explains the growing movement to electrify American kitchens. If Americans can wean themselves from those comely flames, the thinking goes, cleaner electricity will more quickly supplant fossil fuels in other residential applications, such as swapping out gas furnaces for heat pumps.

That's the goal behind the tens of billions of dollars in subsidies and tax breaks for green energy upgrades contained in 2022's Inflation Reduction Act. It's also the reason for efforts by municipalities across the country to ban gas hookups in new construction. California, Colorado, New York and Washington have adopted legislation restricting gas use, and New York Governor Kathy Hochul recently proposed a 2030 ban on the sale of fossil fuel-powered heating systems. Meanwhile, dozens of cities and counties have forbidden gas in new construction. The fossil fuel industry has mounted its counteroffensive, persuading some 20 states to pass legislation essentially stripping the power of municipal authorities to adopt and enforce their own building codes, at least when it comes to gas.

In early February, as the reaction to Trumka's comments reached new depths, the gas range found itself under attack from another federal agency. The Department of Energy released a proposal to increase efficiency standards for both gas and electric cooking appliances. (The Energy Department and the CPSC operate independently, and the timing was coincidental.) While the announcement has so far generated little attention, its effects may be more sweeping. "We see it as another move by the administration to do away with gas products," says AHAM's Notini. "It's actually a more imminent threat." She estimates that after the new standards are finalized in January 2024, just 4% of gas ranges and cooktops currently on the market will be up to code.

Given the stakes, it's no surprise the gas industry has begun courting a powerful new constituency: influencers. The AGA and another trade group, the American Public Gas Association, have evolved with the times and are paying former Food Network stars and foodie Instagrammers to sing gas's praises on social media while wielding the hashtag #cookingwithgas. (Not to be outdone, the propane industry has also recruited a well-compensated hashtag army of its own.)

Meanwhile, high-profile induction converts are starting to come clean. "I have an induction stove by choice AMA," chef and food writer Alison Roman recently tweeted, calming the nerves of a follower worried she might not be able to crisp her tortillas on the magnetic stove. (Roman's tip: Just use a cast-iron pan.) Celebrity chefs Rick Bayless, Tom Colicchio and Eric Ripert have also joined the chorus, with Colicchio noting on Twitter that "induction is more precise than gas," while conceding he still has gas at home. Detroit chef Jon Kung, who became famous for his underground pop-ups, regularly preaches the benefits of induction to his 1.7 million TikTok followers. The nonprofit Rewiring America, whose mission is to electrify, well, everything, recently teamed with HGTV's Property Brother Jonathan Scott to help spread the word about induction, and in January it shot back at a segment on *The Late Show With Stephen Colbert* making fun of electric stoves with a video flaunting one of induction's greatest novelties—the ability to comfortably rest one's face on an active burner.

Design influencers, arguably more important than chefs when it comes to the sacrosanct kitchen, are slowly coming on board, too. Emily Henderson, whose blog gets about 2 million page views per month, recently installed a brass-knobbed 48-inch **Aga** induction range in her Oregon farmhouse. "I thought, 'What is the smartest, greenest, best thing for the planet?'" she says. Still, Henderson treads gingerly when considering the politics of gas. "I'm not one to be dogmatic about anything these days," she says. "I was very much like, 'This is the choice that we made.'"

Appliance makers are finally beginning to offer gateway products for the induction-curious. Some of LG's Signature models aimed at "Technicureans"—"a new generation of forward-thinking cooks"—combine gas burners, induction hobs and even a built-in sous vide bath. Samsung is looking to compensate for induction's tactile shortcomings with "virtual flames," little blue lights that glow brighter around the bottom of a pan as the power is increased, and optional magnetic knobs for those who'd rather twist than tap a digital button.

But neither those bells and whistles nor even the Great Stove Debate of 2023 could sway the judges at the International Builders' Show. As Design + Construction Week wrapped up, the panel bestowed an award for the year's "Best Kitchen & Bath Product." The winner: a 48-inch **BlueStar** range. With a cast-iron top grate that might double as the portcullis to a medieval torture chamber, eight gas burners throwing off up to 25,000 Btu apiece, more than 1,000 colors and 10 trim finishes to choose from at a starting price of $15,995, it might just be the Hummer of home cooking. Although the company also offers induction cooktops, Ann Muth, BlueStar's marketing director, admitted she'd never cooked on one.

She might want to give it a try. Even Carl, Viking's founder, who says gas cooking "is something that is very dear to me," views induction as the superior technology. "Die-hard gas cooks would be surprised," he says. "They might not want to admit it." He attributes the slow sales of Viking's induction cooktops, which were introduced in 2005, to aesthetics. "A big piece of blank glass—that's kind of boring," he says, "as opposed to the glamorous, serious-looking cast-iron grates, and those burners and all the knobs going on."

Then again, Carl says, styles change. He thinks even the most committed gas snobs "might, over time, just say, 'You know, this is not bad. I can deal with this. So, I'm moving on.'" Ⓑ *—With Olivia Rudgard*

COURTESY BLUESTAR COOKING. COURTESY AGA RANGES USA

China's Co

After imposing three years of sacrifice, Xi Jinping's government let Covid tear through the population in two months. Moving on won't be easy

By Allen Wan, with Daniela Wei

ovid Scars

A garlic field dotted with graves in the village of Chenghe, Jiangsu province, in January 2023

Families in Chenghe, a village of 4,000 people in eastern China, bury the ashes of their dead in little mounds near the fields they till. In early January, more than 100 new piles appeared between bright green rows of garlic sprouts. The sound of *suo na*, a double-reed horn villagers play to commemorate the deceased, cut through the quiet.

A-Peng was planning to add another grave there for his father, who'd died the day before. But first he needed to stand in line to get a time slot for cremation, behind more than 200 others. He was used to waiting. Whenever the government had implemented strict lockdowns to prevent the spread of Covid-19, A-Peng—who asked to go by his nickname because he feared repercussions for talking about China's pandemic response—had struggled to support his household as factories shut down and customer traffic to the store he runs slowed. Then, when the policies to eliminate Covid ended abruptly in early December, the virus ripped through the whole country, including everyone in A-Peng's family. More than 80% of the population was infected, according to the Chinese Center for Disease Control and Prevention. His 75-year-old father started having trouble breathing, then suffered two episodes of brain bleeding. The small county hospital didn't have room for him in intensive care. He died there four days later.

"We have contributed to the Covid fight, but how come nobody is taking care of us now?"

In Shanghai, a protester is seized by police

President Xi Jinping's Covid Zero policy was an historic experiment in control over the nation's 1.4 billion people. Citizens' movements were monitored with location-tracking apps, China's external borders were sealed and a recent negative test was required to do almost anything. But Xi reversed course shortly after the economically crippling restrictions sparked a wave of protest in November—a rare display of public anger, and for the Communist Party, a risky one.

The policy shift exposed how Xi's controls had inadvertently created the conditions for mass death and chaos, by leaving the country unprepared for the coming spike. Despite having ample time to vaccinate elderly Chinese and expand hospital capacity, officials had done neither, leaving the virus to run rampant through a population with little previous exposure. According to government estimates, nearly 60,000 people died in hospitals between Dec. 8, when Covid Zero was officially dismantled, and Jan. 12—numbers the World Health Organization and others view as a severe undercount. Foreign epidemiologists estimate that the true death count is, conservatively, in the hundreds of thousands.

The scale of suffering has rattled public faith in Xi, the most dominant Chinese leader in a generation. After listening to three years of propaganda boasting that China was protecting its people far more effectively than Western countries, many citizens looking for Covid treatment had to wait for hours in the cold outside overwhelmed hospitals. Doctors and nurses battled their own infections while trying to help patients. Pharmacies ran short of basic medicines such as acetaminophen, while workers hired to conduct mass testing and enforce quarantines found themselves abruptly unemployed, leaving no system to reliably test and quantify the surge.

Just as suddenly, the messaging of state media flipped, emphasizing the benefits of opening up and urging people to take responsibility for their own health. "With official reports downplaying the scale of deaths or severity of the health crisis facing the country, people are more likely to lose trust in the government," says Sarah Cook, senior adviser for China at advocacy group Freedom House. Even as officials trumpet the benefits of moving on, China's pandemic response remains a sensitive topic; while reporters for *Bloomberg Businessweek* traveled the country to speak with dozens of citizens for this story, government minders trailed from a distance, often spooking interview subjects.

The official death count doesn't include victims such as A-Peng's father who never got access to Covid tests. "Whether he got Covid or not doesn't matter," A-Peng says. "He was left to die without getting his place in the ICU." Other elderly people in Chenghe chose to die at home, residents say, rather than pass away in the undignified atmosphere of local hospitals, where body bags were left in some patients' rooms for days.

In the two weeks after his father's death, A-Peng attended seven funerals. Then he went back to the store. With two kids to raise, he needed to make up for the losses of the Covid years.

There's no doubt China suffered under Covid Zero. In its final year, many citizens were forced to stay indoors or risk being quarantined in state-run facilities under the watch of enforcers in hazmat suits, known as *dabai* or "Big Whites." With factories, travel and property investment stalled, economic growth

PREVIOUS SPREAD: QILAI SHEN/BLOOMBERG. PROTEST: AP PHOTO. LI: QILAI SHEN/BLOOMBERG

Li beside a Shanghai testing booth

slumped to 3%, the second-slowest pace since the 1970s. Much of everyday life was controlled or limited by the government—whether it was access to food, movement or speech.

Faced with limited prospects, many people joined the dabai. Li Hanhua signed up after losing money on a jade jewelry business. During the two-month lockdown of Shanghai last spring, the 50-year-old earned twice as much as she would have as a waitress. Li and her co-workers, zipped up in their suffocating white suits, monitored more than 1,000 patients with mild symptoms at a pop-up hospital. Discomfort aside, she knew she could trust a government job to help repay her debts.

When the lockdown ended, Li got a contract to swab throats at a testing booth. With tests required to get into workplaces, shopping malls and even some parks, millions of people were lining up at outdoor stations such as hers multiple times a week. “When we were applying for the job, the recruiters said, ‘It’s a government project—very safe,’” Li says.

But as popular support for Covid restrictions waned and the measures became increasingly difficult and expensive to maintain, local officials started to shift priorities. Li’s paychecks, backed by the government but delivered by a third-party contractor, began to come later than expected, and then not at all. Li says she still hasn’t been paid for testing booth work in the last two months of 2022. She was ashamed to go home for Lunar New Year without the money and had to sell her scooter for 400 yuan ($58) to buy food. “We have contributed to the Covid fight, but how come nobody is taking care of us now?” she says. In February, Li and other dabai sought help from local authorities in Shanghai. They sat at the gates of a government complex for days and still weren’t paid.

In late November, protests broke out in a number of major cities across China, including Beijing, Shanghai and Wuhan, where the virus first emerged. They were triggered by concern Covid restrictions had delayed rescuers from a deadly apartment-block fire in the Xinjiang region of western China, but quickly snowballed. Protesters broke down lockdown barricades, demanded an end to pandemic measures and in some cases called for Xi to step down. The Covid Zero mandates, already weakened by their unsustainable costs, ended shortly after.

When the policies ended, citizens had to immediately change their mindsets. The Communist Party’s presence in everyday life, once a constant, became a conspicuous absence, unsettling to even the most loyal supporters. Everyone was forced to rethink their relationship with the state and what it could accomplish for its people in the aftermath. For some, the shift felt like a betrayal.

In Shenzhen, the southern city that’s the heart of China’s tech industry, Chloe Yang had fully supported Covid Zero. A 34-year-old banker, she grew up hearing her father explain how the government could be trusted to make better decisions than ordinary people. He was always nagging her to get a state job and teaching his grandson songs praising the party.

The family listened to media broadcasts applauding Xi for steering the country clear of the disastrous waves of infection in the US and elsewhere. In China for much of the pandemic, Covid was so rare that a single case—where it was traced to, how long after exposure the person tested positive—was news to obsess over and reason enough to shut down a whole city. What many Western governments were doing was inept, or “lying flat,” as Xi described it, while China actively quashed flareups out of a duty to protect its citizens.

Yang and other supporters assumed that the government would maintain a more cautious approach before letting people return to normal life. It would make sure everyone had booster shots. Hospitals would prepare extra beds, and families would be taught how to identify and treat infection.

Instead, whiplash. Citizens were left in the dark, unsure whether they had Covid and then unsure what to do when they fell ill. The government stopped mass testing in early December, leaving people scrambling for hard-to-find rapid antigen tests. The daily infections number, once closely monitored, quickly became a gross undercount. Authorities quietly narrowed the definition of a Covid death, counting only virus-induced respiratory failures and excluding instances where the virus accelerated other ailments, such as heart attacks. In the first five weeks after the pivot, the government logged only 37 deaths, a number that those interacting with hospitals and crematoriums could see firsthand was impossible. Only after pressure from outside governments and the World Health Organization did China’s National Health Commission update its count to the still-dubious figure of 60,000 on Jan. 14.

“It’s like among all the options, the government hurried onto the worst path,” Yang says. Her 70-year-old father couldn’t obtain antivirals after falling ill and was then forced to wait too long for a hospital bed as his disease became severe. When Yang called him to explain the situation, he ▶

◀ breathed a deep sigh and said, "How could the reopening end up like this?"

Yet the government's rhetoric remained congratulatory. Authorities published data suggesting the number of Covid deaths in China was decreasing rapidly. State media emphasized the benefits of opening back up, depicting jubilant citizens finally able to reunite with their families, eat out and travel, the virus now behind them.

Charlie Parton, a former British diplomat who has done stints in China and a fellow at the think tank Council on Geostrategy, says the gambit didn't work: "Propaganda is persuasive but becomes counterproductive when it so obviously contradicts the people's own personal experience."

One of the things no one could fail to notice as illness spread was the dearth of fever medications and antivirals. In rural areas, especially, fever medicines ran out quickly. Wang Jian, who operates a clinic out of his home in a village of about 1,000 in Luyi County, Henan province, said that within weeks of Beijing's policy pivot, almost every family had someone come in for treatment. Unable to get common fever drugs like ibuprofen and acetaminophen, he administered analgin and aminopyrine, medications that have been banned by other countries because they have potentially dangerous side effects. By late December, even those were hard to come by. Even so, his village fared better than the next one over, where many elderly people died without intervention. "Rural clinics can't rival big city hospitals in hardware, but prescribing timely medicine can still save a lot of lives," he says. "It was such a pity."


A woman at the entrance to a health clinic in Jiangsu province

The shortages hit cities, too. In early January, Huang Li, a sales manager from Shanghai, drove one and a half hours to bring fever medicine to her 80-year-old mother at a nursing home in Jiaxing. When Huang arrived, she wasn't allowed in because the facility was in lockdown. In the five days after the home's Covid outbreak started on Dec. 29, more than 90% of its residents became infected. The sole uninfected staff member was in charge of 70 patients, and a nurse with mild symptoms handled a few dozen others, Huang was told.

When she noticed that other people were going in and out of the building, she lobbied to be allowed in as well. But she stopped asking when she realized that the others were there to collect their parents' bodies. Five people had died the day before. As Huang left, someone explained that even the cleaning staff had come down with Covid. The floor was a mess, with piles of garbage being navigated by people too feeble to pick them up.

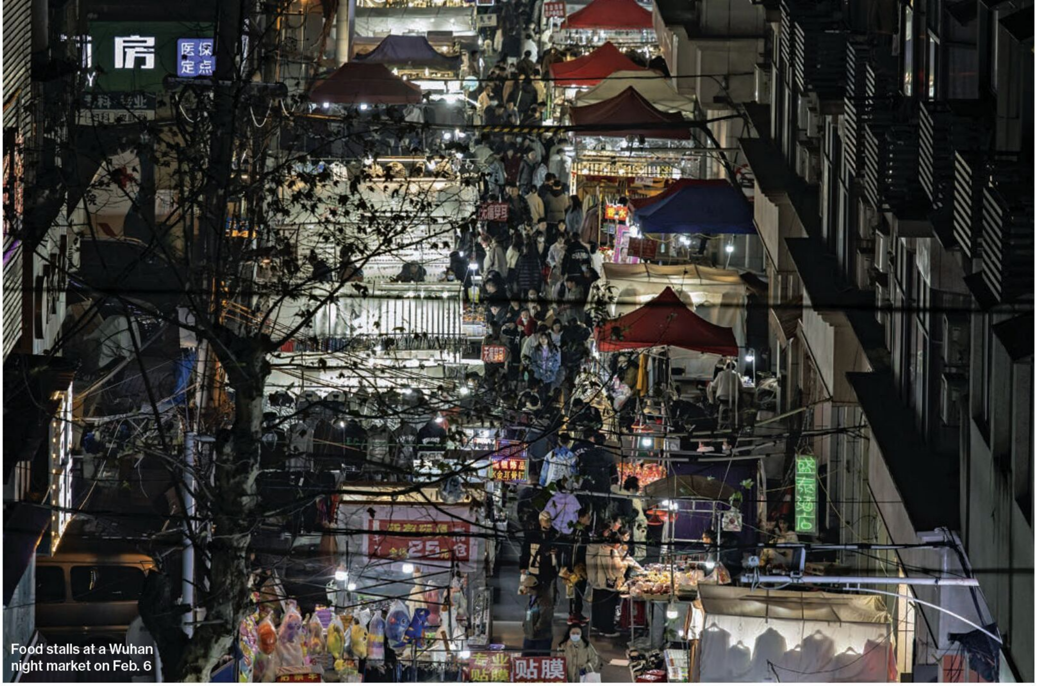
Huang didn't have any better options for her mother. Shanghai's hospitals were overwhelmed. She tried to get Pfizer Inc.'s antiviral, Paxlovid, from a local clinic, but the doctor wouldn't give it to her—supplies were short, and they insisted on seeing her mother first. "I almost snapped," Huang says. She ended up buying the drug online at an exorbitant price, gambling on its authenticity. "I'm not sure if she might need this drug to survive next time and if the government can supply it," she says. "We have only ourselves to count on."

Some say that it was all intentional: to let Covid run its course during the coldest months of the year, so it would touch the highest number of people in the shortest time frame and let the government shift quickly from controlling Covid to improving economic growth. China's outgoing vice premier for economic affairs, Liu He, said at the World Economic Forum in Davos, Switzerland, on Jan. 17 that life has been "restored to normal" and that the economy will "most likely" return to pre-pandemic growth rates of almost 6%.

By the time the Lunar New Year holiday started five days later, with the initial wave of infections appearing to ebb, many traveled to celebrate with family for the first time in three years. Yet in the days and weeks that followed, there were signs that the Covid pivot had seeded a sense of resistance to Beijing's pervading power. During the New Year festivities, people pushed back against the government's longstanding ban on fireworks. One protest in Henan turned violent, with demonstrators swarming a police car and flipping it. Local officials everywhere, fearful of unrest, started lifting fireworks bans. Protests over unpaid wages, stalled real estate projects and reforms to the national health insurance scheme have followed in recent months. The incidents provide "a small window into people's thinking—that they don't always have to comply with the government policy if it's not sensible," says Hanzhang Liu, a specialist in Chinese politics at Pitzer College in Claremont, California. After so much sacrifice to prevent Covid based on government demands, and then seeing mass infection anyway, "there are definitely some impacts on the psyche. Some people will reevaluate the government and the individual-state relationship."

In Guangzhou, home to factories for clothing makers including fast-fashion giant Shein, employers are following the government's cues, operating as if Covid is over and productivity is the priority. But the task of getting people back to work has been complicated by the legacy of a November omicron

QILAI SHEN/BLOOMBERG (2)



Food stalls at a Wuhan night market on Feb. 6

flareup that plunged entire districts into lockdown. Garment factory workers who'd migrated from other cities were confined to dorms for weeks with no income and insufficient food supplies. Many grew so frustrated they broke the barricade sealing off their urban village and clashed with police.

In February, Tang Ning, a migrant worker herself, spent a week trying to recruit others for her boss's factory. She stood on Datang Village's main street, canvassing people as they walked by. A man stopped to check out the pants she held out as a sample, but he decided the work was too complicated. "If you are interested, we can offer you a free ride to take a closer look at the factory!" she shouted after him. But he walked away.

Tang didn't begrudge the man, and she said she understood the protesters, too. "For young workers who only came in the past three years, Guangzhou only gave them the experience of living in tiny rooms, being locked down and failing to make any savings," she says. There was no reason to trust that it wouldn't happen again.

Still, in February, nationwide factory activity saw its biggest increase in more than a decade, and with the threat of lockdowns gone, Chinese are dining out and shopping again. Economic prosperity—the glue that binds China's government and its people—is returning, helping put memories of the lethal reopening in the past. That's how it went after the deadly Tiananmen Square crackdown in 1989. In the following decade, China's economy went on an unprecedented run of growth, with millions elevated into the middle class.

Then again, Tiananmen didn't directly affect the whole country the same way Covid did. This time, the government's haste to move on and its intolerance for open discussion of its pandemic policies have left many citizens wondering what it was all for. Zhang, a cancer specialist in Shanghai who asked to be identified by her surname only, says she regularly avoided eating, drinking and going to the bathroom at work to limit her chances of getting Covid—then got it in December anyway. Xiong Fei, a restaurant owner in Wuhan, had to close 7 of his 10 restaurants with almost no profits in the past few years. Then he didn't have enough people to run the restaurants when the reopening suddenly occurred.

Jason Wu, a prison officer in northern Guangdong province, had a breakdown last year when he wasn't allowed to leave the 14-day quarantine required before starting a stint at the jail to help his sick, pregnant wife. Post Covid Zero, he expects pay cuts; the local government is strapped because of the money it spent implementing mass testing and other Covid Zero policies. "I'm always on the verge of collapse," Wu says. "I think everyone wants to leave."

"Propaganda is persuasive but becomes counterproductive when it so obviously contradicts the people's own personal experience"

Wang, the doctor in Henan, says he's already stocking medicine for a potential second wave. Nobody else wants to talk about it. "They've got to get back to work," he says. But when the next wave happens, they might not get help from anyone else. —*With Colum Murphy and Lucille Liu*

EFFECTIVE ALTRUISM became a punchline after Sam Bankman-Fried's implosion, but its philosophy of maximum do-gooding is part of a wider web of tech industry thinking, funding, living, zealotry—and alleged abuse.

Silicon Valley's OBSESSION with the AI APOCALYPSE

By ELLEN HUET

Illustration by SOPHI GULLBRANTS

SONIA JOSEPH WAS 14 YEARS OLD WHEN SHE FIRST read *Harry Potter and the Methods of Rationality*, a mega-popular piece of fan fiction that reimagines the boy wizard as a rigid empiricist. This rational Potter tests his professors' spells with the scientific method, scoffs at any inconsistencies he finds, and solves all of wizardkind's problems before he turns 12. "I loved it," says Joseph, who read *HPMOR* four times in her teens. She was a neurodivergent, ambitious Indian American who felt out of place in her suburban Massachusetts high school. The story, she says, "very much appeals to smart outsiders."

A search for other writing by the fanfic's author, Eliezer Yudkowsky, opened more doors for Joseph. Since the early 2000s, Yudkowsky has argued that hostile artificial intelligence could destroy humanity within decades. This driving belief has made him an intellectual godfather in a community of people who call themselves rationalists and aim to keep their thinking unbiased, even when the conclusions are scary. Joseph's budding interest in rationalism also drew her toward effective altruism, a related moral philosophy that's become infamous by its association with the disgraced crypto ex-billionaire Sam Bankman-Fried. At its core, effective altruism stresses the use of rational thinking to make a maximally efficient positive impact on the world. These distinct but overlapping groups developed in online forums, where posts about the dangers of AI became common. But they also clustered in the Bay Area, where they began sketching out a field of study called AI safety, an effort to make machines less likely to kill us all.

Joseph moved to the Bay Area to work in AI research shortly after getting her undergraduate degree in neuroscience in 2019. There, she realized the social scene that seemed so sprawling online was far more tight-knit in person. Many rationalists and effective altruists, who call themselves EAs, worked together, invested in one another's companies, lived in communal houses and socialized mainly with each other, sometimes in a web of polyamorous relationships. Throughout the community, almost everyone celebrated being, in some way, unconventional. Joseph found it all freeing and exciting, like winding up at a real-life rationalist Hogwarts. Together, she and her peers were working on the problems she found the most fascinating, with the rather grand aim of preventing human extinction.

At the same time, she started to pick up weird vibes. One rationalist man introduced her to another as "perfect ratbait"—rat as in rationalist. She heard stories of sexual misconduct involving male leaders in the scene, but when she asked around, her peers waved the allegations off as minor character flaws unimportant when measured against the threat of an AI apocalypse. Eventually, she began dating an AI researcher in the community. She alleges that he committed sexual misconduct against her, and she filed a report with the San Francisco police. (Like many women in her position, she asked that the man not be named, to shield herself from possible retaliation.) Her allegations polarized the community, she says, and people questioned her mental health ▶

◀ as a way to discredit her. Eventually she moved to Canada, where she's continuing her work in AI and trying to foster a healthier research environment.

"In an ideal world, the community would have had some serious discussions about sexual assault policy and education: 'What are our blind spots? How could this have happened? How can we design mechanisms to prevent that from happening?'" she says. "I was disappointed how the community viewed me through this very distorted, misogynistic lens."

In Silicon Valley, the overlap between rationalists, EAs, and AI safety researchers forms a deeply influential subculture. While its borders are blurry, its hundreds or thousands of members are united by a belief that they need to work their butts off, or at least invest lots of money, to stop AI from going Terminator on us. The movement's leaders have received support from some of the richest and most powerful people in tech, including Elon Musk, Peter Thiel and Ethereum creator Vitalik Buterin. And its ideas have attracted the usual Valley mix of true believers and brazen opportunists. Until recently, its most generous supporter was Bankman-Fried, who invested close to $600 million in related causes before dismissing effective altruism as a dodge once his business fell apart.

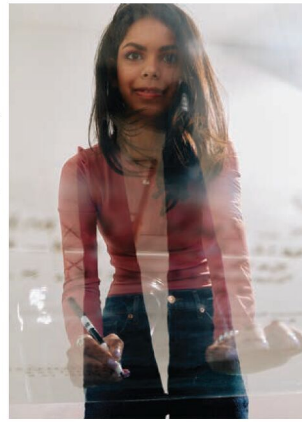
Bankman-Fried's collapse has cast a harsh light on the community's flaws, but he's far from the only alleged bad actor. The combination of insularity and shared purpose that makes the subculture so attractive to smart outsiders also makes it a hunting ground for con artists, sexual predators and megalomaniacs. Filtering the legitimate desire to make AI better and safer through the familiar lens of Valley messiah complexes risks tainting the whole project by association.

The underlying ideology valorizes extremes: seeking rational truth above all else, donating the most money and doing the utmost good for the most important reason. This way of thinking can lend an attractive clarity, but it can also provide cover for destructive or despicable behavior. Eight women in these spaces allege pervasive sexual misconduct, including abuse and harassment, that they say has frequently been downplayed. Even among people with pure intentions, adherents say, EA and rationalist ideologies can amplify the suffering of people prone to doomsday thinking—leading, for a few, to psychotic breaks.

These fissures have global consequences. The community's connections and resources give its members outsize influence on the development of AI, the No. 1 object of fascination for today's tech industry and an incredibly powerful tool worth untold billions. The believers are trying to make AI a force for good, but disillusioned members say their community of kindred spirits is being exploited and abused by people who don't seem to know how to be humane. "Even if there's a strong chance that bad AI outcomes will happen," Joseph says, "using it as an excuse to erode human rights is disrespecting the very thing we're fighting for."

THE BORDERS OF ANY COMMUNITY THIS PEDANTIC CAN be difficult to define. Some rationalists don't consider themselves effective altruists, and vice versa. Many people who've drifted slightly from a particular orthodoxy hedge their precise beliefs with terms like "post-rationalist" or "EA-adjacent." Yet two things are clear: Over the past decade EA has become the mainstream, public face of some fringe rationalist ideas, particularly the dire need for AI safety; and the whole thing started with Yudkowsky.

JOSEPH



Born in Chicago in 1979, Yudkowsky gave up Modern Orthodox Judaism as a preteen, becoming an atheist. He didn't finish high school, but in his late teens he encountered and grew obsessed with the idea of the Singularity, the point at which technological progress will lead inevitably to superhuman intelligence. He started writing about AI in earnest in the 2000s, well after HAL 9000, Skynet and the Matrix had entered the public consciousness, but his prolificacy stood out. In years of pithy near-daily blog posts, he argued that researchers should do all they could to ensure AI was "aligned" with human values. To this end, he created the Machine Intelligence Research Institute (MIRI) in Berkeley, California, with early funding from Thiel and Skype co-founder Jaan Tallinn.

Yudkowsky's ideas didn't initially attract many followers. But he had a gift for marketing. In 2009 he created an online forum called LessWrong, which grew into a hub of rationalist debate and AI thought experiments. By 2010, Yudkowsky was churning out *HPMOR* on fanfiction.net. Many of its serialized chapters directed readers to LessWrong posts about rationalist tenets, and some solicited donations to the Center for Applied Rationality (CFAR), a Yudkowsky-affiliated institute in Berkeley. *HPMOR* "is an incredible recruiting tool for neurodivergent people, people who are into fantasy and people who are looking for community," says Jacqueline Bryk, a writer who counts herself a member of all three camps.

At the same time, effective altruism was growing in parallel. It originated with philosopher Peter Singer, who argued that people who can save lives should save as many as possible. In short, pour the money you might have donated to the opera into antimalarial bed nets instead. By the early 2010s EA organizations with names like GiveWell were advocating for research-based, quantifiable philanthropy choices. Many EAs also went vegan and researched the cheapest ways to reduce animal suffering. At their core, rationalism and effective altruism shared a belief that math could help answer thorny questions of right and wrong. In 2013, Thiel, still a fixture on the edges of the rationalist scene, gave a keynote address at an annual EA summit, hosted at a Bay Area rationalist group house.

By 2014 the idea of the robot apocalypse had won more believers. Nick Bostrom, a philosopher who'd known

JOSEPH: PHOTOGRAPH BY ALEX BLOUIN & JODI HEARTZ FOR BLOOMBERG BUSINESSWEEK. COVER: COURTESY YUDKOWSKY

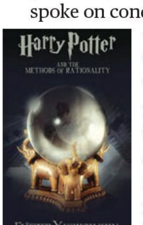
Yudkowsky since the 1990s, published *Superintelligence*, a bestseller that compared humans to small children playing with a bomb. “We have little idea when the detonation will occur, though if we hold the device to our ear we can hear a faint ticking sound,” he wrote. Stephen Hawking, Bill Gates and Elon Musk echoed the warning. “With artificial intelligence, we are summoning the demon,” Musk said at a Massachusetts Institute of Technology symposium in 2014. The next year he co-founded OpenAI, a nonprofit with the stated goal of making AI safe for humanity. A group of 80 prominent scientists, academics and industry experts gathered at a closed-door conference in Puerto Rico to discuss the risks, then signed an open letter warning about them.

Gradually, the worlds of the rationalists, EAs, and AI safety researchers began to blend. The EAs came up with the word “longtermism,” meaning that if all lives are equally valuable, better to save trillions of potential lives in the future than the billions of lives on the planet today. So scratch the malaria nets and concentrate on the apocalypses, like nuclear proliferation, future pandemics and, yes, runaway AI.

Over the course of a few years, this idea became an inescapable subject of Silicon Valley debate. Of the subgroups in this scene, effective altruism had by far the most mainstream cachet and billionaire donors behind it, so that shift meant real money and acceptance. In 2016, Holden Karnofsky, then the co-chief executive officer of Open Philanthropy, an EA nonprofit funded by Facebook co-founder Dustin Moskovitz, wrote a blog post explaining his new zeal to prevent AI doomsday. In the following years, Open Philanthropy’s grants for longtermist causes rose from $2 million in 2015 to more than $100 million in 2021.

Open Philanthropy gave $7.7 million to MIRI in 2019, and Buterin gave $5 million worth of cash and crypto. But other individual donors were soon dwarfed by Bankman-Fried, a longtime EA who created the crypto trading platform FTX and became a billionaire in 2021. Before Bankman-Fried’s fortune evaporated last year, he’d convened a group of leading EAs to run his $100-million-a-year Future Fund for longtermist causes. At the fund’s Berkeley offices, according to the *New Yorker*, water cooler chitchat included questions about how soon an AI takeover would happen and how likely it was—or in the jargon of the group, “What are your timelines?” and “What’s your p(doom)?”

Effective altruism swung toward AI safety. “There was this pressure,” says a former member of the community, who spoke on condition of anonymity for fear of reprisals. “If you were smart enough or quantitative enough, you would drop everything you were doing and work on AI safety.” *80,000 Hours*, an influential career-advice podcast among effective altruists, started recommending jobs in the field above all else. But the community also began to splinter. OpenAI, which had been launched as a nonprofit, announced in 2019 that it was switching to a for-profit enterprise with a $1 billion investment from Microsoft Corp. Two years later, several OpenAI executives defected to form their own research company, Anthropic. OpenAI, they alleged, was in fact accelerating the arrival of an AI that might be impossible to control, so Anthropic would continue working to get it right. Bankman-Fried invested $580 million in Anthropic early last year.



YUDKOWSKY’S BOOK

For those AI researchers who sincerely fear an AI apocalypse, this growing feud laid bare a haunting question with echoes of the Manhattan Project. By researching AI, were they protecting the future of humanity? Or were they, despite their best intentions, making things worse?

AS EFFECTIVE ALTRUISM GREW IN POPULARITY, SO DID criticisms of its philosophy—in particular, “earning to give,” the idea that people like Bankman-Fried should do whatever it takes to make a lot of money so they can give it away. To amass his billions, Bankman-Fried allegedly defrauded his customers, and critics have said his downfall shows that EA is vulnerable to a myopia that allows the ends to justify illegal means. Among EAs themselves, however, the most salient criticism is subtler: that living at the logical extremes of the ideology is impractical and a recipe for misery.

EAs are laser-focused on optimizing their impact, to the point where a standard way to knock down an idea is to call it “suboptimal.” Maximizing good, however, is an inherently unyielding principle. (“There’s no reason to stop at just doing well,” Bankman-Fried said during an appearance on *80,000 Hours*.) If donating 10% of your income is good, then giving even more is logically better. Taken to extremes, this kind of perfectionism can be paralyzing. One prominent EA, Julia Wise, described the mental gymnastics she faced every time she considered buying ice cream, knowing the money could be spent on vaccinating someone overseas. For similar reasons, she agonized over whether she could justify having a child; when her father worried that she seemed unhappy, she told him, “My happiness is not the point.”

Wise has since revised her ice cream budget and become a mother, but many other EAs have remained in what some call “the misery trap.” One former EA tweeted that his inner voice “would automatically convert all money I spent (eg on dinner) to a fractional ‘death counter’ of lives in expectation I could have saved if I’d donated it to good charities.” Another tweeted that “the EA ideology causes adherents to treat themselves as little machines whose purpose is to act according to the EA ideology,” which leads to “suppressing important parts of your humanity.” Put less catastrophically: EAs often struggle to walk and chew gum, because the chewing renders the walking suboptimal.

The movement’s prioritization of AI safety also raised eyebrows among critics who see this all-or-nothing approach as a dodge, a way to avoid engaging with more solvable problems in favor of tech industry interests. “If you really think AI is cool, isn’t it better to believe you have to work on it to save the world?” asks Timnit Gebru, an AI ethicist who often tweets spicy criticisms of effective altruism. “You don’t ▶

◀ have to feel guilty about not solving hunger."

Even leading EAs have doubts about the shift toward AI. Larissa Hesketh-Rowe, chief operating officer at Leverage Research and the former CEO of the Centre for Effective Altruism, says she was never clear how someone could tell their work was making AI safer. When high-status people in the community said AI risk was a vital research area, others deferred, she says. "No one thinks it explicitly, but you'll be drawn to agree with the people who, if you agree with them, you'll be in the cool kids group," she says. "If you didn't get it, you weren't smart enough, or you weren't good enough." Hesketh-Rowe, who left her job in 2019, has since become disillusioned with EA and believes the community is engaged in a kind of herd mentality.

In extreme pockets of the rationality community, AI researchers believed their apocalypse-related stress was contributing to psychotic breaks. MIRI employee Jessica Taylor had a job that sometimes involved "imagining extreme AI torture scenarios," as she described it in a post on LessWrong—the worst possible suffering AI might be able to inflict on people. At work, she says, she and a small team of researchers believed "we might make God, but we might mess up and destroy everything." In 2017 she was hospitalized for three weeks with delusions that she was "intrinsically evil" and "had destroyed significant parts of the world with my demonic powers," she wrote in her post. Although she acknowledged taking psychedelics for therapeutic reasons, she also attributed the delusions to her job's blurring of nightmare scenarios and real life. "In an ordinary patient, having fantasies about being the devil is considered megalomania," she wrote. "Here the idea naturally followed from my day-to-day social environment and was central to my psychotic breakdown."

Taylor's experience wasn't an isolated incident. It encapsulates the cultural motifs of some rationalists, who often gathered around MIRI or CFAR employees, lived together, and obsessively pushed the edges of social norms, truth and even conscious thought. They referred to outsiders as normies and NPCs, or non-player characters, as in the tertiary townsfolk in a video game who have only a couple things to say and don't feature in the plot. At house parties, they spent time "debugging" each other, engaging in a confrontational style of interrogation that would supposedly yield more rational thoughts. Sometimes, to probe further, they experimented with psychedelics and tried "jailbreaking" their minds, to crack open their consciousness and make them more influential, or "agentic." Several people in Taylor's sphere had similar psychotic episodes. One died by suicide in 2018 and another in 2021.

Several current and former members of the community say its dynamics can be "cult-like." Some insiders call this level of AI-apocalypse zealotry a secular religion; a former rationalist calls it a church for atheists. It offers a higher moral purpose people can devote their lives to and a fire-and-brimstone higher power that's big on rapture. Within the group, there was an unspoken sense of being the chosen people smart enough to see the truth and save the world, of being "cosmically significant," says Qiaochu Yuan, a former rationalist.

Yuan started hanging out with the rationalists in 2013 as a math Ph.D. candidate at the University of California at Berkeley. Once he started sincerely entertaining the idea that AI could wipe out humanity in 20 years, he dropped out of school, abandoned the idea of retirement planning, and drifted away from old friends who weren't dedicating their every waking moment to averting global annihilation. "You can really manipulate people into doing all sorts of crazy stuff if you can convince them that this is how you can help prevent the end of the world," he says. "Once you get into that frame, it really distorts your ability to care about anything else."

THAT INABILITY TO CARE WAS MOST APPARENT WHEN IT came to the alleged mistreatment of women in the community, as opportunists used the prospect of impending doom to excuse vile acts of abuse. Within the subculture of rationalists, EAs and AI safety researchers, sexual harassment and abuse are distressingly common, according to interviews with eight women at all levels of the community. Many young, ambitious women described a similar trajectory: They were initially drawn in by the ideas, then became immersed in the social scene. Often that meant attending parties at EA or rationalist group houses or getting added to jargon-filled Facebook Messenger chat groups with hundreds of like-minded people.

The eight women say casual misogyny threaded through the scene. On the low end, Bryk, the rationalist-adjacent writer, says a prominent rationalist once told her condescendingly that she was a "5-year-old in a hot 20-year-old's body." Relationships with much older men were common, as was polyamory. Neither is inherently harmful, but several women say those norms became tools to help influential older men get more partners. Keerthana Gopalakrishnan, an AI researcher at Google Brain in her late 20s, attended EA meetups where she was hit on by partnered men who lectured her on how monogamy was outdated and nonmonogamy more evolved. "If you're a reasonably attractive woman entering an EA community, you get a ton of sexual requests to join polycules, often from poly and partnered men" who are sometimes in positions of influence or are directly funding the movement, she wrote on an EA forum about her experiences. Her post was strongly downvoted, and she eventually removed it.

The community's guiding precepts could be used to justify this kind of behavior. Many within it argued that rationality led to superior conclusions about the world and rendered the moral codes of NPCs obsolete. Sonia Joseph, the woman who moved to the Bay Area to pursue a career in AI, was encouraged when she was 22 to have dinner with a 40ish startup founder in the rationalist sphere, because he had a close connection to Thiel. At dinner the man bragged that Yudkowsky had modeled a core *HPMOR* professor on him. Joseph says he also argued that it was normal for a 12-year-old girl to have

"EVERYONE BELIEVED ME, BUT THEM BELIEVING IT WASN'T ENOUGH.

sexual relationships with adult men and that such relationships were a noble way of transferring knowledge to a younger generation. Then, she says, he followed her home and insisted on staying over. She says he slept on the floor of her living room, and that she felt unsafe until he left in the morning.

On the extreme end, five women, some of whom spoke on condition of anonymity because they fear retribution, say men in the community committed sexual assault or misconduct against them. In the aftermath, they say, they often had to deal with professional repercussions along with the emotional and social ones. The social scene overlapped heavily with the AI industry in the Bay Area, including founders, executives, investors and researchers. Women who reported sexual abuse, either to the police or community mediators, say they were branded as trouble and ostracized while the men were protected.

In 2018 two people accused Brent Dill, a rationalist who volunteered and worked for CFAR, of abusing them while they were in relationships with him. They were both 19, and he was about twice their age. Both partners said he used drugs and emotional manipulation to pressure them into extreme BDSM scenarios that went far beyond their comfort level. In response to the allegations, a CFAR committee circulated a summary of an investigation it conducted into earlier claims against Dill, which largely exculpated him. “He is aligned with CFAR’s goals and strategy and should be seen as an ally,” the committee wrote, calling him “an important community hub and driver” who “embodies a rare kind of agency and a sense of heroic responsibility.” (After an outcry, CFAR apologized for its “terribly inadequate” response, disbanded the committee and banned Dill from its events. Dill didn’t respond to requests for comment.)

Rochelle Shen, a startup founder who used to run a rationalist-adjacent group house, heard the same justification from a woman in the community who mediated a sexual misconduct allegation. The mediator repeatedly told Shen to keep the possible repercussions for the man in mind. “You don’t want to ruin his career,” Shen recalls her saying. “You want to think about the consequences for the community.”

One woman in the community, who asked not to be identified for fear of reprisals, says she was sexually abused by a prominent AI researcher. After she confronted him, she says, she had job offers rescinded and conference speaking gigs canceled and was disinvited from AI events. She says others in the community told her allegations of misconduct harmed the advancement of AI safety, and one person suggested an agentic option would be to kill herself.

For some of the women who allege abuse within the community, the most devastating part is the disillusionment. Angela Pang, a 28-year-old who got to know rationalists through posts on Quora, remembers the joy she felt when she discovered a community that thought about the world the same way she did. She’d been experimenting with a vegan diet to reduce animal suffering, and she quickly connected with effective altruism’s ideas about optimization. She says she was assaulted by someone in the community who at first acknowledged having done wrong but later denied it. That backpedaling left her feeling doubly violated. “Everyone believed me, but them believing it wasn’t enough,” she says. “You need people who care a lot about abuse.” Pang grew up in a violent household; she says she once witnessed an incident of domestic violence involving her family in the grocery store. Onlookers stared but continued their shopping. This, she says, felt much the same.

NONE OF THE ABUSE ALLEGED BY WOMEN IN THE community makes the idea of AI safety less important. We already know the ways that today’s single-tasking AI can distort outcomes, from racist parole algorithms to sexist pay disparities. Superintelligent AI, too, is bound to reflect the biases of its creators, for better and worse. But the possibility of marginally safer AI doesn’t make women’s safety less important, either.

Twenty years ago, Yudkowsky’s concerns about AI safety were fringe. Today, they have billions of dollars behind them and more piling up—Google invested $400 million in Anthropic in February—but safety-focused efforts remain a tiny sliver of the money the industry is dedicating to the evolving AI arms race. OpenAI’s ChatGPT can pass a law school exam; its DALL-E can paint you pink dolphins leaping through clouds. Microsoft is piloting AI in Bing search. Even though the consensus view is that truly sentient AI remains a ways off, the pace of research and advancement is rapidly accelerating.

The questions that haunt the movement are becoming more relevant, as are its sins. Yudkowsky now views OpenAI’s commercial efforts as “nearly the worst possible” path, one that will hasten our doom. On a podcast last month, he said he’d lost almost all hope that the human race could be saved. “The problem is that demon summoning is easy, and angel summoning is much harder,” he said.

In 2003, around the time the *Matrix* sequels were in theaters and AI doomsday scenarios were mostly relegated to late-night dorm talk, Bostrom proposed a thought experiment about an AI whose only goal is to make the largest possible number of paper clips. That AI would quickly realize that to maximize its goal, there should be no humans: If humans decided to switch off the AI, that would prevent paper clip creation, and humans contain atoms that could be made into paper clips. The AI, he concluded, would be strongly incentivized to find ways to strip-mine us and everything else on the planet to reach its goal. The paper clip maximizer, as it’s called, is a potent meme about the pitfalls of maniacal fixation.

Every AI safety researcher knows about the paper clip maximizer. Few seem to grasp the ways this subculture is mimicking that tunnel vision. As AI becomes more powerful, the stakes will only feel higher to those obsessed with their self-assigned quest to keep it under rein. The collateral damage that’s already occurred won’t matter. They’ll be thinking only of their own kind of paper clip: saving the world. Ⓑ

YOU NEED PEOPLE WHO CARE A LOT ABOUT ABUSE”

Through snow and mud and mountains, the Ferrari Purosangue SUV is a speed machine
By Hannah Elliott Photographs by Alberto Bernasconi

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I knew my car had made an impression when the portly construction worker I passed in Pinzolo, Italy, made that signature gesture Italian men do where they shake their hand at the wrist, like they've just touched something too hot.

SUVs don't often generate fiery ardor. But the 2023 Ferrari Purosangue, the automaker's first four-door vehicle, had that precise effect as I drove through the ski town three hours north of Milan.

Signore must have liked the sinewy air ducts set like suspension bridges on each side of the hood. Or the guttural growl of the V-12 engine. Maybe it was the sloping roofline, 23-inch wheels and sizzling vermilion paint that caught his eye.

I get it. The $393,000 Purosangue (PUR-o-SAN-gway, it's Italian for "thoroughbred," literally "pure blood") is a smoldering hulk of metal, carbon and supercar heart aimed at taking down its closest competitor in the segment—the $230,000 Lamborghini Urus—as the top performance luxury SUV.

After 12 hours behind the wheel in the Dolomites, a day that included driving off-road on snow, on alpine switchbacks and on broad expressways, I can report that it doesn't knock the Urus from the throne. The Urus has a better overall combination of performance, value and faithfulness to design heritage. But for Ferrari fans the Purosangue will still set pulses racing. It will even attract some new admirers.

If you follow Ferrari at all, you know the carmaker pretty much has everything: sold-out order books and record sales in 2022; margins that rivals including Porsche and Mercedes-Benz can't touch; and riotous hybrid supercars such as the 296 GTB, SF90 Stradale and LaFerrari.


The writer with the Purosangue

The one thing it lacked was an SUV. (See also: the $189,000 Aston Martin DBX, the $200,000 Bentley Bentayga and the $355,000 Rolls-Royce Cullinan.) Ferrari leadership had sworn they'd never make such a sacrilegious conveyance. In 2016, Chief Executive Officer Sergio Marchionne told Bloomberg News, "You have to shoot me first." Times have changed.

Che sorpresa! The amount of money to be made by joining the most lucrative automotive segment in the world finally became too silly to resist. Ferrari says that, starting this year, the Purosangue will make up 20% of its total global production. The percentage is low: Rolls-Royce, Lamborghini and Bentley report their SUVs account for roughly half of their sales. But Ferrari, ever the contrarian, has long made far fewer vehicles than it can sell. Company brass even refuse to call it an SUV, describing it instead as an "agile car" with "volumes more imposing than Ferrari's most powerful sports cars."

When I ask Ferrari's design director, Flavio Manzoni, if he'd studied his rivals' SUVs, he replies, "I wasn't interested at all. This was not a world we wanted to be connected to. I didn't want to be contaminated." So he started at square one, he says, and built a 4,500-pound vehicle with all-wheel drive and four driving modes with suspension settings to handle deep snow and ice. He added rear doors and ample adjustable clearance off the ground, both new line items for Ferrari. (So, yes, it's an SUV.)

All sensuous curves from the clamshell hood to the rounded fenders, there's not a straight line on this car. The front boasts the classic sharknose style shared on my personal favorite

The interior comes in leather and partially recycled Alcantara

Ferrari, the Roma. Daytime running lights on each side of the hood sit between two pairs of air intakes, a design cue that emphasizes the arched ducts rather than headlamps. The rear doors open in reverse, carriage-style, easing access to the back two seats. It's a cool look and affords more space for bulky items such as coats and knees, because it frees up the area where a normal door's hinge would be.

At first I couldn't see the door handles. Up close I found a black, credit-card-size piece of plastic at the bottom of the window. A light pull opens the rear door with the help of an electronic motor; it can be closed by pushing a button on the inside door frame or using the black lever again. It's not an exact science, nor is it quick. More than once I resorted to pushing, then re-pushing, then shoving the door closed because the motor was too slow.

Ferrari gave me the chance to test the Purosangue off-road, on a small snow track cut into the mountain near the resort town of Madonna di Campiglio. I started with the car in wet mode, with a soft suspension setting, and hit the gas. It whipped around snowdrifts and a lone skier relaxing in a sweater, toy poodle in tow, the rig staying firmly planted to the ground with no wiggling or sliding. The slip control—a new electronic stability function that works on each of the four wheels even under braking—and a slew of other cornering systems helped master the ruts and bumps along the course. The Purosangue also has hill descent control, a standard feature for many off-road vehicles but a first for Ferrari.

Then I switched to ice mode. That tightened the feedback between the steering wheel and the tires as we sped along the side of the mountain. It was wild to be hearing that famous Ferrari V-12 engine note not on a sunny Miami street but instead while avoiding snowbanks and that toffee-colored poodle (utterly unbothered, by the way) as I blew by.

Back on the road, I activated the seat warmers—it had been -7C (19F) that morning—turned the red switch on the steering wheel to comfort mode, then waved to some schoolchildren in boots and ski helmets as they waited for the bus. I needed to hit the highway. I flipped on the 21 speakers' worth of Burmester stereo to some sort of Italo-disco on the radio. But there was a loud intermittent popping, which I first thought was an errant snowball from those kids. It turned out it was "related to an early version of the software for the audio system," a spokesperson told me, and will get fixed.

The cockpit feels modern, sporty and rich. I'd suggest opting for the glass roof, because the standard recycled polyester fabric roof lining feels like… polyester. The Purosangue lacks any center touchscreen; its absence felt like a welcome escape. Instead I controlled audio, drive settings and heads-up display functions from a tiny touch-sensitive section of the steering wheel. It may bother some users not accustomed to playing video games or being on their phone a lot.

A round dial in the center of the dash controls climate for both driver and passenger. And if you haven't guessed, no, there's no onboard navigation system, either. The Purosangue doesn't offer it. "Our customers plug their phones in anyway—they don't need it," another spokesperson told me. OK.

I didn't reach the 192 mph top speed promised in the Purosangue, and I didn't take out a stopwatch to check the advertised 3.3-second zero-to-62 mph sprint time. But after turning back toward Pinzolo and bombing down Route SS43 and the A22 near the ice-blue water of Lake Toblino, I came close.

Maybe it was the disco music or the mushy pink of the setting Alpine sun that had me surging past the lumbering trucks around me. The Purosangue lacked wobble as it darted through traffic; the faster I went, the more fun I had. It gets a combined 13 mpg, but you didn't get this far through the review if you care about that. (The Urus gets a combined 14 mpg; this segment isn't for those concerned with efficiency.) The refined powertrain, pin-precise handling and level cornering is what you came here for; the Purosangue offers those in spades.

Back at the hotel nursing a Bombardino, I found myself feeling smug, basking in the glow of this feat from Ferrari. The automaker's signature performance, offered from a higher seat position, is a treat. Founder Enzo Ferrari would've rolled over in his grave if he'd heard his company made an SUV—er, sorry… "agile car with imposing volumes." But he would've loved it once he got behind the wheel.

Chill Out, Look Up

A trip to Sweden's Arctic Retreat finds days packed with physical fun and nights aglow with the northern lights

By Eva Szalay

Three cabins, each with a back wall of windows, are perfectly poised to observe the aurora borealis

COURTESY GRAEME RICHARDSON

I was butchering a block of ice the size of a tombstone, trying to etch out a jukebox with a sharp chisel, when there was an enthusiastic shout beside me. I tried to remain focused on my task—determined that my husband and I would beat my parents at ice sculpting; their own slab was starting to resemble its assigned goal, a bar stool.

We were standing in the middle of the frozen Rane River, in Sweden's northern reaches, carving out this ice bar as the first activity on an action-packed birthday trip. This is just one of the many seemingly harebrained—but physical and fun—tasks you'll find yourself engrossed in during a typical stay at the Arctic Retreat. But our guide, Staffan Wallner, was urging us to look up. I diverted my gaze to meet his. No, he said. *Up* up.

The sky sat so low it felt close enough to touch, and in the swiftly fading light we saw a small iridescent splotch. It shimmered like celestial mother of pearl, with swirling oily pinks, limpid blues and mercurial greens blending into a small cloud. "Wow," I said, impressed in the way parents are when their second child stands up the first time: It's exciting but possible to move on relatively quickly. After all, we were here to see the northern lights, not clouds—and, according to our weather app, the chances of doing that were high this very evening. And this chiseling waited for no one.

But Wallner informed us that this was the tops, as far as cloud spotting goes, that these pearly manifestations are rarer than the aurora borealis and usually only ever seen close to the North Pole. He said these were polar stratospheric clouds, so uncommon that it was the first time that he, a connoisseur of clouds, had seen them. Created by the sun's reflection on water molecules in the sky, the same particles are at play as with the northern lights.

We paused our ice sculptures to watch for a while, beginning to understand that you don't come to the wintry North to show off, but to be a spectator to some of nature's greatest shows.

Our arrival here earlier that day was a similar moment of understated magic: The turnoff to the Arctic Retreat, a small collection of posh log cabins operated and co-owned by Graeme Richardson and a group of local families, is unmarked and easy to miss. Just over an hour's drive from Lulea airport near Boden, the snowy path off the road looks too narrow to lead anywhere but trouble.

But the resort is a cozy oasis of warmth and luxury in the frozen expanse of Lapland, which my husband, Richard, and I first found in the autumn of 2020. It had never occurred to us to go to Sweden, but in the uncertain days of the pandemic it was one of the few countries open to tourists. I was looking for a place to get a recharge from London life.

After I did some intensive Googling, the simple, confident vibes persuaded me to book the Arctic Retreat rather than the glitzy Treehotel, a magnet for celebrities an hour's drive away. I'm glad I did: The retreat was as remote as it possibly could be, nurturing the strange but wonderful feeling that we'd fallen off the face of the Earth and landed in some frozen world with amazing food.

Now we'd come back three years later with my parents, two 71-year-old Hungarians whose childhood winters resembled conditions in Swedish Lapland and whose birthdays we were here to celebrate. Since the pandemic we've taken to meeting outside Hungary for a different experience each year,

something fun but challenging, like rifle shooting in a Second World War bunker in a forest outside Berlin. Hence the three days of ice sculpting and other merriment, including mushing dog sleds and snowmobiling. Above all, we came to catch a glimpse of the northern lights, which my parents had never seen. This part of Sweden is known for them; the abundant forests mean there's very little light pollution.

You may have read recently about a commercial pilot who turned his plane 360-degrees so passengers could witness the lights. Perhaps that piqued your interest, and you should book now to catch them during the next peak season in December and January.

Those who've tried to see the aurora borealis will probably have stood in the middle of a field in freezing conditions, hoping the lights appear before the cold spreads to their every nook and cranny. At the Arctic Retreat, the lights seem to come to you: It's possible to watch them dance and shimmer from the comfort of your sofa, your cabin's terrace or the private hot tub. But on our first night, we were disappointed—no aurora to be seen. I shouldn't have been so cocky.

With a maximum of eight guests at a time, the resort is discreet and homey. Each of just three cozy cabins is furnished minimally, with north-facing floor-to-ceiling windows overlooking the Rane. Despite temperatures that often dip well below -20C (-4F), the buildings' sturdy logs are soothing on an elementary level—as if your body knows it's protected. If that doesn't work, there's the aforementioned hot tub, ideal for drinking in the forest's snowy silence.

The retreat has a sauna and provides massages in the comfort of your cabin. (For something a bit more invigorating, you can even plunge into a cleared section of the icy river.) Plus, as of this year, there are reiki and yoga classes. Emanuel Swärd, the chef, prepares three-course dinners featuring dishes such as reindeer tartare, arctic char and cloudberry desserts. Leftovers are given to the chef's chickens, whose eggs we devoured at breakfast. (Swärd will customize your meal completely to your tastes; my vegetarian mother was, for once, happy with the food.) All meals and soft drinks are included in the nightly price, with activities costing extra. Prices in the peak winter season run to $1,700 per cabin for two people. For about $4,300, the whole resort is yours for a night.

Other activities include Swedish baking, ice fishing and a visit with local Sami families for music and a meal. As of last month, adventurous guests can ascend 40 meters (131 feet) in a hot air balloon to get closer to the northern lights. There's also plenty of wildlife, with a black bear living quietly nearby and reindeer herds wandering around freely. On our first morning, we got a very special visit from a family of moose.

As we fished, the now-familiar-yet-otherworldly polar clouds reappeared. This time, three glistening purply-pink creations shimmied low over the frozen lake, and we all got to appreciate them. We were so mesmerized we didn't catch any fish. That was our excuse, anyway.

When we got back from our second day, happy, thawed-out and exhausted, we settled down for dinner as Swärd came into the dining room to ask if he should hold back our next course, as the northern lights were making an appearance. With all the talk of the clouds, we sort of forgot about the lights. But now we rushed outside to watch the magic happen: A beam of light sliced through the dark sky and into the tops of the trees and suddenly arched over us like the dome of a cathedral. Little green streaks waxed and waned behind us, playing hide-and-seek with our gaze. Then a curtain of color hung down like a skirt—all emeralds and whites, oily and clear at the same time. It was a small show by the resort's standards, but it was enough that my mother announced she was going to move here. We finished dinner, drunk on the lights and glowing like clouds.

On our last day, my father unexpectedly revealed himself to be an innately talented musher. As I watched him take off at an alarming speed, his sled pulled by seven adorably friendly Alaskan huskies, I wondered if he and my mother would survive this adventure. Then my own team of five huskies lurched down the hill in pursuit, beasting forward even though I was standing with my full body weight on the brakes.

As the dogs surged ahead, silence descended upon us, leaving only the steely whisper of the sleds against the icy snow (except for Dad, who had to take continuous advice about his driving from Mum, who was cozily ensconced in reindeer skins). Driving a dog sled feels like flying, but with considerably more airborne poop. Up and down mountains we went, crossing vast frozen fields and running toward the low-hanging sun.

After an al fresco lunch of soup and toasties, warming up by a fire our guides Sanne Kouwenhoven and Lotte Molenaar conjured to life in waist-deep snow, we were back on the tracks to home base. Stiffly, we coaxed the proud dogs out of their harnesses, and they settled into their kennels for the night. As permanent residents of this spectacular Arctic theater, they see the lights and the clouds all the time. We were just happy to have been in the audience for a while. B

Top row, from left: Evergoods Civic Panel Loader 24L ($279), Goruck GR2 34L Carryology Kaidan V2.0 ($525). Bottom row: Mission Workshop Rhake ($535), Aer City Pack X-Pac ($175), Peak Design Everyday Backpack ($280)

Building a Better Backpack

Self-proclaimed “bag nerds” have created a market for ultra-functional carryalls, made with elite materials

By Ryan Cavataro
Photograph by Linda Xiao

In 2008, Jason McCarthy just wanted a backpack. Having served in Iraq for the US Army Special Forces, he needed one that would be rugged and durable, yet wouldn’t look out of place on the uptown 6 train. But he didn’t know where to buy it, so he posted a Craigslist ad in New York seeking a designer. Through it, he found a design team in Bozeman, Montana, and over the next two years, together they designed and prototyped the original GR1 rucksack, a project that evolved into Goruck LLC. Inspired by the harsh conditions during his three military tours, the brand has set as its goal to build a bag that acts as “a bridge between Baghdad and New York City.”

Gorucks start at $150 and can cost as much as $425 for the waxed canvas GR1 Heritage model. American-made, they’re the standard-bearer in the industry, using hard-wearing materials such as military-grade 1000D Cordura and YKK zippers with silent pulls. There’s extra padding on the shoulder straps and around the laptop compartment, which the company calls “bombproof.” It’s all backed by a lifetime repair warranty against any snags and tears from hikes or trips abroad. “We have about 50 employees and $32 million in revenue a year,” McCarthy says, which is a lot of bags (68,000 in 2022, in fact).

Compared with a rival such as JanSport Apparel Corp., which has been around for 50 years and has a value of $500 million by some estimates, Goruck is still an upstart. But it’s part of a wave of companies, including Peak Design and Evergoods, making and marketing highly functional and damage-resistant backpacks to self-proclaimed bag nerds, or “carry geeks.”

This community convenes around online platforms such as Carryology, which was founded in 2009 by Andy Fallshaw and Hadrien Monloup to improve the way people organize and carry their things. It exists in a niche between fashion, technology and outdoor activities. Goruck’s first bag arrived in 2010, within a rich multiyear period when peer brands Aer, Mission Workshop and Topo Designs also began to appease enthusiasts wanting useful bags for hiking, cycling or going to the office—or even simply to collect and trade. Carryology regularly hosts in-person meetups across the world for those hobbyists, who also organize their own, where they’ll show off or sell their limited-edition bags as if they’re Air Jordan sneakers.

Andrew Cheu, a senior architectural designer in Brooklyn, New York, has been to a few meetups across the US in the past couple of years. “You buy, sell, trade, help each other find their Grail pack,” he says. “The pandemic really kick-started our community.” Even with a few bags in his apartment, he’s still chasing the perfect pack and how to use add-ons (think cord or food pouches) to maximize his “carry” efficiency; it’s the continued experimentation that keeps him involved in the hobby.

The pandemic proved a double-edged sword for the high-end backpack industry. Supply chain issues snarled raw material production and international manufacturing. “Fabric issues, getting stuff freighted and through customs, and the inability to scale American labor have been the greatest impediments to our growth,” McCarthy says. But as Covid-19 cases abated in 2020, outdoor activities exploded, and people looked for better gear to take on their adventures.

Boutique makers such as Filip Raboch and Jakob von Berg, based in the Czech Republic and Austria, respectively, saw demand surge for their machine-sewn custom bags. Over the past couple of years, they’ve turned their side gigs into full-time professions. “I’m able to do about 10 bags a month,” says Raboch, whose backpacks cost around $400 to $500 if based on a standard design. Von Berg’s requests have been split 50-50 between cycling bags and everyday backpacks that could be worn in the office or on a short hike, averaging €210 ($223).

Office attire has become more casual over the past two decades, and the pandemic sped up that shift. “For a professional back in the day, it was briefcase only, right?” says Michael Knispel, editor in chief at Carryology, “Today, you might see Wall Street bankers rocking an expensive backpack.” Leather ones, which Knispel notes are heavy and limited in their design options, were the high-end choice before 2010, but new technical materials are in vogue.

Textile manufacturers Avient Corp. and Dimension-Polyant developed Dyneema and X-Pac, respectively, lightweight, waterproof fabrics inspired by modern laminate sailcloth. Their materials have been a hit. “We’ve seen really strong growth in the past four years in X-Pac, and we hope that trend will continue,” says Taylor North, head of technical fabrics at Dimension-Polyant’s US division. Goruck and Carryology released two exclusive collaborations, priced from $495, in Dyneema and X-Pac that sold out in hours. Even though these fabrics are more expensive than standard nylon, for Raboch’s customers they have come to define the perfect backpack.

In 2010, Carryology introduced its own product line, Bellroy, which founders say is now a $300 million brand selling backpacks, slim wallets and other accessories (page 63). A Facebook group called Carryology Classified boasts more than 25,000 members. Knispel says that in the carry-geek community, talking about high-end backpacks is like discussing a shiny Ferrari. “There’s a story attached to a particular product,” he says. “They want to show it off, talk about the performance, all the details.” Ⓑ

ILLUSTRATION BY JAY DANIEL WRIGHT

There's an Art To This Game

A reality show pits artist against artist, fighting over a prize that's already been won. *By James Tarmy*

The new art-world docu-competition series *The Exhibit: Finding the Next Great Artist* opens with introductions. There's a self-taught oil painter from Chicago, another painter from Northfield, Minnesota, whose work focuses on contemporary Indigenous life, and, wait—Baseera Khan? As in the same Baseera Khan who had a solo show at the Brooklyn Museum last year? And, hold on, what's the design-world wunderkind Misha Kahn doing on the screen?

Khan, Kahn and five other artists are there to compete for the honor of a "career-defining" exhibition at the Hirshhorn Museum and Sculpture Garden in Washington and a $100,000 cash prize. Over the course of six episodes, these painters, sculptors, printmakers and multihyphenates create art, get judged, and do their best to inject some reality-show-style drama into the proceedings while remaining unfailingly kind and supportive to the other contestants.

It's a fun idea, and the show, which premiered on MTV on March 3 and aired on the Smithsonian Channel on March 7, does a decent job of introducing art and artmaking to a general audience without dumbing it down. Headed by its glamorous lead judge, Hirshhorn Director Melissa Chiu, and featuring guest judges such as contemporary artist Adam Pendleton (who recently had a solo show at New York's Museum of Modern Art), the series has the potential to be the first televised version of the art world that doesn't embarrass itself. (I'm looking at you, *Velvet Buzzsaw*.)

In that respect it succeeds. But as an actual show, *The Exhibit* is unfocused: Is it reality TV or educational programming? Is it about hidden geniuses getting their big break, or, given the mixture of famous and unknown, is it a competition between the establishment and amateurs? In the end it's not much of anything.

Each episode is structured around a *RuPaul's Drag Race*-style assignment—"an exploration of gender," for instance—which the artists respond to by creating a work of their choosing in whatever medium they desire. Given the abundance of very specific materials, it seems everyone had ample opportunity to prepare for the prompts before the show aired. There's a time clock, which no one seems to care about, and *Real Housewives*-inspired dramatic music, which, when set to people painting at easels, is unintentionally hilarious.

When the time is up, guest judges critique the results and choose a winner, but no one goes home. Instead, the "win" is counted vaguely—more spiritually than quantitatively, as far as I can tell—toward the artist's overall ranking. The real winner will be named in the grand finale, which will take place at the Hirshhorn's annual gala.

In any other reality-show competition, de-emphasizing victories, eliminations and intra-contestant rivalries would be deadly. Here, though, the blandness is kind of a blessing, turning each episode into a straightforward tutorial on how art is made. Furthering *The Exhibit*'s educational bent, the participants describe their work to the judges, and though several explanations had me laughing out loud (one person proclaims "in art history, the banana is always the stand-in for male virility," which will come as news to art historians), it's generally instructive to hear artists decode their work for an audience.

So why is it such an enervating viewing experience? Start with the lack of dramatic tension. The show's tag line is "Finding the next great artist," but some of these artists have already been found. (Khan's and Kahn's motivations for appearing on the show are never made clear.) It's not just an intellectual quibble, because evidence of this overt hierarchy lowers the stakes and makes the amateurs' wins feel inconsequential. I winced when, reciting their bios to the camera, one contestant's dream of being able to teach less and make "more of a living through art" was followed by another contestant casually mentioning his solo museum exhibition in Munich.

Competitions are fun only when the rules are clear and the playing field is roughly even. Here the parameters are muddy, and the field has a steep pitch. If there's a winner before the game is played, why stick around to watch? Ⓑ

The Case for Ditching Your Wallet

Bellroy's clever phone carrier keeps those last crucial cards close. *By Matthew Kronsberg Photograph by Takamasa Ota*

Someday in the not-too-distant future, the wallet will become as anachronistic as the pocket watch. But not quite yet. A mere three US states let you show your ID digitally with Apple Wallet, and though contactless payment with your phone is common, it isn't quite ubiquitous. Still, Australian card-issuing platform Marqeta Inc. noted in its *2022 State of Consumer Money Movement* report that 59% of Americans (and 82% of Australians) age 18-24 would be comfortable leaving home wallet-free. The $99 leather Mod phone case and wallet set from Australian accessories company Bellroy, redesigned for the latest iPhones, reflects this transitional state, letting users carry just the (ever-dwindling) essentials in tandem with their device.

THE COMPETITION

• Peak Design's $40 Everyday case, available for iPhones, Google's Pixels and Samsung's Galaxy phones, works with several magnetic accessories, such as tripods for filming and a $60 mobile wallet with a seven-card capacity

• The $59 full-leather MagSafe wallet case from Mujjo comes in three colors and has metal buttons for extra "clickiness." The simple pocket design holds two or three cards, but they need to be removed before cord-free charging.

• Pad & Quill's $100 Traveler LeatherSafe wallet case is made entirely from American full-grain leather. The wallet portion stays attached to the case, but it bends away for charging, and can be used as a stand.

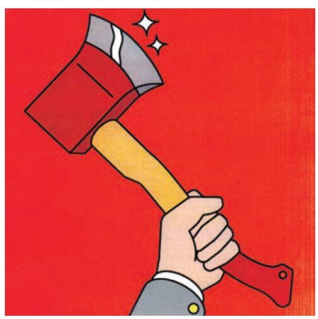
THE CASE

Ever since its 2010 Slim Sleeve, an elegantly rethought leather wallet, Bellroy has focused on elevating the way we carry things. Its microfiber-lined Mod phone case and wallet set is available in seven mix-and-match color options, from simple black to evergreen (pictured) to pebbled, pinkish "fiesta." The wallet features a diagonally hinged door for access to as many as three cards and a thumb-flip magnetic closure for security. Its hardshell body, a mere third of an inch thick, fixes magnetically to the Mod phone case, staying straight and secure with an interconnecting ridge. The case, available for all iPhone 14 sizes, supports MagSafe charging, though you will need to remove the wallet to do so. *$99; bellroy.com*

Where the Ax Will Fall Next

By Alex Webb

Another week, another round of job cuts—this time Meta Platforms Inc. is adding to the 11,000 people it fired in November with thousands more, Bloomberg News has reported.



It raises the question: Even after the thousands of layoffs we've seen in recent months, which industries might be looking to toss more staff on the scrapheap? The answer, based on an analysis of earnings and stock performance, appears to be the financial and health-care sectors.

Here's how I reached that conclusion. In the S&P 500 there are 105 companies whose revenue per employee—the average amount of revenue generated by each worker—has declined from pre-pandemic levels; i.e., 2019. That's a pretty good gauge for how efficiently a company is run. It means that either sales have declined or management hired new staff faster than it could expand the business—head count growth exceeded sales growth.

Of those 105 stocks, some 60 have outperformed the broader market over the past year. That might lead you to conclude there's less pressure on the executive team to right the ship and improve profitability. That won't, of course, always be the case. Meta has performed better than the S&P 500, not least because of its earlier layoffs, but that doesn't seem to be stopping Chief Executive Officer Mark Zuckerberg from slashing more jobs. The social media giant's 14% decline in revenue per employee from 2019 to 2022 was one of the more extreme drops among companies in the index.

Eliminating those companies leaves 45 stocks that both are underperforming the rest of the market and have declining sales per employee. And within that group, the biggest cohort is the 12 financial companies, followed by 10 health-care companies. Among the big names are Bank of America and Citigroup from the banking industry, both of which employ hundreds of thousands of people, as well as the Minneapolis-based medical device maker Medtronic.

The number of companies from those two industries on my list isn't just a function of their outsize presence in the index as a whole—they're in fact overrepresented compared with the weight they carry in the S&P 500.

The roster also includes Amazon.com Inc., another tech giant that's already announced huge head count reductions. But those 18,000 roles it slashed represent just 1.2% of the 1.5 million people the company employed at the end of 2022. With the stock still trading near historic lows compared with expected earnings, founder Jeff Bezos' lieutenants might well determine there's scope to cut more.

Companies have other levers to pull to spur sales and profit growth before they resort to staff reductions. Yet even if executive teams are happy to retain their current staffing levels, activist investors on the prowl for targets might cite the "bloated workforce" as evidence of current management's lack of rigor. For America's beleaguered workforces, the bad news may not be over yet.

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