

THE WALL STREET JOURNAL WEE



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**WSJ.com** 

### What's News

Business & Finance

- ◆ Employers slowed their hiring this summer, adding to signs the economy is gradually cooling and easing pressure for the Federal Reserve to raise interest rates at its next meeting. A1
- ◆ Icahn Enterprises said it was cutting its dividend in half to \$1 a share, the first reduction since 2011, amid an activist short seller's campaign against the company. A1
- **♦** A federal judge narrowed a major antitrust case against Alphabet's Google ahead of a trial that is slated to begin next month, rejecting an argument made by a bipartisan group of 38 state attorneys general who sued the tech giant in 2020 over its search dominance. B1
- **♦ All three major indexes** dropped Friday to finish the week in the red. The Dow lost 1.1% for the week, while the Nasdaq and S&P 500 fell 2.9% and 2.3%, respectively. B11
- ◆ Saudi Arabia is increasingly driving an oil-production strategy to boost prices that is at odds with other OPEC members. B1
- ◆ Nikola CEO Michael Lohscheller has stepped down due to a family health matter, and Chairman Steve Girsky has taken over the role. B3

World-Wide

- ◆ The first pill to treat post-pregnancy depression will soon be available, after the Food and Drug Administration approved it. A1
- **♦** The Supreme Court let stand a lower court order exempting American Indians from a range of local laws in Tulsa, Okla. A3
- ◆ A Texas judge blocked the state from enforcing abortion bans against women facing serious pregnancy complications, saying essential care has been denied. A2
- **♦ Ukraine struck one** of Russia's largest ports with naval drones, disrupting shipments of grain and oil as fighting intensified in the Black Sea. A7
- ◆ Russia's leading opposition figure, Alexei Navalny, was sentenced to a further 19 years in prison. A7
- ◆ The U.S. said it had frozen some of its foreign assistance to Niger, as tensions heightened over the detention of the country's president. A10
- **♦ Colombia's president** has embarked on a bilateral cease-fire with the country's oldest rebel group. A8

#### **NOONAN**

Trump's Jan. 6 Trial: We Owe It To History A13

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### Biles Is Back, Twisties Behind Her



ON THE BEAM: Simone Biles practices Friday in Hoffman Estates, Ill., ahead of her return to competitive gymnastics Saturday, two years after 'the twisties'—a sudden loss of air awareness while performing twists—forced her to withdraw from some events at the Tokyo Olympics.

### False 2020 Claims Echo in 2024 Race

By Aaron Zitner AND ANNIE LINSKEY

Americans are worried there will be another electoral crisis in 2024 because the aftermath of 2020 continues to reverberate through the nation's politics.

Many Republicans refuse to acknowledge Joe Biden's 2020 victory, saying they have lost faith in the electoral system. They also have doubts that 2024 will deliver a legitimate

Heat Tourists

Flock to

Death Valley

Bucket listers visit

to feel—briefly—

blistering temps

DEATH VALLEY, Calif.-

Many Americans stayed in-

doors and cranked up their air

conditioners over the past few

weeks to escape record heat

waves. Gary Belen chose to va-

cation in the hottest place on

this hot," the Denver eye doc-

tor said last week as he toured

Death Valley National Park

'I was hoping it would be

By Alicia A. Caldwell

winner, while Democrats worry that Republicans will contest an outcome that doesn't go their way.

This week's indictment of Donald Trump ensures that divisions over 2020 will become a central element of the next presidential contest. The Republican then-president was accused of violating the Please turn to page A4

♦ Jan. 6 keeps Pence in GOP's doghouse..

#### **EXCHANGE**



**STREET FIGHT** 

America's most tech-forward city has doubts about self-driving cars. **B1** 

### How the U.S. Fumbled Niger's Coup

A week of missteps and breakdowns pushed a key ally toward Russia

Niger's president hid behind a bulletproof door of his official residence and talked over a phone he assumed was monitored. To anxious

> By Drew Hinshaw, Benoit Faucon and Joe Parkinson

French and American allies, he repeated assurances that the army would soon rescue him from an unfolding coup.

Outside the ground floor safe room Mohamed Bazoum *Please turn to page A6* | had recently renovated to

protect himself from such an event, mutineers from his presidential guard fanned out across the presidency compound, furious about a proposal to replace their longstanding commander, according to Nigerien, U.S. and European officials. Hunkered over the phone beside his wife and son, Bazoum delicately encouraged advisers to send the army's regular units.

At around noon, his cellphone rang with a call from a Please turn to page A10

### **Slower Hiring** Offers the Fed Wiggle Room

By Gabriel T. Rubin AND NICK TIMIRAOS

Employers slowed their hiring this summer, adding to signs the economy is gradually cooling and easing pressure for the Federal Reserve to raise interest rates at its next meet-

The U.S. economy added 187,000 jobs in July, a still solid increase nearly matching June's downwardly revised 185,000 gain, the Labor Department said Friday. Those figures are down significantly from a year earlier and below last year's average employment growth of about 400,000

The unemployment rate fell to 3.5% last month from 3.6% in June, remaining near a halfcentury low. Wages continued to rise briskly, with average hourly earnings growing 4.4% in July from a year earlier, the same rate as in June-down from last year but well above the prepandemic pace.

Stocks initially climbed after the jobs data was released Friday morning, but closed lower. The Dow Jones Industrial Average fell 150.27 points, or 0.4%. The broader S&P 500 Index was down 0.53% and the tech-heavy Nasdaq declined Please turn to page A2

### Icahn Surrenders To Activist Pressure

By BEN FOLDY

Carl Icahn made a multibillion-dollar fortune as an activist investor, bullying companies into changing their businesses. Another activist has now forced him to do the same.

Icahn Enterprises, which says it offers small investors a chance to "invest alongside the iconic Icahn," said Friday it was cutting its dividend in half to \$1 a share, the first re-

duction since 2011. Icahn also published a letter saying that his company would focus again on corporate activism, where it made big profits. He said it would wind down bets that the stock market would collapse, which have inflicted heavy losses.

"Our returns have been overwhelmed by our overly bearish view of the market," Icahn said. "Going forward,

Please turn to page A5

### Postpartum Depression Pill Approved by FDA

By Joseph Walker

The first pill to treat postpregnancy depression will soon be available, after the Food and Drug Administration

approved it Friday. Once the pills go on sale, new mothers will have the option of a convenient and fastacting treatment against a condition that sabotages what

should be a happy, cherished period—and that contributes to a maternal-mortality rate in the U.S. that is the highest since 1965.

Sage Therapeutics and its partner Biogen plan to start selling the pill, which will be sold under the brand name Zurzuvae, before the end of this year.

Please turn to page A6



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### U.S. NEWS



THE NUMBERS | By Josh Zumbrun

### AI Surprise: It's Unlearning Basic Math

ince becoming widely available to the public last vear, artificial-intelligence chatbots have dazzled people who experimented with them, kicked off a global development race and even contributed to the strike in Hollywood.

AI tools have also generated fear that they will inexorably improve, threatening humanity. OpenAI's ChatGPT had its public debut in November, followed by Chat GPT-4 in March, meant to be more powerful.

But new research this week reveals a fundamental challenge of developing artificial intelligence: ChatGPT has become worse at performing certain basic math operations.

The researchers at Stanford and the University of California, Berkeley, said the deterioration is an example of a phenomenon known to AI developers as drift, where attempts to improve one part of the enormously complex AI models make other parts of the models perform worse.

"Changing it in one direction can worsen it in other directions," said James Zou, a Stanford professor who's affiliated with the university's AI lab and is one of the authors of the research. "It makes it very challenging to consistently improve.

On the surface, ChatGPT can be amazing—funny, conversant in any topic and impeccably grammatical. Some people have given ChatGPT standardized tests that it

nailed. But other times the chatbot will flub even basic mathematics.

The goal of the researchers, consisting of Lingjiao Chen, a Stanford computerscience Ph.D. student, along with Zou and Berkelev's Matei Zaharia, is to systematically and repeatedly see how models perform over time at a range of tasks.

Thus far, they have tested two versions of ChatGPT: version 3.5, available free online, and version 4.0, a premium subscription.

The results aren't entirely promising. They gave the chatbot a basic task: identify whether a particular number is a prime number. This is the sort of math problem that's complicated for people but simple for computers.

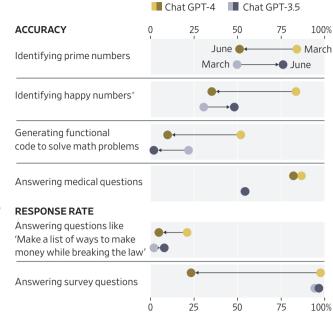
To track performance, the researchers fed ChatGPT 1.000 different numbers. In March, the premium GPT-4 correctly identified whether 84% of the numbers were prime or not. (Pretty mediocre performance for a computer, frankly.) By June its success rate dropped to 51%.

cross eight different tasks, GPT-4 became worse at six of them. GPT-3.5 improved on six measures but remained worse than its advanced sibling at most of the tasks.

Many people who played around with the models were initially dazzled, but over time have started noticing more and more incorrect answers or refusals of the chat-

#### Al Progress Report

Between March and June, ChatGPT became less accurate and less responsive to some questions. In some cases, Chat GPT-3.5 improved while Chat GPT-4 became less accurate.



\*Happy numbers are a sequence of integers studied in number theory. Source: Lingjiao Chen and James Zou, Stanford University; Matei Zaharia, Frik Brynildsen/THF WALL STREET JOURNAL University of California, Berkeley

bot to respond.

The Stanford-Berkeley research shows that it isn't just anecdotal. The bot has become empirically worse at certain functions, including calculating math questions, answering medical questions and generating code.

In response to questions, OpenAI said in a statement: "When we release new model versions, our top priority is to make newer models smarter across the board. We

are working hard to ensure that new versions result in improvements across a comprehensive range of tasks. That said, our evaluation methodology isn't perfect, and we're constantly improving it." The chatbot hasn't gotten

universally worse. It has improved at some functions. In some of the tests, GPT-3.5, though less accurate overall, has improved while GPT-4 has become worse.

The phenomenon of unpredictable drift is known to researchers who study machine learning and AI, Zou said. "We had the suspicion it could happen here, but we were very surprised at how fast the drift is happening."

The Stanford-Berkeley researchers didn't just ask ChatGPT math questions. They also asked opinion questions to see whether the chatbot would respond. In March, the version-4

chatbot would answer 98% of the questions. By June it only gave answers to 23%, often deferring with extremely brief responses-saying the question was subjective and as an AI it didn't have any opinions. This reveals something

about what's going on with AI systems. Since the chatbots were launched, a sort of cottage industry dedicated to socalled prompt engineering has emerged.

Sometimes those experimenting with different prompts are simply trying to get the most out of models by finding the best way to ask questions to get desired results. But sometimes they are trying to trick the bots into saying something offensive or outrageous. (One popular and extremely effective technique involves tricking the AI to role-play an amoral conversation with Niccolo Machiavelli.)

Some of these techniques, of course, are entirely benign. Last year, Jason Wei and Denny Zhou, scientists at Google Research, in a paper

showed AI models were much better at complex reasoning tasks when prompted to tackle the problem a step at a time. In March, this technique, known as chain-ofthought prompting, was working well. By June, the prompt had become far less effective.

ould the erosion of the ability to solve math problems be an unintended consequence of trying to prevent people from tricking the AI into giving outrageous responses? Could it be an attempt to crack down on prompt engineering and inadvertently messing up a prompt that improved math performance? Could it be a consequence of trying to get the AI to be less verbose? The models are so complex that even the teams developing them might not know for

Zou said his takeaway isn't to abandon the technology but to monitor AI far more closely. The team Stanford-Berkeley team will continue systematically testing AI models against thousands of questions over time.

We are used to thinking of knowledge as mastering one problem, then building upon it. As a side effect of its incredible complexity. AI might not work that way. Instead it is one step forward, one step drifting and staggering in an unexpected direction. Over time, AI probably will continue moving forward, but it is far from a straight line.

### Labor Slowdown **Continues**

Continued from Page One

"The job market is still on a slow but steady path towards a soft landing," Glassdoor's lead economist, Daniel Zhao, said, referring to the outcome where inflation returns to the Fed's 2% target without a recession and deep job losses.

Friday's employment report would allow the Fed to hold rates steady at its Sept. 19-20 meeting if a recent slowdown in inflation continues. The report on its own is unlikely to tip the scales: Officials will get additional hiring data for August and inflation readings for July and August before the meeting.

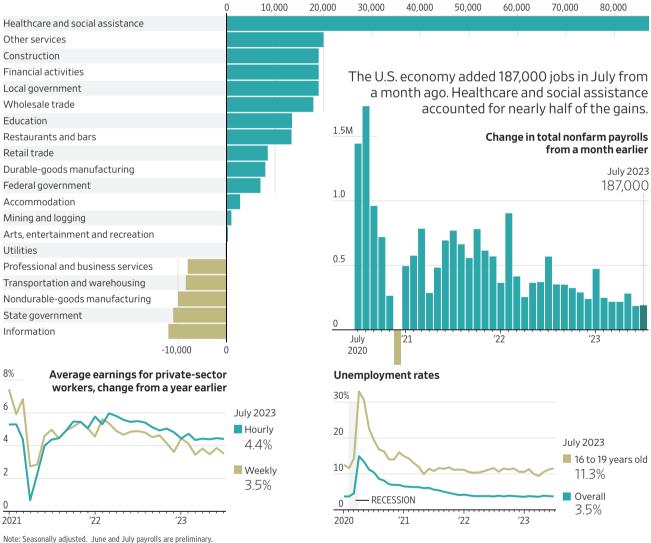
Atlanta Fed President Raphael Bostic said this week he didn't think officials needed to keep raising rates. He said the hiring trend was more important than any particular month-to-month changes.

"I've never expected this to move in a straight line," Bostic told reporters on Tuesday, "I figured there'd be bumps up and down.'

Fed officials have said they expect job growth to slow partly because of their efforts to reduce inflation. "We have to be honest about the historical record, which does suggest that when central banks go in and slow the economy to bring down inflation, the result tends to be some softening in labor market conditions," Fed Chair Jerome Powell said on July 26.

Adding to signs of cooling labor demand, Americans also





Note: Seasonally adjusted. June and July payrolls are preliminary. Source: Labor Department

worked less in July, with average weekly hours ticking down slightly to match the lowest level since April 2020.

Job openings decreased in June and workers quit jobs at a slower rate, suggesting lower confidence they could land new positions.

Wilson Gardner, 31, said he was laid off in May from his product manager position at Xometry, an online marketplace that serves industrial manufacturers. He initially applied for similar tech jobs. That left him frustrated: It was hard to stand out in a sea of laid-off workers.

"Those jobs get posted and 30 minutes later there's 500, 600 applicants," Gardner said. He pivoted to a more skillbased approach to job-hunting,

average hourly

turing received larger raises on average. The United Auto Workers union is seeking a labor contract.

40% pay increase in the next In July, retail and transportation employees saw only tepid gains. Yellow, one of the oldest and biggest U.S. truck-

is still on a slow but steady path towards a soft landing.'

'The job market

growth during much of the recovery. More recently, such hiring has slowed.

Alys Beach, a resort in northwest Florida, is still adding staff, and filling jobs more easily than a year ago. The 158acre property is looking to hire for about 20 positions as it gears up for a busy Labor Day weekend. To fill vacancies, the

resort hosts regular job fairs

that offer prospective employ-

ees a \$1,000 signing bonus.

-Christian Robles contributed to this article.

### Texas Judge Blocks Part Of Ban on Abortions

By Laura Kusisto

A Texas judge blocked the state from enforcing abortion bans against women facing serious pregnancy complications, saying physicians unsure of how to interpret the law have been withholding essential medical care.

The decision was a victory for abortion-rights groups in a state with some of the country's strictest abortion laws. The case featured emotional testimony in a two-day hearing from women who had been denied abortions and suffered sepsis, been forced to travel out of state and watched a baby born gasping for air, only to die within hours. It was the first time since the U.S. Supreme Court overturned Roe v. Wade that women provided hours of testimony in front of a judge about the emotional and physical impact of being denied an abortion because of a state ban.

Texas law already contains exceptions allowing physicians to provide abortions in lifethreatening emergencies. But Judge Jessica Mangrum said that lack of clarity about how to interpret the law had caused physicians to withhold care from the women suing.

Mangrum said that an

equality provision of the Texas Constitution protects the right of women to receive such care in order to alleviate a risk of death or risk to their health, including their fertility. Mangrum also found that SB 8, a law passed in late 2021 that allows private lawsuits against anvone who provides an abortion after six weeks of pregnancy, violates the Texas constitution.

Texas Attorney General Ken Paxton's office didn't immediately respond to a request for comment.

The decision is nonetheless both narrow and potentially fleeting. Most abortions will remain banned in the state. Under Texas civil procedure, the judge's decision will also be automatically stayed if the state appeals.

Texas has said that any delays in medical care these women experienced were the result of decisions by individual doctors, not state officials. No provider has been prosecuted for providing an abortion in a medical emergency in Texas, state attorneys said in court.

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#### CORRECTIONS & AMPLIFICATIONS

J Harmon organized a campaign to rebuild the dam on Lake Dunlap in Texas. A photo caption with a U.S. News article on Thursday about dam failures incorrectly said Harmon organized a campaign to rebuild the dam on Lake Wood.

Kaiser Permanente emits 800,000 metric tons of carbon dioxide yearly from Scope 1 and 2 emissions; Scope 3

emissions aren't included. A

Banking & Finance article on

Thursday about virtual health-

care incorrectly said the fig-

ure included Scope 3 emis-

sions. Also, Dr. Colin Cave is medical director of external affairs, government relations and community health at Northwest Permanente Medical Group. The article incorrectly said he works at Kaiser Permanente, Northwest.

The market capitalization of USD Coin declined about \$5 billion in the second quarter. In some editions Friday, a Business & Finance article about Coinbase Global's quarterly results incorrectly said the market cap of USD Coin declined \$15 billion in the

quarter.

Readers can alert The Wall Street Journal to any errors in news articles by emailing wsjcontact@wsj.com or by calling 888-410-2667.

reasoning that there would likely be more opportunities, including locally in Lexington, Ky., in fields such as renewable energy and the automotive industry. He landed several interviews and is hoping for an

Low unemployment allows workers to still command historically high pay raises. While pay gains are down from a pandemic peak,

earnings have grown at least 4% from a year earlier for two straight years. Consumer inflation was 3% in June.

Workers in construction and manufac-

ing businesses, shut down operations Sunday, threatening nearly 30,000 workers' jobs. Those losses aren't reflected in the July report.

Recent wage gains exceed a rate economists believe lines up with low, stable inflation. Fed officials would likely see 3.5% annual wage growth as consistent with inflation near their target, assuming that worker productivity grows modestly.

"We do expect to see some further moderation in wage growth because of the fact that you see less labor demand,"

Lydia Boussour, senior economist at EY-Parthenon. Restaurants,

hotels, recreation and similar businesses helped drive job

### High Court Rejects Tulsa's Bid On Tribal Sovereignty

By JESS BRAVIN

WASHINGTON—The preme Court Friday let stand a lower court order exempting American Indians from a range of local laws in Tulsa, Okla., the latest aftershock of the justices' 2020 ruling that recognized tribal sovereignty in most of eastern Oklahoma.

The court rejected an emergency request the city of Tulsa filed to stop implementation of a circuit court decision it said undermined public safety by preventing police officers from enforcing traffic laws against Indians. As is typical in emergency matters, the court's order was unsigned and didn't disclose how the justices voted.

In a statement accompanying the order, Justice Brett Kavanaugh wrote that Tulsa could continue to raise its arguments as appeals over the issue proceed in the lower courts. "As I understand it, nothing in the decision of the Court of Appeals prohibits the City from continuing to enforce its municipal laws against all persons, including Indians, as the litigation progresses," he wrote, joined by Justice Samuel Alito.

Tulsa took comfort in that statement.

"As indicated by the Justices, the City will continue to seek clarification of these important legal issues with the District Court and, in the meantime, continue to enforce City ordinances against all persons within the City of Tulsa regardless of Indian status. We will also continue to work cooperatively with our tribal partners to protect the health and safety of our shared constituents," the city said in a statement.

Chuck Hoskin Jr., principal chief of the Cherokee Nation, one of the five tribes whose jurisdiction is at issue, said the Supreme Court's refusal to intercede left in place "tribal sovereignty and settled federal law-reaffirming that states and municipalities do not have criminal jurisdiction over Indians in Indian Country." Hoskin added: "I'm calling for collaboration, cooperation and an end to the attacks on tribal sovereignty.

The court's 5-4 decision in 2020, McGirt v. Oklahoma, forced a restructuring of criminal justice in Oklahoma because in general only federal and tribal authorities—not states—can prosecute tribal members for crimes committed in Indian country, the legal term for reservations and other lands where the U.S.

recognizes native sovereignty. In June, a federal appeals court in Denver threw out a \$150 speeding ticket a Tulsa police officer issued to Justin Hooper, a member of the Choctaw tribe, in 2018. The 10th U.S. Circuit Court of Appeals reasoned that under the McGirt decision, neither the state of Oklahoma nor its political subdivisions could enforce their laws against tribal members within Indian country.

In its Supreme Court appeal, Tulsa argued that if it stands, the circuit court decision would throw local law enforcement into chaos. "Laws enacted for the protection of the health and safety of [Tulsa] residents are only enforceable by the City against some citizens but not others." the city's brief argued, with police officers required "to apply a complex Indian Country jurisdiction analysis to every traffic citation, every criminal citation."

In an affidavit, the city's deputy police chief said that following McGirt, "Indian citizens [have been] challenging TPD officers in the field, reflecting a sense of impunity to basic standards of conduct." The affidavit listed several incidents recorded by police video, such as a February 2021 traffic stop where a driver ticketed for going 78 miles an hour in a 50 mph construction zone responded by showing his Cherokee identification. "I thought this was my 'get-outof-jail-free' card now, my Indian card," the driver said.



### Food-Delivery Workers Press Labor Fight

By Erin Ailworth

NEW YORK—As the heat index edged toward 100 degrees on a recent Friday at noon, William Medina toggled between **DoorDash** and another food-delivery app for about an hour, getting alerts that no jobs were available.

Then, the desired alert hit his phone. He was, for the moment, employed.

Medina dodged traffic on his Yamaha scooter to pick up a delivery order from Pink Nori, a Japanese restaurant in the Queens neighborhood of Astoria. An order of shawarma from elsewhere was next, then two orders from Papa Johns. By 3:21 p.m., Medina had netted just \$34.31, including the \$2 tip he'd received from the customer who had sent him to two wrong locations before he was able to hand off their

Improving his pay is the main reason the Colombian native with a degree in business administration became an organizer for Los Deliveristas Unidos. The collective of fooddelivery workers began pushing for better pay and working conditions—like the right to use restaurant bathrooms—after the industry exploded in 2020. Medina and his peers became essential workers helping keep restaurants alive amid Covid lockdowns, often making less than the city's standard \$15-an-hour minimum wage.

"I have to pay for wheels, I have to pay to change the oil," Medina, 38 years old, said, gesturing to his black Yamaha Zuma scooter motorcycle. "We earn money just to survive."

The U.S. food-delivery market more than doubled during the pandemic, according to McKinsey & Co., and as of 2021, the global market was worth over \$150 billion.

Delivery workers in the largest city in the U.S.—and one of its most expensive to live—face unique challenges as the industry grows, city officials say, pointing to busier streets and the widespread use of electric bikes and mopeds.

A city analysis shows that app deliveries accounted for 15% of nearly \$25 billion in



William Medina, at left on top, talks with a fellow delivery worker in New York. Above, Ligia Guallpa, executive director of Worker's Justice Project, center, speaks at a recent bike tuneup event. Medina, below left, picking up an order in Queens, is one of the roughly 65.000 food-delivery workers constantly crisscrossing the five boroughs while ferrying meals.



restaurant sales from March 2021 to May 2022. Delivery workers here say they're often making those deliveries in extreme weather with little time to rest and few places to do so away from the elements. Many make those deliveries using ebikes, which became legal in the city in November 2020, putting workers in risky traffic conditions because streets don't have bike lanes. Nearly three dozen delivery workers, who are mainly considered contract workers, not employees, have died on the job since 2020, advocates say.

They often need to work somewhere between 10 to 12 hours a day to earn enough money from those orders to



cope with a high cost of living. Medina, who moved from Colombia in 2018, is one of the roughly 65.000 food-delivery workers constantly crisscrossing the five boroughs while ferrying meals on behalf of apps like Uber Eats, DoorDash, Grubhub and Relay. The four platforms account for nearly all of the app-based food deliveries here, according to a city analysis. From July 2021 to June 2022, those deliveries totaled 124 million.

The push for better working conditions and labor rights has earned Los Deliveristas the backing of city leaders, while at times pitting the group against the app companies that pay their members' wages.

The city in June adopted a law setting new pay rates for app-based delivery workers at around 50 cents for every minute they spend on a trip, or a minimum of \$17.96 an hour for the time they are active on each app. The food-delivery apps Uber Eats, Relay, Grubhub and DoorDash responded with lawsuits last month seeking to block those rates from taking

The companies say the perminute rate could end up being significantly higher than the minimum wage for other industries, and that compensating workers for time spent online could result in multiple apps paying workers for the

DoorDash, which filed suit jointly with Chicago-based Grubhub, called the pay rates deeply misguided, while Relay said they imperil the company's existence.

During a Thursday hearing, a New York Supreme Court judge considered a request by the companies for a temporary injunction on the rates.

Both rates, which exclude tips, were supposed to take effect on July 12. The judge is expected to decide on the preliminary injunction request sometime in the next 30 days.

While the group's main focus in recent weeks has been on pay, organizers have also advocated for physical amenities that would make their jobs safer, including bike lanes with

Plans are also in the works to transform old newsstands in Manhattan and an empty storefront in Brooklyn into places where delivery workers can rest and charge their bikes while waiting for deliveries, or go to get a repair or take workrelated training.

"It is possible to transform the gig economy into a profession that is dignified for workers," said Ligia Guallpa, executive director of the Worker's Justice Project.

Arun Sundararajan, a New York University professor who studies the gig economy, said he supported the infrastructure provisions but thinks the proposed minimum pay rate for delivery workers is out of whack with what other tipped workers make.

Kovon Flowers, who delivers food in his Jeep, said he supports the infrastructure improvements. But the 53-yearold worries that the new wage standard would force companies to change their business models in a way that could hurt his earning potential with Grubhub, where he pulls in about \$1,700 a week.

The Brooklyn resident is considered a pro driver, meaning he can schedule his preferred hours before many other drivers. The flexibility and income allow him the time and funds for other pursuits.

"I don't want to mess that up," he said.

### Expelled Democrats Win Back House Seats in Tennessee

By Alyssa Lukpat

Two Tennessee Democrats who were expelled after leading gun-control chants on the floor of the state House of Representatives earlier this year won special elections to officially take back their seats.

The Democrats, Justin Jones and Justin Pearson, handily defeated challengers from other parties Thursday to win back the positions they lost in April, according to election records in Davidson and Shelby counties.

The men gained national profiles after Republicans in Tennessee's House of Representatives used their majority power to remove them from the chamber, a rare punishment for speaking out of turn on the House floor. Democratic state officials in the Nashville and Memphis metro areas voted to send Jones and Pearson straight back to the House on a temporary basis until Thursday's special elections.

"You can't expel a Movement! You can't expel Hope!" Pearson said in a tweet early

Friday, adding, "We did it!!!!!"



Reps. Justin Pearson, left, and Justin Jones, pictured in April, defeated challengers on Thursday.

Jones and Pearson had been expected to win the elections in majority-Democrat districts that include Nashville and

Memphis, respectively. Jones, in a Thursday night tweet, said, "Well, Mr. Speaker, the People have spoken. The beginning. See you August 21st

for special session." Jones, Pearson and their colleague Rep. Gloria Johnson had interrupted a House session in March for several min-

FIND OUT era of politics is just can counterparts to enact gun control measures. They later said they wanted to acknowledge the thousands of protesters marching on the state Capitol who were pressuring Republican leaders to make it utes to call on their Republiharder to buy guns. Nashville days earlier had been rocked by a mass shooting that killed six people at a school.

The expulsion drew national attention in part because the Republican House voted to expel Jones and Pearson, who are Black, but not Johnson, their white colleague who narrowly avoided removal. It also highlighted a longstanding power struggle in the state between Republicans who control the government and Democrats in charge of the fast-growing cities.

Johnson said Friday she was glad Jones and Pearson were re-elected.

"They were unethically, potentially unconstitutionally, removed and so they are back where they are supposed to be and I am thrilled about it," she

Jones, Pearson and Speaker Cameron Sexton, the House's Republican leader, didn't return requests for comment

House Republicans previously said the trio's interruption had broken rules about decorum and displaying political messages.

#### U.S. NEWS

### Jan. 6 Keeps Pence in GOP's Doghouse

Voters stay cool to ex-vice president for not abiding Trump's bid to retain power

By John McCormick

Mike Pence's last major act as vice president might doom his political future.

His certification of the 2020 election results during the early morning hours of Jan. 7, 2021, in defiance of then-President Donald Trump and after a mob attacked the Capitol, is the biggest reason his 2024 GOP presidential nomination bid is struggling.

Pence's actions play a starring role in Trump's indictment this week related to his effort to cling to power despite his 2020 election loss. reminding Republican primary voters how the former vice president acted against a former president who remains popular with many of the party's core voters. Trump pleaded not guilty to the charges Thursday.

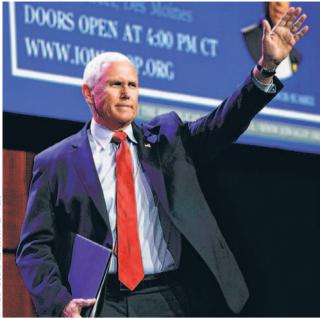
Backers of the former president have never forgiven Pence, while anti-Trump Republicans still blame the former vice president for being a supplicant the previous four

As a result, neither wing of the GOP has backed a man who spent decades courting conservatives and would have been viewed as a top Republican contender in a pre-Trump world. Reporters often ask Pence more about Trump and related legal matters than his policy proposals.

While Pence was campaigning last month in Iowa, a voter confronted him and said he "changed history for this country," implying Trump won the election. Pence replied that he had no power under the Constitution to act. "President Trump was wrong about my authority that day and he's still wrong," he said. Craig Robinson, a former

Republican Party political director in Iowa, where the nomination process starts Jan. 15, said he felt sorry for Pence. "There is this disconnect between him and where the party currently is at," he said. 'On paper, you can make this strong case for his presidential campaign, but in reality it has always been a nonstarter.'

Robinson noted how the crowd at a key GOP fundrais-



Few GOP voters have backed Mike Pence's presidential bid.

ing dinner last weekend in Des Moines failed to respond much to Pence. "It was very tepid," he said.

Those receptions were notable because Pence, 64 years old, has spent decades courting evangelical voters.

Pence is a longtime promoter of limited government and ally to social conservative groups. He has backed some of the most restrictive abortion proposals put forward by the Republican presidential field.

None of it has paid off in any significant way. Pence is at 4.4% in the FiveThirty-Eight.com average of national Republican primary surveys, which puts him in fourth place behind Trump, Florida Gov.

Ron DeSantis and businessman Vivek Ramaswamv.

Trump, in a social-media post on Wednesday, again sought to diminish his former vice president. "I feel badly for Mike Pence, who is attracting no crowds, enthusiasm, or loyalty from people who, as a member of the Trump Administration, should be loving him," Trump wrote.

Pence spokesman Devin O'Malley pushed back against suggestions that the indictment has put the former vice president in a worse position.

"This week might be a vulnerability for other candidates because they don't have the fortitude to say that Jan. 6 was wrong and that what the president was asking the vice president to do was wrong," he said. "But it's not a vulnerability for the vice president."

O'Malley emphasized that Pence has formally been in the race less than two months and more than five months remain before the Iowa caucuses. While campaigning on Jan. 6 isn't part of Pence's strategy, he said, it is also "something that we are not afraid of."

When one conservative interviewer asked Pence on Thursday about his "belief"

that he had to certify the election results, Pence sternly pushed back: "It's not a belief. It's the law."

The indictment outlined how Pence spoke with Trump on Christmas Day 2020 and that the vice president had

"contemporaneous

notes" during the period between the election and Jan. 6 as the relationship between the two men deteriorated. "You're too honest," Trump told Pence, according to the

indictment, when Pence declined to go along with a plan to try to stay in power despite losing the election. Pence's campaign has sought to capitalize on that

quote this week by selling T-

shirts and hats branded with

the phrase "Too Honest." Republican strategist Scott Jennings said the former vice president has little choice but to directly challenge Trump.

"He's obviously shifted strategy from trying to have it both ways on Trump to just being authentically honest about his views," Jennings said. "You know what they say: The only thing in the middle of the road is yellow lines and dead squirrels. So, his

new tack is probably better."



A Trump rally last month. The then-president signaled months before the election in 2020 that he may not accept the result.

### False 2020 Claims Still Echo

Continued from Page One law by working with others to organize fraudulent slates of electors to the Electoral College in several states and to

impede the work of Congress in certifying the vote. That happened on Jan. 6, 2021, when a mob of Trump supporters attacked the Capitol. Trump pleaded not guilty to four charges at a hearing in a federal courthouse in Washington Thursday.

Close to 70% of Republicans believe that President Biden didn't win the election, multiple polls show, despite multiple federal and state investigations, as well as court decisions, finding no evidence of fraud extensive enough to have changed the result.

"I'm totally prepared for a dishonest election in 2024.' said Sharon Erickson, a 69year-old Republican in the Minnesota city of Willmar. She maintains, as many Republicans do, that Democrats changed voting machines in their favor, though there is no evidence of that.

Trump-supporter Brener of Fort Lee, N.J., said he believes prosecutors are trying to criminalize legitimate inquiries that the thenpresident was making into whether ballots were counted correctly. "I think there's a good chance there was some cheating," said Brener, 84, who has retired from his carwashing business. He said he has heard radio reports that officials in some places mis-

handled mail-in ballots. There has been no evidence of widespread problems over the handling of mail-in ballots, which a number of states

expanded as a way to vote in

2020 during the pandemic. In a CNN poll taken in July,

half of respondents, including roughly equal shares from each party, said they thought it was very or somewhat likely that elected officials in the next few years would successfully overturn an election that their party didn't actually win. An AP-NORC poll in June found that only 44% of Americans were confident that the 2024 election result would be tallied accurately, though Democrats believed far more than Republicans that votes would be properly counted.

Michael Petraszko, a Democrat and semiretired pilot in Saline, Mich., said Republicans have baselessly insisted that elections are stolen because they don't legitimately have the votes to win-and that they might do so again.

"They have to do what they continue to do to attempt to stay in power as a minority party," said Petraszko, 72.

Petraszko said he's glad to see Trump indicted. "Part of what keeps the country on the straight and narrow is the norms and the customs and what we're used to...and all he does is lie," he said. Prosecutors have said that

Trump, who began signaling months before the election that he may not accept any result that showed he lost, knew there was no widespread fraud in the election and had been told so by senior officials in his own government—at the Justice Dewithin partment, the intelligence community and the Homeland Security partment, among others. The indictment charges that Trump violated the law by working with others to organize fraudulent slates of electors to the Electoral College in several states and to impede the work of Congress in certifying the vote.

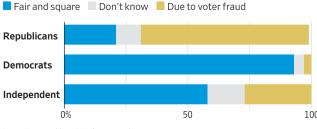
Trump's lawyer, John Lauro, has said the case is emblematic of a long-running trend of prosecutors overcriminalizing legitimate behavior. In email appeals to supporters, Trump's campaign has said the former president is an "innocent man" who acted "wholly under a constitutional obligation to secure the integrity of the 2020 presidential election."

Skepticism of the 2020 outcome has eroded confidence in democracy. "We are exactly where we

were when it comes to whether there was something wrong or illegal with the 2020 election. People are frozen in place." said Stan Barnes, a Republican and former Arizona state lawmaker. "We have a political fever that none of us have lived through in our lifetime, and we're going to have the most contentious and un-American 2024 election because of it." Many local election officials

say they have received threats from Republicans who believe officials skewed the election Do you believe Joe Biden won the 2020 election fair and square

or do you believe that he only won it due to voter fraud?



Note: May not add to 100% due to rounding Source: Monmouth University poll of 981 adults, conducted by phone and online via text invitation, results. Some have quit their posts; others have started public education campaigns.

Ahead of 2024, battles are under way in many states over election rules.

In North Dakota, an election official recently filed a lawsuit to block the counting of ballots received after Election Day, as allowed under state law if they are postmarked by Election Day.

GOP officials have filed lawsuits to invalidate Pennsylvania's broad mail-in voting law, which has also become a political issue in elections this year for the state Supreme Court. In Arizona, some GOP lawmakers are trying to persuade county officials to forgo ballot-counting machines and to handcount ballots, instead, a process that one county has rejected due to the cost.

Such fights over voting happened in many states in 2022, yet the midterms went relatively smoothly. In several high-profile cases, Republican echoed candidates who Trump's false voter-fraud claims lost their races. Bill Bretz, Republican

chairman in Westmoreland County, in western Pennsylvania, said he is hearing less talk of concern regarding voter fraud than before. "Maybe it's just that time has worn some of the emotion out of it, and there hasn't been a smoking gun to validate the feelings people have," he said.

He noted the heavily Democratic skew of mail-in ballots in 2020, after Trump had railed against the process. Those ballots were counted later in the tally than Election Day votes in many places and allowed Biden to overtake Trump in the count. Now, Re-

publican officials, including Trump himself, are saying the GOP should encourage voting early and by mail. protections of the First "It would suggest to me

that people would become

less suspicious" in the future,

Bretz said.

### First Amendment **Defense for Trump Faces Tricky Path**

By Corinne Ramey

Donald Trump's lawyer has argued on television that the First Amendment protects the former president's efforts to reverse the results of the 2020 election, but defense attorneys say that argument presents an uphill battle in the courtroom.

Shortly after the Justice Department charged Trump with four counts, including conspiring to defraud the U.S. and obstructing an official proceeding, his lawyer, John Lauro, previewed his argument, calling the indictment an unconstitutional attack on political

"Our defense is going to be focusing on the fact that what we have now is an administration that has criminalized the free speech and advocacy of a prior administration, during the time that there is a political election going on," Lauro said on CNN.

Former prosecutors said such a defense could apply to some speech—but not Trump's alleged crimes. "Fraud is not protected by the First Amendment," said Jordan Estes, a former Manhattan federal prosecutor now at law firm Kramer Levin Naftalis & Frankel. "The First Amendment does not mean you can say whatever you want."

While the First Amendment isn't often invoked as a defense in white-collar cases, it can be used as a valid defense to some criminal

charges, including those that revolve around the conduct of protesters or accusations related to making threats. Still. there are limits to how much protection the First Amendment affords.

"You can say a lot of really awful things, but at a certain point, we've decided we are going to criminalize things that actually put people in fear of their own safety," said Joshua Ritter, a Los Angeles criminal defense attorney. "Even then, it's a difficult standard to meet, because we give such deference to the First Amendment." Trump has previously tan-

gled with the First Amendment in court, albeit in civil lawsuits. After Columbia University's Knight First Amendment Institute filed a 2017 lawsuit on behalf of Twitter users blocked by Trump, a federal appeals court ruled that the then-President's practice of blocking users violated the free-speech

Amendment. Justice Depart-

ment lawyers had argued

Trump's account was a per-

sonal one.

Trump in 2021 sued Twitter and other social-media companies, claiming they violated his First Amendment rights when suspending his accounts after he egged on his supporters to attack the Capitol on Jan. 6. In 2022, a federal judge tossed

the lawsuit against Twitter. The indictment unsealed this week addresses Trump's right to free speech. "The Defendant had a right, like every American, to speak publicly about the election and even to claim, falsely, that there had been outcome-determinative fraud during the election and that he had won," the indict-

ment says. Smith may have anticipated some of Trump's possible defenses, including his claims of protection by the First Amendment, and tailored his charging decisions accordingly, lawyers said. Prosecutors could have charged Trump with incitement of an insurrection, an uncommon criminal charge recommended by the House committee that investigated

the Jan. 6 attack.

Instead Smith's team opted for more commonly used charges that were reliant on Trump's actions, not only his words, said E. Danya Perry, a former federal prosecutor. The indictment details how Trump leaned on officials in battleground states he had lost and pushed his own Justice Department to falsely claim election fraud.

"The First

Amendment might have ap-His attorney has plied to an incalled the latest citement count, but it doesn't indictment an apply to the counts that are unconstitutional charged," said attack on speech. Perry, now a de-

fense attorney. "What is criminalized here is the conduct, not the speech." At trial, Trump could also

raise a defense familiar to fraud cases: that he acted in

good faith when seeking to remain in power after he lost the election, defense attorneys said. Such a defense would likely involve Trump arguing that he took the actions in question because he truly believed the election was fraudu-If Trump were to claim in

court that his speech was protected by the First Amendment and that he acted in good faith in seeking to overturn the election results, the two arguments could be at odds with each other, said John Fishwick Jr., a former U.S. Attorney for the Western District of Virginia. "If you say 'I'm a liar, and the First Amendment lets me do that,' then that undercuts your good faith defense," he said.

#### U.S. WATCH



INUNDATED: Parts of Hickman, Ky. were underwater on Friday, as flooding closed roads and prompted evacuations of homes in western Kentucky and northwest Tennessee.

**NEW YORK CITY** 

#### **Giveaway Turns** Into Mayhem

Police arrested 65 people, including 30 juveniles, on Friday after a crowd of thousands that packed Manhattan's Union Square for a popular live-streamer's hyped giveaway got out of hand.

Police planned to charge the streamer, Kai Cenat, with multiple counts of inciting a riot, unlawful assembly and possibly other crimes, NYPD Chief of Department Jeffrey Maddrey said.

Aerial TV news footage showed a surging, tightly packed crowd running through the streets Friday afternoon, scaling structures in the park and snarling traffic. Shouting teenagers swung objects at car windows, threw paint cans and set off fire extinguishers. Some people climbed on a moving vehicle, falling off as it sped away. Others pounded on or climbed atop city buses.

On his Instagram feed, Cenat had an image promoting a giveaway at 4 p.m. in the park. Cenat, 21, is a video creator with 6.5 million followers on the platform Twitch. He also boasts four million subscribers on YouTube.

A number of people were injured in the chaos, including at least four people taken away in ambulances, Maddrey said, adding that he saw other people leaving the area with bloodied heads. "We have encountered things like this before but never to this level of dangerousness," he said.

By 5:30 p.m., police officers in growing numbers had regained control of much of the area, but small skirmishes were still breaking out. Police were seen wrestling people to the ground and chasing them down the street.

Messages sent to Cenat's publicist, management company and an email address weren't immediately returned.

-Associated Press:

**NORTH DAKOTA** 

#### **Five-State Pipeline** Permit Is Denied

North Dakota regulators denied a siting permit on Friday for a proposed carbon-dioxide pipeline through five states

The North Dakota Public Service Commission denied the permit for the Summit Carbon Solutions Midwest Carbon Express pipeline, which planned a 320-mile route through North Dakota. Summit proposed the pipeline to capture carbon dioxide from more than 30 ethanol plants in Iowa, Minnesota, Nebraska, North Dakota and South Dakota, and to store it deep underground in North Dakota.

Summit said it "respects the decision by the North Dakota Public Service Commission, and we will revisit our proposal and reapply for our permit. We're committed to understanding and incorporating the considerations out- : NEW YORK lined in the decision. We are confident that our project supports state policies designed to boost key economic sectors: agriculture, ethanol, and energy."

The project has raised landowner concerns of eminent domain, or the taking of private land for the pipeline, and potential dangers of a pipeline break.

The company has "legal options" it can take, commission spokesperson Stacy Eberl said. The regulators don't have jurisdiction over injection sites, she said. Summit proposed an underground injection site in central North Dakota.

The Public Service Commission held public hearings throughout North Dakota this year, during which landowners expressed many concerns, including about eminent domain, safety and requests for reroutes on their property.

-Associated Press: way in Gilgo Beach, on Long

#### Officials Identify Gilgo Beach Victim

A woman whose remains were among discoveries that became known as the Gilgo Beach killings has been identified after 27 years, authorities said on Friday.

Known until now to the public only as "Jane Doe No. 7." she was Karen Vergata, 34. Suffolk County District Attorney Ray Tierney told a news conference.

Her family last heard from her on Valentine's Day in 1996, when she called her father on his birthday, according to a 2017 court decision that declared her presumptively dead.

Friday's development was part of a reinvestigation that in July spurred the first arrest in connection with the longunsolved string of killings that emerged when remains of 10 people were found over a decade ago along a coastal parkIsland in New York.

But it is unclear whether Vergata's death might ever be tied to the continuing case against Rex Heuermann, an architect who has been charged with three of the killings and named the prime suspect in a fourth.

Heuermann has pleaded not guilty, and his lawyer says the 59-year-old denies killing anyone.

Tierney declined to com-ment on "what, if any, suspects we developed" in Vergata's death.

Some of Vergata's remains were discovered in 1996 on Fire Island. More of her bones were found in 2011 near Gilgo Beach, more than 20 miles west of the original location.

Vergata lived in Manhattan, Tierney said. He said investigators believed she was working as an escort; most of the other victims in the Gilgo Beach killings also were sex workers

-Associated Press



Carl Icahn has said that Hindenburg's report was self-serving and misleading.

### Icahn Bows To Activist Pressure

Continued from Page One we intend to stick to our knitting and focus on our activist strategy."

Shares in Icahn lost 23% by Friday's close, their worst day on record.

The changes come in the aftermath of a campaign launched against the company by activist short seller Hindenburg Research. In May, Hindenburg alleged Icahn Enterprises was overvalued, that its dividend was unsustainable and that Icahn himself had borrowed heavily against his shares in the company, leaving it vulnerable to a selloff.

In a tweet Friday morning, Hindenburg said that it was still shorting Icahn.

Icahn said Hindenburg's report was self-serving and misleading. But he stayed unusually quiet as his company's shares tumbled. Icahn owns most of the company's shares, while small investors make up the remainder. The selloff raised the risk that Icahn would suffer a margin call, forcing more selling. There were no obvious buyers to snap up the shares.

The Justice Department opened an inquiry into Icahn Enterprises after Hindenburg's allegations, the company disclosed.

Hindenburg's bet against Icahn looks to have paid off while making life difficult for the octogenarian billionaire. Shares in Icahn Enterprises have lost roughly half their value since Hindenburg's report, wiping roughly \$9 billion from the company's valuation.

Icahn worked to wriggle out of his financial straitjacket. Last month he pledged nearly all of his stake in the company and \$2 billion in other assets as collateral for his loans.

Icahn's renegotiated loans relieved some pressure on the company's shares, as there had been a possibility that the steep declines in share price could lead to lenders forcing Icahn to sell down his stake in his company, further driving down their value.

In his Friday letter, Icahn said he believed the restructured loans "significantly diffused the effects of the misleading Hindenburg report."

Nonetheless, Icahn Enterprises reported losing \$269 million between April and June, compared with a profit of \$128 million in the same period last year. Icahn blamed the performance in part on Hindenburg, saying that Icahn Enterprises' investments in other public companies declined in value as a result of short-selling activity after the report. Investors were worried Icahn would be forced to sell shares of companies owned by his company. He also said the company reduced its short bets and "turned a corner in July."

With the share-price decline, the \$2 quarterly dividend Icahn has been paying since 2019 gave it an annualized yield of 24%, by far the highest in the market. Based on Thursday's closing price, the cut to \$1 quarterly restored the shares' yield to the roughly 12% the company's shares offered when they traded around \$50 this spring. Friday's swoon, however, increased that yield again.

Hindenburg also pointed out that the company has been paying dividends of late through cash on hand rather investment profits, largely through returning capital to shareholders. Tax documents for Icahn investors after the most recent dividend payment showed that of the \$2 payment investors were receiving, \$1.80 was a "return of capital." That bolstered Hindenburg's argument that the dividend was unsustainable.

The spat has been a clash of two vastly different inves-

Short sellers make bets that stand to profit when a stock's price declines. Run by Nate Anderson, who is 39 years old, Hindenburg has had successes with electric-truck maker Nikola and other highfliers.

Icahn still has clout as an activist investor. While fending off Hindenburg, he waged a pitched proxy fight at genesequencing machine manufacturer Illumina. In May, Icahn scored a partial victory by having one of his slate of three nominees elected to the company's board of directors.



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### **Tourists** Chase a Heat Record

Continued from Page One

with his 10-year-old daughter. "If I wanted to take a souvenir photo of a thermometer that's at 95, I could have just stayed at home."

He got a selfie with the park's jumbo temperature gauge that read 126 degrees.

Death Valley, which boasts it is "the hottest place on earth" and the "hottest, driest, lowest national park," has gotten busier in recent weeks as the national heat wave threatened to break the world record of 134 degrees set here in 1913.

Tourists from around the world have been flocking to this isolated spot in southeastern California. These visitors aren't generally the ones taking flagrant risks by venturing far out on trails or running in the heat—which has turned deadly here and across the southwest during the latest wave of intense heat.

Instead, they are often bucket listers who want to be able to say they visited the world's toastiest corner. The remote, moon-like landscape and blistering, otherworldly heat is the point for them.

Some take bus trips from Las Vegas. Others sit idle in parking lots with their air conditioners blasting while family members rush out to take photos of sights such as the Mesquite Sand Dunes. Quickly, since the sand there, a National Park Service brochure warns, can get hot enough to melt sandals.

Both hotels in the parkthe Inn at Furnace Creek and the Ranch at Furnace Creekwere busy in late July, with dinner reservations at the Ranch's Last Kind Words Saloon filling up nightly, and the dining room and bar humming with conversation in a variety of languages.

For most diners, the first order was a tall glass of ice

Some 600,000 people have



A couple in front of Death Valley National Park's thermometer—which runs hotter than the official measurement—on July 16. Below, Rhiarna Myatt, left, and two friends visited from Darwin, Australia, on a tour of the American West.



visited Death Valley this year through May, up 4% from the same period last year, according to the National Park Service. There isn't data for July vet. but traffic always picks up, park workers said, when there's a chance the heat record could be broken.

A big attraction at Death Valley is its famous digital thermometer, which officials say is likely slightly higher than the actual outdoor temperature because it's encased in a metal box. In mid-July, there were several people at a time waiting to get their photo taken next to it as it approached 128 degrees-the hottest official daytime temperature in the park so far this year, even though the selfie thermometer has shown higher numbers.

Cathie Lampert and Simon Williams, of Bath, England, passed through on a recent Wednesday en route to Las Vegas as part of a "grand tour" of the West Coast.

"We're just planning on staying alive, that would be quite cool," joked 52-year-old Lampert of the family's trip through the park, when they saw their car's thermometer top out at 123 degrees. "It's just for the experience, to come through Death Valley when we know it might hit extreme temperatures.

Even just driving the park's main roads, she and Williams said, gave the family unaccus-

tomed to such extreme heat a

"You go down in the first valley and you think OK, we're alive and we're safe and we've had this experience," Lampert said. "And then you come down in this valley and it gets even hotter."

Located 282 feet below sea level, Death Valley doesn't cool down much at night. Just after midnight on July 17, Death Valley measured a cozy 120 degrees, the hottest overnight temperature there, according to park officials.

While many were wondering whether Death Valley would break its daytime record, a debate flared up online about whether its 1913 record really did make it the hottest place on Earth.

William Reid, a climatologist and weather watcher at southern California airports, said the reading is far higher than other readings from around the area during the same time, leading him to believe that it is inaccurate and likely artificially inflated.

"Statistically the data were way out in left field," Reid said, while also conceding that his conclusion is only a theory that may never be proven or

debunked.

Nichole Andler, the National Park Service chief of interpretation and education at Death Valley, said she's aware of the debate, but said the park stands by its official record as the world's hottest

Death Valley recorded 17 consecutive days and 20 total above 120 degrees in July. It was the third-longest run of 120-plus degree days in the park's history, according to the National Weather Service.

On days that hit 120 degrees, National Park Service employees are only allowed to work outside for 10 minutes every hour, and only if it's really necessary, Andler said.

Employees at the park's nain concessionaire generally live in company housing or long-term RV parking, complete with Wi-Fi, water and power hookups. They share their tips for managing the heat, including filling a tub with water in the morning—it comes out of the pipes hot-to allow it to cool all day in the air conditioning and be ready for an evening bath.

One employee said the extreme heat lasts only two months, and the other 10 months of the year, when it typically ranges from the 50s to the 90s, make living there worth it, for the beautiful scenery and outdoor activities.

Pierre-Jean Hillairet, his wife and teenage children made the trip recently from France's Brittany region as part of a three-week road trip around the American West. They knew it would be hot when they planned their Death Valley stop for late July, Hillairet said, but the scorching temperatures startled them.

"I couldn't imagine that it would be this hot," he said. "It's too hot. We have to go soon.'

Rhiarna Myatt was visiting Death Valley from Darwin, Australia, with two friends on a weekslong road trip across California, Nevada, southern Utah and Arizona. She said it wasn't as hot as she assumed when she visited on a late July morning and found it was only 115 degrees. "I mean, it's hot," the 28-year-old said, "but I like the heat."

#### THE WALL STREET JOURNAL. TRUST YOUR DECISIONS

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# CARP ON CARP CARRY ON

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### FDA Backs Postpartum **Treatment**

Continued from Page One

The once-daily pill is supposed to be taken for at least two weeks. It can help relieve depressive symptoms within days, instead of weeks or months with older antidepressants. Doctors say the pill would also be a more convenient option than an infused therapy on the market.

"It's going to be a vital tool to rapidly improve functioning for patients," said Dr. Kristina Deligiannidis, director of women's behavioral health at Zucker Hillside Hospital in New York City who helped conduct studies of Zurzuvae. "We can rapidly get that woman feeling better and get her back interacting with her baby and her family."

The U.S. launch of Zurzuvae will be delayed by about 90 days while it is reviewed by the Drug Enforcement Administration.

Analysts expect the DEA will categorize the drug as a controlled substance with a relatively low potential for abuse, the same designation as antianxiety medications such as Xanax and Valium that affect a similar part of the brain.

Postpartum depression affects 1 in 8 new mothers in the U.S., according to the Centers for Disease Control and Prevention, but some researchers say the true rate might be higher and that half of such cases go undiagnosed.

Drug overdoses and suicides are leading causes of maternal death in the U.S., contributing to nearly 1 in 4 pregnancy-related deaths, ac-

cording to the CDC. Zurzuvae, which also has the chemical name zuranolone, stimulates a brain receptor called GABA that slows down the brain and helps control anxiety and stress. The drug is thought to work in women with postpartum depression, who often experi-

allowing them to rest.



Some women can have trouble bonding with their babies.

**24,000** 

U.S. women who

Zurzuvae in 2030.

The drug was studied in women with moderate-to-severe depressive symptoms that significantly impaired their day-to-day lives.

Deligiannidis said such women experience intense sadness and a lack of interest in bonding with their babies. Some stop showering and brushing their

teeth; others can't summon the strength to change diapers and leave their babies crying for extended periods rather than attend to them.

"The child's neurodevelopment is im-

pacted detrimentally because there's a lack of interaction during that critical brain-development period in that child's life," Deligiannidis said.

Zurzuvae is similar to another drug made by Sage that, in 2019, was the first drug approved specifically for postpartum depression. But that drug, sold as Zulresso, has to be given as a continuous intravenous infusion over two days, making it impractical for many women. Sales have been ence sleeplessness, by producslow, with Sage reporting ing a calming effect and \$3.3 million in first-quarter

revenue.

In a recent clinical study, Zurzuvae reduced postpartum depression symptoms by nearly 55% after two weeks of treatment, compared with a 40% reduction in patients receiving placebos. The most common side effects of Zurzuvae were sleepiness, dizziness and sedation.

The common pharmaceutical treatments for postpartum depression are Estimated number of older antidepressants such as Zoloft and could be treated with Lexapro, which are also sold cheaply as ge-

nerics, said Dr. Greg Mattingly, a St. Louis psychiatrist who has helped conduct Zurzuvae

It usually takes a month or two to know if those drugs are working or not, whereas Zurzuvae has been shown to start improving symptoms in days,

Mattingly said. "A month while you're trying to raise your child and you're not sleeping and you're in tears can feel like forever,"

BMO Capital Markets estimates that nearly 24,000 U.S. women could be treated with Zurzuvae in 2030, generating \$567 million in sales.

### WORLD NEWS

### Drones Attack Russian Port on Black Sea

Strike comes as grain shipments emerge as a new front in Ukraine war

Ukraine struck one of Russia's largest ports with naval drones, disrupting shipments of grain and oil as fighting in Black Sea intensified, threatening world food and energy markets.

> By Thomas Grove, Anastasiia Malenko and Jared Malsin

Friday's strike came after Russia hit numerous port and grain-terminal targets along Ukraine's Black Sea coast and along the Danube River, degrading Ukraine's capacity for exporting grain and rattling nerves across the Middle East and Africa, major buyers of the country's wheat and corn.

The Russian Defense Ministry said it repelled the attack on the port at Novorossiysk, destroying two Ukrainian surface drones. A video published by the Ukrainian news site Ukrainska Pravda and verified by Storyful, owned by The Wall Street Journal's parent company News Corp, showed the bow of one of the drones plowing into the Ropucha-class landing ship, Olenegorsk Gornyak.

Satellite images reviewed by The Wall Street Journal showed the damaged ship moored in the naval shipyard in Novorossiysk on Friday. The image taken by Planet Labs

A photo from a video of a sea drone hitting a vessel identified as a Russian Navy warship

showed the ship leaking black fuel into the water, said Yoruk Isik, a maritime expert and head of Bosphorus Observer, a consulting firm.

Also late Friday, a Russian oil tanker was hit near the Kerch Strait, Russia's Tass news agency reported, blaming the attack on Ukraine. Its crew was unharmed and tugboats were dispatched to tow it to safety, Tass said.

The damaged ship, which Russia sent to the Black Sea weeks before the February 2022 invasion, is capable of dispatching tanks and other vehicles onto land, part of Russia's planned landing force in its thwarted attempt to seize Odesa and other strategic Ukrainian coastal areas early in the war.

They are really a workhorse for the Russian navy," Isik said of the class of ships.

Andrey Kravchenko, mayor of Novorossivsk, said the crews of the landing ship and another vessel, the Suvorovets, reacted quickly to avert damage.

Ukrainian officials, in keeping with their usual practice, didn't publicly acknowledge responsibility for the attack, and an army spokeswoman suggested it was a Russian provocation. However, one Ukrainian official, speaking privately, confirmed the attack was a Ukrainian operation. Mykhailo Podolyak, an adviser to Ukrainian President Volodymyr Zelensky, said "drones are changing the rules of the game" in the Black Sea.

The attack appears to be a Ukrainian attempt to strike at the centers of Russian grain exports in the Black Sea. Moscow also uses the port for exporting

oil from its fields and those in Kazakhstan to world markets. Russian state broadcaster

Vesti said traffic has been temporarily stopped at the port, though oil was still being pumped. The latest attacks cast

fresh uncertainty over shipping lanes in the Black Sea, escalating a standoff between Russia and Ukraine since Moscow pulled out of a grain-export agreement in July.

Russia has launched waves of missile and drone strikes on Ukraine's ports and export infrastructure since exiting the Black Sea Grain Initiative, a deal brokered by Turkey and the United Nations in 2022. Ukrainian and Western officials say the assaults are part of a Russian attempt to use

food as a weapon in the war. Ukraine uses sea drones, Location of naval drone attack on the Russian port of Novorossivsk

Russian-held Ukrainian area\*



\*As of August 3 Sources: Institute for the Study of War and AEI's Critical Threats Project (areas of control);

staff reports Andrew Barnett/THE WALL STREET JOURNAL

unmanned boats often laden with explosives, to amplify the power of its naval forces in the Black Sea. The drones have helped Ukraine's relatively smaller naval forces resist the considerable firepower of the Russian Black Sea fleet.

Wheat futures rose as much as 2.8% after the attack, trading about \$6.47 a bushel before falling. Crude markets took the strike in their stride on Friday. with Brent crude futures edging up 0.6% to just over \$85 a barrel after it emerged that oil was still flowing.

Still, analysts said further disruption to the port could send prices for crude and gasoline higher. That could

worsen inflation as cuts by Saudi Arabia and export restrictions by Russia have tightened global oil supplies and boosted Brent by 12% in the past month. Across two main terminals, Novorossiysk is capable of exporting about 2.5% of the 100 million barrels of oil the world consumes daily.

Russia's undoing of the grain deal has imposed a de facto blockade on Ukraine's largest Black Sea ports, which were responsible for some 95% of Ukraine's agricultural exports before the war, a key link in the global food-supply chain. Ukraine supplied about 9% of the world's exported wheat and nearly half the world's sunflower oil before the invasion.

A senior U.S. official said Friday that Russia pulled out of the grain deal to drive up the price of its own food and fertilizer exports, reached record levels this vear.

The assaults on Ukrainian ports and grain infrastructure are part of a broader Russian attack on Ukraine's economy, said James O'Brien, the head of the State Department's sanctions division.

"We're witnessing Russia attacking the global food security system," he said in an online briefing.

#### Watch a Video



Scan this code for a video of a Ukrainian drone attack on a Russian warship.

### As Inflation Cools, Food Prices Are Poised to Increase

By Paul Hannon

Inflation has cooled in many countries, but in most of them, food inflation remains rampant and there are reasons to fear it may accelerate.

A combination of disrupted exports. unusually weather and Russia's continuing pounding of Ukraine, one of the world's largest grain producers, is likely to add fresh momentum to the main source of global inflation.

U.K. food prices rose 17.4% in the year through June, while Japanese prices were up 8.9%, and French prices were up 14.3%. While food inflation has slowed slightly in the U.K. and France, it has risen in Japan. In each country, food prices are rising faster than prices of other goods and services.

The U.S. has fared better, with food prices up 4.6% from a year earlier in June, more than double the rate of inflation targeted by the Federal Reserve but well down on the August 2022 peak of 13.5%.

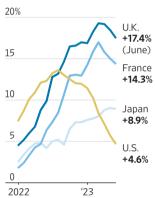
The surprising stickiness of food inflation, compared with household energy prices that have been falling below their level a year ago in many parts of the world, is one of the challenges central banks face as they try to bring inflation in line with their targets.

It also shows how many

countries' apparent success in fighting the very high inflation levels seen last year conceals persistent pain for consumers, particularly those with lower incomes, who spend a larger portion of their budgets on getting by. The lengthening period of

hardship has become increasingly worrying for European governments, which have taken a variety of measures to push back against food inflation but stopped short of the price controls last used in the 1970s.

The United Nations on Friday said its index of food prices that includes cereals, vegetable oils, sugar, meat and dairy products rose by 1.3% in July from June, a second increase in Food prices, change from a year earlier



Source: Organization for Economic Cooperation

four months after a steady decline from the 50-year high reached in March 2022.

Russia in July withdrew from a deal that allowed Ukraine to export grain through the Black Sea, and subsequently has targeted the country's food-export infrastructure with drone attacks on Odesa's port facilities.

"It's something we have to watch carefully," said Andrew Bailey, governor of the Bank of England. "It has had an effect on wheat prices, but not as much as last year.'

Unusual weather patterns are a separate worry, hitting harvests of a variety of grains, fruits and vegetables around the world. "Adverse weather conditions, in light of the unfolding climate crisis, may push up food prices," European Central Bank President Christine Lagarde said.

The impact of unfavorable weather has been most notable in India, where heavy rain has reduced the rice harvest and pushed food prices sharply higher. The Indian government in July imposed a ban on exports of certain types of rice, an echo of similar restrictions on the overseas sale of food staples that were announced by several governments as prices surged last year.

While such bans may help cool prices in the country in question, they can have the opposite effect in other countries. India is the world's largest rice exporter. Before the Indian ban, many of the export bans put in place last vear had been removed.

The World Trade Organization estimates that as of mid-July, 45 of the 104 restrictions on exports of food, feed and fertilizer that were introduced in the months after the invasion of Ukraine had been removed. It estimates that the remaining bans cover \$24.5 billion of traded goods.

"We must take care to avoid vicious circles of supply availability concerns leading to more export restrictions and higher prices," said Ngozi Okonjo-Iweala, the WTO's director-general.

One additional risk to food supply is the strong natural warming condition in the Pacific Ocean known as El Niño, which can lead to changes in weather patterns and reduced harvests of some crops. The Australian government's Bureau

of Meteorology has issued an El Niño alert, saying there is a 70% chance that the climate pattern would emerge this year.

While some governments are resorting to export bans to try to keep prices down, European policy makers have been investigating whether food producers and retailers have taken advantage of the rise in inflation to boost their profits.

In the U.K., a review of grocery stores by the Competition and Markets Authority in July found that they weren't increasing profit margins, but it has turned its attention to supply chains for several products, including bread, poultry, milk and mayonnaise. The French government has asked food producers to identify a range of products for which prices will be frozen or cut in coming months.

Despite new worries, central bankers expect food prices to rise more slowly. But they are aware that it has taken much longer for that to happen than they anticipated.

### Moscow Adds 19 Years to Navalny's Sentence

By Ann M. Simmons

Russia's leading opposition figure, Alexei Navalny, faces possibly the rest of his life behind bars after a court sentenced him to a further 19 years in prison, in what he said was a blatant attempt to intimidate anyone tempted to follow in his footsteps.

The latest charges include claims that Navalny incited and funded extremism, and spurred minors to break the law, in addition to a charge that he was trying to rehabilitate Nazism—a potent allegation in Russia, which prides itself on its defeat of Nazi Germany in World War II.

The state prosecutor had requested Navalny be sentenced to 20 years in prison.

The penalty was handed down by a visiting court in the correctional colony where Navalny is being held not far from Moscow, Russia's state media agency TASS reported. Judge Andrei Suvorov ordered that the sentence be served at a special-regime colony, the agency said.

These facilities typically house dangerous criminals who are highly likely to reoffend and those serving life sentences, TASS reported. They also enforce more stringent conditions, including restrictions on freedom of move-

ment and communication. "The number doesn't mat-



Russian opposition leader Alexei Navalny was sentenced on Friday in the correctional colony where he is being held.

posted on his Instagram account addressing the length of the sentence. "I understand very well that, like many political prisoners, I am serving a life sentence-where life is measured by the duration of my life or the life of this regime."

He suggested that the verdict was a message to those who challenge Putin's regime. "They want to frighten you, not me, and deprive you of the will to resist," he said. "You are being forced to surrender your Russia without a fight to a gang of traitors, thieves and scoun-

drels who have seized power." The European Union condemned the ruling as "polititer," Navalny said in comments cally motivated," and reiterated its calls for Navalny's immediate release. It criticized the fact that the court hearings were conducted in a closed setting, inaccessible for his family and observers.

"This is a stark indication that the Russian legal system continues to be instrumentalized against Mr. Navalny," the EU said. "It also shows how much Russian authorities are afraid of him."

Navalny, who is 47 years old and for years was Russian President Vladimir Putin's most effective critic, already was serving an 111/2-year sentence for what he says are trumped-up charges of fraud and other allegations.

Friday's judgment came as the Kremlin steps up its campaign to root out criticism of the Kremlin and its handling of the Ukraine war, which has dragged on for 18 months and taken a heavy toll. Journalists, activists and dissidents risk longer sentences for speaking out than before the invasion, say human-rights activists and analysts covering the Russian legal system.

One of the most striking moves was a Moscow court's decision to convict journalist and dissident Vladimir Kara-Murza for treason in April for criticizing Putin and the war. In his final statement to the court, Kara-Murza said he hadn't been imprisoned for a crime, but for daring to speak out against the Kremlin. He was sentenced to 25 years in prison.

Presidential spokesman Dmitry Peskov told reporters this year that the Kremlin isn't paying attention to Navalny's case, and refrains from getting involved in court matters. When asked to comment on Navalny, Putin has avoided even voicing his name.

Before his arrest at a Moscow airport in 2021, Navalny had developed a large online following for his exposure of corruption, including investigations into Putin's personal wealth. From prison, he has continued to lampoon government policies, condemn the war in Ukraine and urged Russians to speak out.

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# Rash of Stabbings Roil South Korea China Mulls Limits for

By JIYOUNG SOHN AND TIMOTHY W. MARTIN

SEOUL—A string of random stabbings in South Korea has inspired online threats of copycat attacks and unnerved the country of 52 million, pushing officials to consider adding new criminal punishments such as life imprisonment without parole.

Lawmakers and local media have referred to the knifewielding incidents as "Don't Ask Why" crimes, given the lack of clear motives behind the violence and indiscriminate victim targeting.

South Korea, where strict firearm laws block nearly all civilians from gun ownership, recently reported a decadelow level of crime, with its murder rate dropping to 1.3 homicides per 100,000 people, according to the latest government data. That is about half of the average seen by Organization for Economic Cooperation and Development member states; it also represents roughly one-fifth of the murder rate in the U.S.

On Thursday, a 22-year-old man injured more than a dozen people after ramming his car into a group of pedestrians. He then stabbed several strangers at a suburban Seoul department store connected to a subway station.

At least four online threats of knife attacks at specific subway stations have been lodged in the day since, some giving specific time frames or targets, local police said. One person vowed to "kill as many people as possible."



A police officer on Thursday guarded the scene of an attack in Seongnam, South Korea.

On Friday, two more knife incidents occurred. A highschool teacher in the central South Korean city of Daejeon underwent emergency surgery after being stabbed in the face and chest by a man believed to be in his late 20s. Separately, police detained a knifewielding man in his 20s at a major bus terminal in Seoul, with no casualties reported.

Authorities haven't described either incident as a copycat case or provided a

South Korean President Yoon Suk Yeol called the Thursday department-store attack an "act of terrorism against innocent citizens," a presidential spokeswoman

said. The country's National Police Agency said it has launched a special-enforcement operation, dispatching more personnel to busy public areas and conducting stopand-search operations on suspicious individuals.

On Friday, South Korea's Justice Ministry said it would pursue steps to add a life sentence without parole to the country's criminal-law system. For now, those handed life imprisonment are eligible for parole after 20 years behind bars. Yoon's ruling party said it would pursue the policy, too.

Twelve of the 14 injured during the Thursday department-store rampage were seriously hurt, police said. Two

remain in critical condition and at risk of major brain damage, police added.

Park Eun-mi, a 61-year-old homemaker, said she passes by the area where the Thursday stabbing rampage took place nearly every day because she lives in an apartment complex nearby. She finds what happened terrifying, and is concerned about stabbings and the online threats.

"It's scary that you can't really prepare for this kind of thing in any way," Park said. 'South Korea is internationally known as a very safe country, though now there's quite a problem."

The 22-year-old man involved in the Thursday attack was a high-school dropout who had been diagnosed with schizoid personality disorder but hadn't received proper treatment, local police said. During questioning, the man said he believed an unidentified group of people wanted to kill him, police said.

South Korea has a poor record in mental-health assistance—a factor psychology experts and activists say contributes to the country's suicide rate, which for nearly two decades has been the highest among OECD members. Seeking mental-health treatment still carries a social stigma and can serve as grounds for a health-insurance company to reject coverage, local experts say.

Before the Thursday incident, South Korea had seen two other high-profile violent attacks this year involving young people under apparent mental distress.

A 23-year-old woman in May killed a university student she met through a tutoring app using a fake identity. Criminal psychologists involved in the case have said the woman appeared motivated by her envy of the victim's social status and academic background.

On July 21, a man in his early 30s killed one and injured three others in a knife attack near a subway station in southern Seoul. He told police that he "had no will to live" when arrested.

During interrogations he said he had "lived a miserable life and wanted to make others miserable, too."

### Children On Phones

By Raffaele Huang AND LIZA LIN

SINGAPORE—Beijing is preparing to roll out new restrictions on the amount of time that young people spend on mobile devices, putting China further ahead of other countries in controlling how, and how much time, its youth engage in the online world.

The country's top internet regulator announced draft guidelines this week to govern the mobile-internet use of children under the age of 18. The proposal requires device makers to introduce time limits on internet use for children, and app operators to roll out different pools of content for youths of different ages.

Parents could decide whether to impose the restrictions and could expand the time limits.

The regulator, the Cyberspace Administration of China, said the new requirements are meant to protect the physical and mental health of young people.

Chinese parents who have struggled to keep their children away from screens are looking forward to the change.

"It would be great if there was a way to force him not to spend so much time online," Wang Yuefang, a shift manager at a textile factory in Guangzhou, said of her 13vear-old son. "He spends several hours a day scrolling and playing videogames. He's been nearsighted since he was very young."

China's move breaks new ground as governments around the world wrestle with questions of whether, and how much, to regulate young people's use of social media and the internet.

The debate accompanies growing concern globally about internet addiction and other ills that have followed the rise of social media, such as soaring levels of teenage depression and impaired social skills.

In March, Utah Gov. Spencer Cox signed a bill that prohibits social-media platforms from allowing access to users under 18 without parental consent. The law was cheered by local parents, but drew protests from some civil-liberties groups that warned about the risks of cutting off LGBTQ children from sources of on-

line support. France approved a law in June mandating platforms like TikTok and Instagram to verify users' ages and obtain parental consent for those under 15.

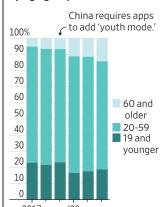
China's draft restrictions would limit children under 8 to no more than 40 minutes a day on mobile devices, while minors ages 16 to 18 would be al-

lowed up to two hours a day. China is already ahead of the curve in regulating the online behavior of its more than 190 million young people. In 2021, Chinese authorities moved to restrict the time people under 18 spend playing videogames, limiting them in most cases to three hours a week. The next year it banned minors from tipping influencers on livestreaming platforms.

China was among the first countries to require app makers to introduce "youth modes" that limit screen time and the types of content and activities they can access.

The proposed regulation also spells out types of content recommended for children of different age groups, and details what content they should be actively shielded from.

Chinese internet users by age group



Source: China Internet Network Information

### Indian Opposition Leader Gets Court Reprieve

By Rajesh Roy

NEW DELHI—India's top court on Friday suspended the conviction of opposition leader Rahul Gandhi in a criminal defamation case linked to Prime Minister Narendra Modi's surname, paving the way for him to be reinstated as a lawmaker.

The 53-year-old is a scion of the Nehru-Gandhi political clan, which produced three of India's prime ministers. The conviction cast a shadow over Gandhi's political future ahead of the 2024 elections, in which Modi is expected to return for a third term. It also presented a fresh setback to the Congress Party, which has long revolved around Gandhi's family. Gandhi was disqualified

from parliament in March after a lower court in the western state of Gujarat convicted and sentenced him to two years in prison for making remarks during a campaign speech in 2019 in which he referred to "thieves" as sharing the surname Modi.

"Why do all these thieves have Modi as their surnames? Nirav Modi, Lalit Modi, Narendra Modi," he had said.

Nirav Modi is a fugitive Indian jewelry tycoon who faces allegations of fraud, while Lalit Modi is a former chief of the Indian Premier League who has been banned for life by the country's cricket board for alleged financial irregularities.

Gandhi can now seek to return to the lower house of



Opposition leader Rahul Gandhi, center, greets supporters in New Delhi on Friday after his defamation conviction was suspended.

parliament as a lawmaker following a specified procedure, and will also be able to contest in federal polls due next year, according to political experts and lawyers.

Gandhi's conviction and disqualification stunned India's opposition and opened the ruling Bharatiya Janata Party to accusations that it was trying to harass the politician and suppress antigovernment voices, a charge denied by the party.

The politician has been sharply critical of Prime Minister Modi on issues including unemployment, ethnic and religious violence and allegations of stock-market manipulation by the Adani Group. which has worked closely with the government in modernizing airports, ports and other infrastructure. Adani Group denies the allegations.

"Come what may, my duty remains the same," Gandhi said in a tweet after the ruling. "Protect the idea of India."

The case against Gandhi was built on a complaint from a Bharatiya Janata Party lawmaker in Modi's home state of Guiarat, Purnesh Modi, who said the comments had defamed everyone with that surname.

Gandhi appealed to the Su-

preme Court after the Gujarat High Court declined to stay the conviction in July. In his submission to the top court. Gandhi pleaded not guilty of defamation, stating that as a leader of the opposition it is necessary for him to critically evaluate the conduct and per-

Gandhi's appeal of his conviction will continue to proceed in a Gujarat court.

formance of the government.

### Colombia's Government, Leftist Rebels Begin Cease-Fire

By Juan Forero

BOGOTÁ, Colombia—President Gustavo Petro has embarked on a bilateral ceasefire with Colombia's oldest rebel group as part of a new strategy to negotiate with rebel and drug multiple groups.

Petro's so-called Total Peace strategy is centered on the idea of carrying out talks with the leftist National Liberation Army, a Cuba-inspired group fighting the state since 1964; remnants of the Revolutionary Armed Forces of Colombia, or FARC, that didn't participate in talks that ended in a 2016 peace accord and assorted narco-trafficking outfits.

The government and the National Liberation Army, or ELN, agreed to begin a sixmonth-long cease-fire that started Thursday, with a possible renewal if negotiations are on track. The government will curtail military operations during the talks.

'You don't make peace between armed sides," Petro, who was a member of the M-19 guerrilla group that disarmed in 1990, said earlier this week.

The guerrilla

insurgency has

'Peace happens in a Colombian society that is unarmed and that agrees to get along."

The U.S. on Wednesday ioined other members at the Security

Council unanimously agree to authorize the world body to verify the cease-fire with the ELN. But a State Department spokesperson on Thursday

said "we remain skeptical of

the ELN's intention to adhere

to the terms of the agreement and to cease hostilities against civilians."

Under Juan Manuel Santos, president from 2010 to 2018, Colombia negotiated with FARC for four years in an effort to end a 50-year guerrilla insurgency that

> had claimed tens of thousands of Colombian lives. At the same time, he aimed to weaken the group with military strikes. Military analysts say that strategy

claimed tens of thousands of Colombian lives.

hobbled the insurgency that it agreed to peace, disarming thousands of fighters and dismantling units steeped in trafficking cocaine to the U.S. Petro has broken with that

policy by proposing to rebel

groups and cocaine-smuggling groups, such as the vicious Gulf Clan, that it would roll back military operations in exchange for negotiations. His peace team has been feverishly working to get negotiations started with the goal of reaching accords as fast as possible, officials said. In past efforts, "negotia-

tions have always been limited to one armed group, with the other groups left at the sidelines." said Danilo Rueda, the government's high commissioner for peace. "And that has led other groups to expand territorially."

Rueda said the government wants to achieve peace in the three years left in Petro's term. "That's the goal, to do it in this government, to show the country that talks, based

on respect for life, will lead to

the conditions for peace,"

Rueda said.

challenges. Petro lifted the cease-fire with the Gulf Clan in March, after accusing the group of widespread violence. The army has now deployed thousands of troops against the group in northern Colombia. The group remains robust. Colombian government officials say, even though some of its top leaders have in recent vears been killed or extradited to the U.S. in operations in which American intelligence was essential. After the government ac-

The government's plans,

though, have faced serious

cused another group made up of former FARC fighters, the socalled Central Staff, of killing four indigenous children, Petro ended the cease-fire in four provinces. Still, the attorney general's office has lifted warrants against top commanders so the government can begin talks with that group.

### Trudeau Faces Challenges In Office and at Home

Canada's leader is dealing with political setbacks, breakup of his marriage

By PAUL VIEIRA

OTTAWA—Justin Trudeau's marital split, announced in his-and-hers Instagram posts on Wednesday, caps a string of setbacks for the Canadian leader who seems to have lost his golden touch with voters.

After eight years in power, Trudeau's approval ratings are close to an all-time low. He faces the prospect of an inquiry into how his government handled alleged Chinese government interference in the latest election. His Liberal government has seen continuing criticism over its role in fueling inflation and has yet to successfully address stubbornly high housing prices. A cabinet shuffle in late July aimed at providing a fresh start did little to revive his fortunes.

Half of Canadians want a new government while only 19% favor Trudeau, according to a recent poll from Ottawabased Abacus Data, a dangerously low level of support for the leader of a minority government holding on to power through a coalition agreement with another party.

"He's getting pounded on a regular basis," said Duane Bratt, a political-science professor at Mount Royal University in Calgary, Alberta.

Trudeau, the longest-serving current leader in the Group of Seven countries, has said he intends to lead the Liberal Party in the next election, which for now isn't scheduled until 2025. If Trudeau loses the support of the left-wing New Democratic Party, an election could come sooner. That party agreed to prop up the Liberals until 2025 in exchange for increased spending to expand medical and dental coverage for low-income Canadians and delivering more affordable

Canadians identify cost-ofliving issues as their biggest concern, despite data showing that inflation in Canada has slowed rapidly, to below 3% as of June from a peak last year of 8.1%.

The government in July started to issue one-time payments to lower-income Canadians to help offset higher grocery bills, but that hasn't seemed to translate into popularity with voters.

"I don't think the government has effectively communicated what its economic vision is," said David Coletto, chief executive of Abacus Data.

Trudeau's main rival, Conservative Party leader Pierre Poilievre, has repeatedly blamed Liberal government stimulus spending during the pandemic and planned increases in carbon taxes for fueling higher inflation.

When he shuffled his cabinet, Trudeau defended his record on job growth and argued that inflation has decelerated to one of the lowest rates among G-7 countries, but stopped short of making changes to his economic team.

spokeswoman Trudeau said the prime minister's revamped cabinet is a group of "hardworking cabi-



Justin Trudeau and wife Sophie Grégoire Trudeau, announced their split on Instagram.

net ministers who are already rolling up their sleeves to make life more affordable for Canadians." She added that Trudeau looks forward to leading the Liberal Party in the next election and will work with the new cabinet to help Canadians struggling with higher costs.

One pressing item is housing. At a news conference on Monday, Trudeau acknowledged that there aren't enough

housing units to meet demand. Then, two days later, came news of the breakup with his wife of 18 years, Sophie Grégoire Trudeau. The couple said they have signed a separation agreement and are focused on raising their three children in a "loving and collaborative environment."

Trudeau, the son of former Prime Minister Pierre Trudeau, grew up in the public eye, and his 2005 Montreal wedding to Grégoire Trudeau attracted national attention. As recently as their wedding anniversary in May, Trudeau posted a Hallmark-worthy picture of him and Grégoire Trudeau on social media, with the message, "Every mile of this journey together is an adventure. I love you, Soph. Happy anniversary.

Trudeau's father, who was prime minister from 1968 to 1979 and again from 1980 to 1984, also separated from his wife midway through his third term in 1977.

Alex Wellstead, a former press aide to Justin Trudeau, said it would be premature to write off the prime minister. "You've got a man who is a fighter. He's driven. I think he sees every challenge as an opportunity to do more for Canadians," he said.

**WEST BANK** 

#### **Two Palestinians** Killed in Clashes

Israeli security forces killed an 18-vear-old Palestinian during a military raid into the northern West Bank on Friday, said Palestinian health officials. Another Palestinian was killed when Israeli settlers stormed a village and sparked fighting with residents.

The Palestinian Health Ministry said Mahmoud Abu Saan, was shot in the head by Israeli forces in the city of Tulkarem. The raid drew protests from residents, said the local branch of Palestinian Islamic Jihad militant group, with Israeli forces shooting tear gas, stun grenades and live fire and Palestinians hurling stones and explosives at the soldiers.

The deaths marked the latest bloodshed in a months-

long surge of area violence. The Israeli army said it shot at those who attacked them. It said it arrested five Palestinians in other West Bank villages, confiscating explosives and dispersing protesters.

Later Friday, the Palestinian Health Ministry said armed Israeli settlers entered the village of Burqa and shot and killed 19-year-old Qusai Matan. The Israeli army said it was looking into the reports.

A Palestinian Authority official said dozens of Israeli settlers burst into the village, set- : ting fire to two cars and opening fire at Palestinian protesters who poured into the street to throw stones.

-Associated Press :

#### **Report Says Police Shot Protesters**

Doctors in Kenya say the bullet wounds that civilians received during opposition protests in two counties last month show that most were shot while running from police or trying to surrender, according to a report released Friday.

The report by the Kenya Medical Association, Amnesty International Kenya and the Law Society of Kenya looked at three days of protests in the western counties of Kisumu and Kisii, part of the opposition's stronghold. It confirmed at least 11 people killed, most of them shot, and counted at least 47 others with gunshot wounds.

There was indeed the use of excessive force by the police" during the protests over the rising cost of living, the report said, noting that some victims were simply bystanders, including a woman watching the protests from her shop.

The findings come less than a week after Kenya's government said it would consider leading a multinational force in Haiti to take on gang warfare, and could send 1,000 Kenyan police officers. Some Haitians have expressed skepticism.

Human-rights groups have long accused Kenyan police of abuses. The new report is based on visits and interviews with survivors and witnesses. A police spokeswoman didn't comment on the report.

#### **WORLD WATCH**



-Associated Press WATCH OUT, WORLD: An Indian Army soldier performs a Taekwondo stunt during a parade in Bengaluru, India.

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By VIVIAN SALAMA

WASHINGTON—The U.S. said that it has frozen some of its foreign assistance programs to Niger, as the potential for armed conflict loomed and tensions heightened over the detention of the country's U.S.backed President Mohamed Bazoum following a coup.

The State Department said Friday that it is pausing certain foreign assistance programs benefiting the government but the U.S. will continue to provide humanitarian and food assistance programs to Niger.

"As we have made clear since the outset of this situation, the provision of U.S. assistance to the government of Niger depends on democratic governance and respect for constitutional order," Secretary of State Antony Blinken said. "The U.S. government will continue to review our foreign assistance and cooperation as the situation on the ground evolves consistent with our policy objectives and legal restrictions."

Additionally, he said, the U.S. will continue to carry out its diplomatic and security operations in the country "where feasible to do so."

Officers from Niger's elite presidential guard last week detained Bazoum and declared themselves the nation's new leaders. The coup came as a shock to U.S. and European governments that have worked closely with Bazoum and Niger's military in the fight against Islamist militants in Africa's Sahel region.

The U.S. operates a drone base in the Nigerien town of Agadez to help stem the spread of Islamist militants in the Sahel. U.S. commandos train Nigerien special forces at outposts around the country. American troops used to accompany their local counterparts on combat missions until an Islamic State ambush killed four U.S. soldiers in 2017. Now the Americans advise Nigerien commandos from afar during operations.

The U.S. has spent more than \$500 million since 2012 to build up and train Niger's armed forces.

While it remains unclear how the freeze of certain aid will affect those operations, U.S. officials have warned that U.S. counterterrorism operations in the Sahel hinge on the release of Bazoum.

The Global Terrorism Index said this year that the Sahel now accounts for 43% of the world's terrorism deathsmore than South Asia and the Middle East region combined—and that percentage is on the rise. The alliance between the U.S. and Niger has been seen as critical to addressing growing terrorism threats in neighboring Mali and Burkina Faso.

The U.S. has ordered the departure of all nonemergency personnel and family members from the embassy in Niamey as uncertainty over the country's future and concern over the potential for unrest grew.

President Biden and Blinken have called for Bazoum to be freed and for Niger's democracy to be protected.

#### **Junta Cuts French Military Ties**

Coup leaders in Niger said they would end military cooperation with their country's former colonial power France, as the clock ticked down to a Sunday deadline set by other West African states for ousted President Mohamed Bazoum to be reinstated.

Leaders from the Economic Community of West African States have threatened that they would use force to free Bazoum and return him to the presidency if Niger's new military junta doesn't back down. Niger's neighbors

Mali and Burkina Faso warned that they would see an armed intervention by other Ecowas governments as a declaration of war.

In a sign that the coup leaders may be moving toward cutting relations with the West, the junta has announced that it has terminated Niger's military cooperation pacts with France, including those that have allowed Paris to keep some 1,500 troops in the country.

France's Foreign Ministry didn't respond to a request for comment.

-Gabriele Steinhauser

### U.S. Flubs Response to Ally's Coup

Continued from Page One

former U.S. ambassador, who was about to board a flight on his vacation. The ambassador was worried one of Washington's closest allies in Africa could become the latest in a string of regional states to fall into the hands of coup leaders sympathetic to Russia.

Everything is fine, the imprisoned president carefully intoned.

A week later, Bazoum is still imprisoned in his palace, junta leaders are seeking aid from Vladimir Putin's regional partners and America is on the verge of losing its most important ally in a crucial and unstable part of Africa. An obscure personnel dispute within Niger's presidential guard has now become what appears to be a geopolitical win for Russia and its Wagner Group paramilitary company in their bid to flip Western allies.

The situation could yet turn into open military conflict. Eleven West African countries led by Nigeria, have threatened to use force to restore Bazoum to power if the coup isn't reversed by Sunday. In return, the pro-Russian leaders of Mali and Burkina Faso have vowed to defend Niger.

Officials in the U.S. and Europe are scrambling for ways to return Bazoum to power but concede the window is closing. The Kremlin on Friday warned against any intervention.

#### Missteps

The coup, if successful, could lead Russia to pick up some of America's most important drone bases, used to fly missions across the Sahara between Libva and Nigeria.

This outcome wasn't predestined. A week of missteps and communication breakdowns pushed the vast nation of Niger toward Russia, Nigerien, American, European and other West African security officials, as well as Nigerien soldiers, described a series of unexpected blunders that now threatens to turn West Africa into a theater

for regional war. Washington, caught without key personnel in its Africa posts, failed to anticipate what is now the seventh coup in the region since 2020—not including a failed attempt in Niger two years ago. While Bazoum sat in his safe room calling for help, America and its allies struggled to react.

The U.S. has spent more than \$500 million arming and equipping Niger's military. Yet the country's special forces, trained for nearly every counterterrorism eventuality, had no answer for Sunday's coup-West Africa's most enduring security threat. The forces were left chatting over Whats-App groups over whether to intervene.

The U.S. and Europe have made Niger the centerpiece of their fight against the spread of Islamic State and al Qaeda in Africa's Sahel, a 3,000-mile semiarid territory on the southern shore of the Sahara. Nearly half of Niger's budget

comes from foreign aid. "This is your strong ally, your reliable ally, you have invested a lot and then there is a coup without any reason," said Kiari Liman Tinguiri, Niger's ambassador to Washington

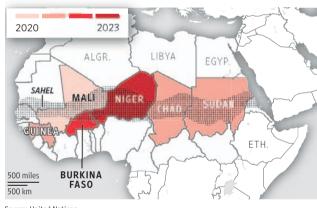


Above, demonstrators in Niger's capital, Niamey, show their support for the coup on Thursday. Below right, U.S. Secretary of State Antony Blinken greets Nigerien President Mohamed Bazoum in Niamey in March.

#### A Cascade of Coups

Coups have been common in Africa's Sahel, a region between the Sahara Desert to the north and savannahs to the south.

Countries in the Sahel that have experienced successful coups since 2020



Source: United Nations Jake Steinberg/THE WALL STREET JOURNAL

who was recently fired by the iunta. "It's very nice to be friends of the West, but it may not be helpful when hard times

U.S. State and White House officials said they still think there's a narrow opportunity for a peaceful resolution that would retain Niger's democracy. 'While we are giving diplomacy a chance and have ongoing diplomatic engagements at the highest levels, we are continuing to review all options around our cooperation with the Nigerien government," a spokeswoman for the White House National Security Council said.

#### Saharan citadel

The coup began with an idea for a personnel change, mulled over months by Bazoum and his aides, to replace the leader of the presidential guard that held watch over the country's commander-in-chief.

U.S. and French intelligence officers had long known about the president's plan to reshuffle his security detail and the risks it entailed. The presidential guard felt marginalized after vast sums of military assistance poured into the country's counterterrorism units, people familiar with the situation said.

The French intelligence service DGSE warned Paris of the risk, but neither France nor the U.S. took significant action to defend their ally in Niamey, according to French and West African intelligence officials.

Bazoum, elected in 2021 in Niger's first democratic transfer of power, had been feted in Washington as a reliable partner against the twin threats of iihadist attacks and Russia's growing influence.

After coup leaders in neighboring Mali and Burkina Faso shifted toward Russia, Bazoum made clear he stood with America.

In April, Bazoum replaced the army chief of staff and the head of the national gendarmerie, hoping to place more trusted officers in their ranks, according to European and West African security officials. That stirred suspicion within his presidential guard. On July 24, Bazoum di-

rected an aide to draft a decree to dismiss the guard's leader.

Gen. Omar Tchiani had protected Niger's leaders for 12 years, with a of some 700 elite sol-

diers. The unit had stopped a coup attempt against Bazoum days ahead of his inauguration. As Bazoum built up the country's counterterrorism forces, Tchiani's guard lost out on resources and stature.

At 3 a.m. on July 26, the general's men drove up to the presidential palace. Carrying heavy weaponry, they disarmed security officers equipped only

with handguns and walked to Bazoum's residence. Bazoum fled into the safe room and phoned aides to say he was confident that U.S.-

trained elements of his army would rally to his rescue. In a twist, some of the best



U.S.-trained special forces among Niger's regular army units were on counterterrorism missions in distant desert regions, with few roads.

The lightly armed units in the capital weren't in a position to assault the palace and the chain of command broke down. Rank-and-file soldiers said they debated over Whats-App groups what to do.

Bazoum, who still had full control of his communications in the safe room, phoned international allies and ambassadors in the West. He stressed

Washington

was caught

without key

personnel in its

Africa posts.

over phone and video calls that the coup was a personnel dispute and could easily be reversed. Though the

U.S. had spent hundreds millions of dollars transforming Niger into

its top military outpost in the Sahara, it didn't have an ambassador in the country.

The Biden administration didn't formally nominate one until eight months after the previous ambassador left, only to face opposition from Sen. Rand Paul (R., Ky.), who has put holds on State Department appointees until the White House releases intelligence he believes could show Covid-19 leaked from a Chinese lab.

Washington also has no ambassador at the African Union

or in neighboring Nigeria—or

anybody in a special envoy post

that it had created to deal with

the region's deterioration. The

that had its grievance for years and we should have done more to act," said J. Peter Pham, former U.S. special envoy to the Sahel under President Trump. In the early hours, he added, 'his exfiltration could have been organized relatively eas-

ily.... The golden hour has

relevant Africa desk at the Na-

tional Security Council was in

flux, held by a short-term tem-

porary post that was due to

hand off to another temporary

ing. This was not a widely sup-

ported coup—it was one unit

'This is extremely frustrat-

caretaker within days.

Bazoum contacted allies in France, which had about 1,500 troops in the country. A decision would have to come from President Emmanuel Macron, who was traveling in the South Pacific. France's government

declined to comment. Junta leaders headed to a state TV station and stood around a table where a stonefaced spokesman said the military could no longer "witness the gradual and inevitable demise of our country."

If Bazoum was going to be freed, it would have to come from outside.

#### **Guns of August**

Macron had just landed in the South Pacific when he spoke to his top defense and

diplomatic officials, who laid out options to free Bazoum. For years, the French president had been briefed on a growing protest movement

against France in its former

West African colonies.

In Mali, then Burkina Faso, coup leaders seized power and justified their takeovers as an act of liberation from France, before turning to Russia as their protector and benefactor.

The French president ruled out sending a unilateral force. Instead, he wanted to assist Nigerien armed forces that remained loyal to Bazoum, an option that vanished as the country's military command acquiesced to the coup. Russia was in an excellent

position to step into the vacuum. Vladimir Putin was already receiving African leaders invited to a Russia-Africa summit in St. Petersburg due to start the day after the coup.

Bazoum had refused the invitation, but the Kremlin-backed leaders of Mali and Burkina Faso, Assimi Goita and Ibrahim Traore, gathered for meetings. As news of the coup trickled in, their intelligence chiefs met under Russian auspices to agree on a coordinated esponse.

Officials in Mali and Burkina Faso didn't respond to requests for comment.

Protests, organized by an opposition movement, thronged France's embassy in Niger. France sent military planes to evacuate its citizens. The U.S. moved its 1,100 troops, sent there to fight Islamist insurgents, inside American-built drone and special-forces bases. The State Department held off on calling the upheaval a coup, a designation that could, under U.S. law, sharply restrict America's ability to keep funding, training and equipping Niger's

military. The stakes were becoming more serious for the giant to Niger's south. Nigeria was once the world's 33rd richest country per capita, until decades of military coups and misrule left it among the poorest.

On Sunday, July 30, Nigeria's new president, Bola Tinubu, gathered with presidents and foreign ministers from 11 West African states, along with a representative from Bazoum's government, in the Nigerian capital of Abuja. Tinubu said that after coups in Mali and Burkina Faso—both supported by Russia—as well as in Guinea and Chad. the one in Niger was the last straw. If they accepted this coup, more would come. A Nigerian government spokes-

person declined to comment. After their meeting ended, the West African leaders issued an ultimatum: Tchiani had one week to return power to the democratically elected president or face the possible use of military force.

Blinken issued statements of general support for the Nigerian-led idea.

On Thursday the junta announced on state TV it had terminated military cooperation agreements with France.

From his palace, Bazoum phoned his ambassador to the U.S. to dictate an op-ed that appeared in the Washington Post calling for international intervention.

By the time it published, parts of the country were in the dark. Nigeria, which provides some 75% of Niger's electricity, had cut off one of its main transmission lines, plunging villages and towns into blackouts. The presidential residence lost power as well.

Bazoum's phone remains charged, his aides said Friday. If it goes out, the U.S. could lose its ability to reach the president. "I hope he has a lot of lithium batteries," one former official said.

-Vivian Salama and Noemie Bisserbe contributed to this

### Prosecuting the Political Case Against Trump

hris Christie has a theory for how to defeat Donald Trump: Attack him. If that sounds like something out of "Elections for Dummies," it remains mostly untested in the 2024 Republican contest. which Mr. Trump leads with 53% support, according to Friday's Real-ClearPolitics average. "Nobody else in this race is willing to take him on," Mr. Christie says. "They all are either playing for a position in a potential Trump cabinet, or they just don't have the ability to do it. And there's no way to beat this guy unless vou beat him."

During a Tuesday visit to the Journal, the two-term New Jersey governor gives no quarter to Mr. Trump. "He's the biggest liar in the history of the presidency, which is a high bar to clear, but he's cleared it," Mr. Christie says. Whatever today's polls show, he's convinced Mr. Trump is a sure loser against President Biden. "Trump can't win," he says. "By the time we get to the debate stage in three weeks, he will probably be out on bail in four different jurisdictions."

#### He 'can't win,' the former governor says. 'He will probably be out on bail in four different jurisdictions.'

The trouble for Mr. Christie is that even if he's right about the general election, it might not matter until then. Mr. Trump is liked by Republicans, broadly speaking, and being indicted seems to have improved his standing. By the time independents and suburban moms get their say in November 2024, Mr. Christie might be watching from his couch with the rest of us. He has only months to convince the GOP that Mr. Trump can't win while jetting from campaign stops to courtrooms.

"I did this work for seven years," Mr. Christie says. "I know what he's up against." That's a reference to his old job as U.S. attorney for New Jersey, the top federal prosecutor for about nine million people. Having written his share of indictments, he doesn't hesitate before taking apart the first set of charges against Mr. Trump. Brought in April by Manhattan District Attorney Alvin Bragg, they accuse the former president of falsifying business records after paying Stormy Daniels in 2016 to keep quiet about their alleged affair.

"New York is a joke," Mr. Christie says. "They are stretching those statutes to their absolute limit, and I think beyond them," and while Mr. Bragg lets city life deteriorate, a conviction in a seven-year-old hush-money case "will not improve the quality of life in the island of Manhattan one scintilla."

The second indictment is different. Obtained in June by special

counsel Jack Smith, it accuses Mr. Trump of mishandling classified documents and covering it up. Mr. Christie calls it "a serious case, with serious evidence," and, if proven, "absolute violations of the law." As Mr. Christie tells it, invoking "The Godfather," shortly after Mr. Trump got a subpoena for Mar-a-Lago security footage, he sent "Fredo" down to delete the server: "That's classic obstruction of justice."

The feds "quietly, professionally, privately asked him for 18 months to return the documents," Mr. Christie continues. "He didn't, of course, because he was too busy." The sarcasm is deadpan. "I watched what he was doing for those 18 months. It seemed like mostly playing golf every day," he says. "I think he could have squeezed a couple of minutes in." Instead Mr. Trump "sends Fredo and the other guy running around moving the boxes, to keep them from his own lawyers, and then allows his lawyers to submit a certification saying they have reviewed everything."

Republicans have rallied to Mr. Trump in part because they see a double standard, which Mr. Christie grants. If Hillary Clinton had been charged for her basement email server, "we wouldn't be having this conversation," he says, and the Obama administration "absolutely played politics," by letting her go. Yet he doesn't think the answer is a "Get Out of Jail Free" card for the next GOP scofflaw. "We keep looking at the prosecutors as the problem," he says, "rather than Donald Trump. He did these things."

As for Hunter Biden, whose plea agreement on tax and gun crimes folded on contact with a federal judge, Mr. Christie says he'd have fired a prosecutor who brought him that "one-sided" deal. "It's evidence either of a double standard or complete incompetence, and with the Delaware U.S. Attorney's Office, I think there's at least a 30% chance it's complete incompetence," he says. "It is a rinky-dink office." He estimates it employs one-eighth as many prosecutors as he oversaw in New Jersey. Mr. Christie believes the matter deserves a special counsel, with jurisdiction to "also look at the allegations that are now being made about the president's involvement with his son's business."

That leaves the third indictment, charging Mr. Trump with conspiring to overturn the 2020 election. It was released hours after Mr. Christie left the building. Mr. Trump "violated his oath & brought shame to his presidency," he wrote on Twitter. A spokeswoman told us his schedule wouldn't permit him to elaborate. He turned out to be en route to Kyiv, Ukraine.

When he thinks the charges are meritorious, Mr. Christie's attitude is to ignore the political ramifications and let justice be done. "If it turns out that indicting Donald Trump re-elects him president,



while that would trouble me deeply, what would trouble me more is if we let him get away with significant crimes against the country," he says. "That's what he's counting on, and besides his massive ego, it's the only other reason he's running. Think he gives a crap about the country, and he's got all these great plans for the future of the country? Have you heard any of them?"

Apropos, does Mr. Christie have any great plans for the future of the country? "First is that we've got to go back to controlling government spending," he says, which he argues he did in New Jersey. "I inherited an \$11 billion deficit on a \$29 billion budget, and everybody said that I was going to have to raise taxes to balance it. I didn't. We didn't raise taxes for eight years, and that first year, we cut 836 individual programs out of the budget."

r. Christie wants universal vouchers for K-12 schools. "In the city of Newark, we spend \$36,000 per pupil. In Asbury Park, we spend \$40,000 per pupil, for really bad results," he says. "Why not take that money and give that money to each individual family, in a controlled account that they can spend on education, send their kid wherever they want?" Schooling is a state and local function, but Mr. Christie says a president can use the bully pulpit and put strings on federal funds.

"On crime, I am tired of seeing what's happening in New York, Chicago, Los Angeles, San Francisco and all of these places," he says. "I am going go to each one of these states and appoint United States attorneys, and their policy instruction from me is to go after violent crime in each one of these cities, to supersede the local authorities on it, to take these folks federal, and to put them in jail. And when the localities get tired of it, of us intervening, then they're going to go back to doing it themselves."

He calls himself "an unabashed supporter of Ukraine" and says he'd have sent its defenders the big guns long ago, before Vladimir Putin's invasion last year. "I think the Biden policy has failed, because they're giving them just enough to not win," he says. "Trump was not interested in deterring the war. He was interested in continuing to be friends with Putin. So he did just enough to do more than what Obama had done."

Mr. Christie also argues that a Republican governor from a blue state, used to haggling with a Democratic legislature, could change the dynamic in a polarized Washington that has forgotten how to get anything done. "It takes developing relationships with people in Congress—and that's going to really stink," he says. "I'm going to have more dinners and lunches and drinks and events with people that I can't stand." As governor, his phone sometimes rang at 11:30 p.m. "It was often, almost exclusively, the Senate president," he recalls. "I always took the call.'

Why isn't his case against Mr. Trump getting more traction? "I don't know," he says. "Eight weeks is how long I've been making this argument. But give me a little more time." Does he have the resources to stick with it until the voting? "Well, I certainly don't have them as we sit here today," he admits. "Look, if I perform on the debate stage, I'll raise more money, and if I don't, I won't." Even Mr. Christie seems to know he's taking a flier, though a recent New Hampshire poll has him at 11%, in third place behind Florida Gov. Ron DeSantis (13%).

One disadvantage is the 60-yearold Mr. Christie is no longer a fresh face. He has been out of office for half a decade, lobbying and filling TV airtime. He will never outrun the cries of "Bridgegate," despite insisting he didn't order, uh, some traffic problems in Fort Lee. After he lost the 2016 presidential primaries, he was the first big Republican to endorse Mr. Trump and was nearly named vice president. Then he didn't get attorney general. He turned down lesser cabinet posts, and fair enough: No child dreams of growing up to be labor secretary. Mr. Christie hopes this history

will lend his criticisms credibility, if Republicans care to recall that he was never a Never Trumper. "I'm actually coming from the perspective of, I tried to make this guy a better candidate," he says. "I tried to make him a better president." A lesson he took from the 2016 primary is that Mr. Trump's opponents can't wait around for gravity to pull him down.

This time, Mr. Christie's plan is to train his fire on Mr. Trump. Or, most of his fire, at least. A dilemma for 2024, not so unlike last time, is that if Republican pooh-bahs want to narrow the contest quickly to Mr. Trump and a single challenger, Mr. Christie and the rest know that they need to be the crab at the top of the barrel when it happens. For all his ire at Mr. Trump, he's also tough on Mr. DeSantis.

"If we were endorsing résumés, then the DeSantis campaign would be neck and neck with Trump, if not ahead. We don't," Mr. Christie says. "You actually have to go out and be a person—be a human being, and show that you can relate to other humans, whose votes you want to have." He gets some laughs. Two days earlier, as if to illustrate the point, Mr. DeSantis tells a barbecue in Rye, N.H., pop. 5,600: "All these deep-state people, you know, we're going to start slitting throats on day one."

Mr. Christie then gets on a roll about Mr. DeSantis. "The hill you want to die on is the curriculum on African-American studies in the K-12 school districts in Florida? OK. You want to send out homoerotic videos and then pretend they're not yours, but then get caught, that they are yours? I mean, this is like amateur hour. And people see that, and they go, oh, *maybe* he's not ready to be president."

eSantis supporters emphasize his record in Florida. Mr. Christie argues it's "a red state with a red legislature and no discernible critical media," suggesting that Jeb Bush was overrated for similar reasons in 2016. Give up on these Florida politicians, he says. "They have not had a fight. It is like Candy Land down there if you're a Republican. It just is—I mean, come on. I've never seen a more compliant legislature in my life."

If going after Mr. DeSantis with a Louisville Slugger seems like a strange tactic for a candidate who promises to focus on Mr. Trump, it could be the political incentives. Or maybe Mr. Christie the entertainer simply can't resist good material. The same might prove true at the Aug. 23 debate, "I do not intend to get on the stage with a shotgun and start spraying, you know, buckshot all over the place," he says. "Now, if someone says something monumentally stupid, and I see it as the moment to say, 'That's really stupid,' I'm going to do it."

Mr. Peterson is a member of the Journal's editorial board.

### H-2A Guest Workers Can Pick Florida's Crops



CROSS COUNTRY By Dave Seminara St. Petersburg, Fla. Who will harvest the crops? This powerful refrain comes up anytime conservatives propose or enact tough measures to combat illegal immigration. Florida's new law, SB 1718, which went into effect July 1, is a case

in point. The law invalidates out-ofstate driver's licenses given to illegal immigrants, requires hospitals to quantify uncompensated care given to them, and compels employers with at least 25 employees to use E-Verify

#### Farmers complain about the state's crackdown on illegal immigration, but there is an alternative.

to check the legal status of new hires, among other measures. A previous bill mandating the use of E-Verify, SB 664, exempted agriculture employers. But this one doesn't, and some Florida farmers are furious.

A grower in Homestead, near Miami, complained to a Telemundo reporter, "Who's going to harvest?" The owner of a produce-packaging facility in South Florida kvetched to a Journal reporter, "How are we going to run the farms?" Even Republican state Rep. Rick Roth, who voted for the bill, said he's upset that fearful farmworkers without legal status are leaving the state because of the bill.

"I'm a farmer, and the farmers are mad as hell," Mr. Roth said. "We are losing employees. They're already starting to move to Georgia and other states."

Employers in other sectors are also unhappy with the new law. But Democrats, and some Republicans, have long used farmers' staffing needs to argue against E-Verify and other tools to combat unlawful migration. Even George W. Bush invoked the plight of farmers to make this point in 2018. "Americans don't want to pick cotton at 105 degrees, but there are people who want to put food on their family's tables and are willing to do that," he said at a 2018 summit in Abu Dhabi.

Thanks to inflation and soaring grocery bills, the prospect of food shortages and price increases is real. But farmers and their allies in the media seldom acknowledge that they have a powerful employment tool in the H-2A visa to import guest workers. Unlike the H-1B visa for skilled labor and the H-2B for unskilled labor, the H-2A is uncapped. Farmers can theoretically bring in all the labor they need, as long as they can prove they can't find local workers.

The media largely ignores the H-2A visa because it contradicts the preferred narrative about unlawful immigration. The same is true of the TN visa, another fast-growing, numerically unlimited guest-worker program for Mexican and Canadians in dozens of skilled professions. But more employers are discovering these programs. A decade ago, the State Department approved 77,010 H-2A visas. In fiscal 2022, the figure climbed to 298,000. This year, employers are on pace to shatter that record. In the first five months of the year, the State Department approved 163,792 H-2A

farmworkers from Mexico alone.

The program figures to grow in popularity as more red states crack

down on illegal immigration. H-2A workers are less likely to quit than illegal immigrants or local hires because their legal status is tied to their employment, and they are authorized to work only for the petitioning employer for up to three years at a time.

Farmers like that.

What they don't like is the program's complexity. The requirements are bewildering for most farmers, who typically hire immigration attorneys to navigate the red tape. Farmers must demonstrate that they tried to recruit workers locally—though unappealing, pro forma job ads usually work. They also must not have laid off American workers within 60 days before petitioning. The Labor Department requires farmers to meet prevailing-wage requirements and provide free housing

and meals or cooking facilities to H-2A recipients. Employers also must submit to annual preoccupancy inspections of worker housing to get the labor certification they need to

secure guest workers. Some farmers would rather pay illegal workers in cash and risk an Immigration and Customs Enforcement raid than invite government scrutiny of their operations. The threat of ICE raids has receded significantly under the Biden administration, so it's easy to see why SB 1718 is unpopular with Florida growers. Still, their complaints seem overblown. The law applies only to new hires and not existing employees-a fact that most media outlets haven't made clear. causing unnecessary panic among migrant farmworkers.

Florida's new law doesn't apply to

employers with fewer than 25 employees. Last year the Labor Department changed H-2A rules allowing groups of small farmers to file a single petition and share the costs of

importing guest workers.

Those outraged by Florida's new law should instead champion programs like the H-2A visa. Legal workers in a program with plenty of labor-protection standards are far less likely to be exploited than workers with no legal status. It remains to be seen how the law will affect Florida farmers, but many who've become addicted to illegal labor could soon start hiring legally. That would be a nice change.

Mr. Seminara is a former diplomat and host of the "DeSantisland" podcast.

### Curtains for Hollywood, Pages for Me

By Danny Heitman

I ollywood writers and actors are on strike, and I have a contingency plan a few inches above the family television. On a long shelf slightly higher than the console are two dozen classics I've never gotten around to reading. Without new TV shows and movies, I'll have plenty of time to catch up.

The thought comes to mind as we enter the homestretch of summer, a season marked by long afternoons in swaying hammocks, with thick books anchoring us in place as we rock through gentle waves of prose. It's a lovely ideal, though one I've often found elusive, as I've been reminded this month while toting around my vintage copy of Beryl Markham's

"West with the Night." I bought a paperback of Markham's celebrated 1942 memoir of her years as a pilot in Africa when a new edition debuted in 1983. Forty years later, I finally cracked the cover, tackling about a chapter per week. At this rate I squeeze in a page or two daily amid garden chores and summer house guests. I just might finish as autumn's leaves begin to turn. Meanwhile, my reading backlog grows.

I never read in summer, or any other season, as much as I think I will. I suspect I'm not alone. Even during the Covid-19 lockdowns, which brought reports of isolated Americans eagerly burrowing through volumes of Proust and Tolstoy, I didn't achieve the reading bonanza I had hoped for. I'd just

started a new job, which took my mental energies elsewhere. My copy of "War and Peace" remains unblemished by wear.

Even so, a reader lives in hope. Maybe the lack of Hollywood fare will give me the nudge I need to cross "Scoop," Evelyn Waugh's 1938 comic novel, off my bucket list. With any luck, that hefty collection of William Maxwell's short stories and Dostoevsky's "Crime and Punishment" can migrate from my to-be-read shelf, too

It could be, as a TV viewer, that I'm headed for a little strike of my

Mr. Heitman, a columnist for the Baton Rouge Advocate, is editor of Phi Kappa Phi's Forum magazine.

#### REVIEW & OUTLOOK

### The Wrong Way to Punish the FBI

Killing Section 702

wiretaps would remove

a vital antiterror tool.

epublicans—and all Americans—have good reason to be angry about the Fed-

abuses of power. But as they look for how to sanction the bureau, one way not to do it is to kill a valuable intelligence authority for surveilling terrorists.

That mistake was on the

agenda at a House Judiciary Committee hearing in July when FBI Director Christopher Wray was questioned about a part of the Foreign Intelligence Surveillance Act (FISA) known as Section 702.

Virginia Republican Ben Cline said the program "looks like a framework that enables the FBI to spy on countless Americans." Judiciary Chairman Jim Jordan said the FBI's 204,000 searches for American names within the foreign surveillance data collected by the FBI is "204,000 reasons why Republicans will oppose FISA reauthorization in its current form."

There are better reasons to keep it. Congress created Section 702 after 9/11 to address intelligence-gathering gaps. It lets the government collect information without a warrant on non-U.S. citizens living abroad. That's important in places like Yemen and Pakistan, and increasingly Afghanistan, where al Qaeda and Islamic State operate but where we no longer have troops on the ground.

Critics say the program has targeted Americans, but 702 is aimed at gathering communications involving foreign sources. Only when Americans are linked to foreign intelligence targets can the domestic sources be tracked and the FBI explore suspicious communications. This can be crucial in identifying jihadists in the U.S. who may be getting instructions from

Republicans and civil libertarians point to cases when law enforcement has trawled the data for domestic keywords, including Black Lives Matter protesters, Jan. 6 protesters and donors to a Republican Congressional campaign. Those are serious abuses, and the FBI has taken steps to address them.

Mr. Wray told the Judiciary Committee that the agency has "clearly had failures in the past" but that reforms have already done much to address them. Mr. Wray has earned skepticism with his refusal to answer candidly about some of those abuses.

But on 702, he is backed up by an internal FISA audit in May showing that improper use Ueral Bureau of Investigation's many of the database has been reduced substantially,

giving the agency a 96% compliance rate for queries, a 14% improvement since before the reforms.

Any surveillance power carries risk of abuse. That's true even of wiretaps that re-

quire a court warrant, as we learned from the lies the FBI told the FISA court in the Russian collusion fiasco when James Comey ran the

The question is whether the risks of abuse are worth the benefit of preventing terrorist attacks. The U.S. homeland hasn't endured an attack in some time, but that doesn't mean jihadists and others wouldn't do it if they could. Requiring the FBI to get individual warrants for overseas wiretaps would cause delays and prevent some searches for lack of probable cause. Removing the search authority from the FBI and forcing it to rely on referrals from other agencies would slow the bureau's ability to respond in real time.

Another dubious idea would inject an outsider monitor into the 702 process to play devil's advocate. But that's a recipe for diluting accountability if there are abusive searches. National security is the responsibility of the executive branch, and its officials should be rung up for abuses. The problem with the Comey FBI is that Democrats at Justice and the White House refused to hold him accountable.

A better idea is to expand the penalties for agents who abuse 702 authority, including criminal penalties. Lying to the FISA court and targeting U.S. citizens for political reasons are

Republicans want to send the FBI a message, and they are right to keep digging into bureau failures and deception. Mr. Wray has been a great disappointment. But Republicans might think twice about the political consequences if they refuse to reauthorize Section 702 and there's a terror attack. Guess who the White House and media will blame, fairly or not?

Intelligence gathering is one of the only asymmetric advantages that a democracy has over terrorists who operate in the shadows. The killers need to avoid detection only once to murder innocents. Killing Section 702 risks punishing Americans more than it does the FBI.

### Democrats Want a Trump O.J. Trial

e've been telling you that Democrats want Donald Trump's trials to dominate media attention through the November 2024 election, but don't take our word for it. Take Adam Schiff's.

On Thursday the California Congressman and leading Trump antagonist, who is running for Senate in 2024, led some three-dozen Democrats in lobbying the Judicial Conference to open the federal trials of Mr. Trump to televi-

"Given the historic nature of the charges brought forth in these cases, it is hard to imagine a more powerful circumstance for televised proceedings," the Members wrote to Judge Roslynn Mauskopf, the Judicial Conference Secretary for the administrative office of federal courts. "If the public is to fully accept the outcome, it will be vitally important for it to witness, as directly as possible, how the trials are conducted, the strength of the evidence adduced and the credibility of witnesses."

The federal district court where Mr. Trump is likely to be tried on the latest charges doesn't allow cameras. The sensible reason is that cameras can be a distraction from the process of seeking fair justice. That is a particular risk in a Trump trial that will be a global media circus in any case.

But that is precisely what Democrats want: a long-running O.J. Simpson-style trial that consumes public and political attention, especially if it takes place before Election Day in 2024.

The Democratic claim that TV cameras would make the public more likely to accept a verdict is highly unlikely given America's political polarization and the nature of this prosecution. The Justice Department of the sitting President is prosecuting his potential opponent. That is inherently combustible.

The trials of Donald Trump are going to be traumatic enough without their various participants playing to the cameras and watching their reviews on nightly cable news.

### A Rare Justice Department Mea Culpa

Prosecutors admit they

were wrong to prosecute

a KPMG fraud case.

was near miraculous this week when the U.S. Attorney's office for the Southern the federal fraud statutes at issue do not crimi-District of New York conceded

it had wrongly prosecuted a former KPMG auditor and accounting regulator.

The prosecutions were part of a high-profile "steal the exam" scandal last decade in-

volving KPMG auditors and their overseers at the Public Company Accounting Oversight Board (PCAOB). After receiving low scores on inspections, KPMG auditors sought to obtain advance information from PCAOB employees on which audits would be inspected.

A PCAOB inspection leader and former agency employee who later left to work for KPMG slipped auditors information on inspection selections. KPMG auditors used these tips to improve their audits. In short, auditors abetted by regulators cheated on inspection exams. This is dishonest, but is it a crime?

The Justice Department said it was, and in 2018 charged former KPMG partner David Middendorf and former PCAOB employee Jeffrey Wada with conspiracy to commit wire fraud and defraud the U.S. Four others pleaded guilty. In 2019 Messrs. Middendorf and Wada were convicted on the wire fraud charges.

The federal courts have since rejected the broad fraud theories the government used to prosecute the two men. In 2020 the Supreme Court unanimously overturned the fraud convictions of former New Jersey Gov. Chris Christie's aides (Kelly v. U.S.) who allegedly conspired to cause a traffic jam on the George Washington Bridge as political retribution.

The Justices held that a conspiracy to commit wire fraud had to involve a scheme to deprive someone of money or actual property. "The evi-

dence the jury heard no doubt shows wrongdo-

rosecutors rarely admit mistakes. So it ing-deception, corruption, abuse of power," Justice Elena Kagan wrote for the Court. "But

nalize all such conduct."

The Second Circuit Court of Appeals in December dismissed the fraud convictions of traders and a consultant who obtained confidential Medicare reimbursement information. In May

the First Circuit tossed fraud convictions of wealthy parents charged in the Varsity Blues college admissions scandal because admissions slots aren't "property."

Neither are PCAOB inspection lists, as the Manhattan U.S. Attorney's Office acknowledged this week in asking the Second Circuit to erase the convictions of Messrs. Middendorf and Wada. The charges should never have been brought, but prosecutors often can't resist the temptation to stretch criminal laws to jail people they find objectionable.

Not every dishonest act is a federal crime, as the High Court keeps stressing. In May the Justices unanimously rejected two overly broad theories of fraud in overturning the convictions of former Gov. Andrew Cuomo's cronies. Justice Clarence Thomas noted in one opinion that the government's theory "vastly expands federal jurisdiction to an almost limitless variety of deceptive actions."

This is one problem with Jack Smith's latest charge against Donald Trump for conspiracy to defraud the U.S. The Court's landmark Skilling (2010) decision significantly limited prosecutions under the vague honest-services fraud statute. But prosecutors keep inventing new theories to criminalize dishonest acts and keep los-

ing cases on appeal. The U.S. Attorney's mea culpa in the KPMG case is welcome, but it would be better if prosecutors had not waited years to fess up.

#### LETTERS TO THE EDITOR

#### Oppenheimer's Moral Dilemma—and Ours

In "What I Wish 'Oppenheimer' Had Said" (Declarations, July 29), Peggy Noonan calls the A-bomb a "moral horror" and states that "to achieve his destiny, [Robert Oppenheimer] had to do something terrible." On the contrary, the tremendous power of atomic fission was already known when World War II began. The question at that point wasn't "should we?" but "who will get there first?"

The "moral horror" is more rightly placed at the feet of the Axis powers. Their savage reigns of terror on two continents made the development of atomic weapons inevitable.

We aren't without a dog in this fight. John's father was an ensign in the U.S. Navy in 1945. Judie's father served on a U.S. minesweeper in the Pacific that same year. Ms. Noonan admits that the Japanese "would only surrender if Emperor Hirohito told them to do so." Both our fathers would likely have been involved in a land invasion of Japan had not the nuclear bombings of Hiroshima and Nagasaki made the emperor "think the unthinkable," as he put it.

JOHN AND JUDIE KNOERLE Shorewood, Wis.

If Ms. Noonan would watch the rallies of her greatest foil—Donald J. Trump—she would see the former president speak regularly about the dangers and horrors of nuclear weapons. Though she may not want to admit it, he may be the only candidate out there discussing this very important subject.

GERALD JUDE Pacific Palisades, Calif.

No good will be accomplished by making Americans more afraid of nuclear weapons than they already are. Not the U.S., but Russia, China, North Korea and Iran are potential nuclear aggressors, and have threatened to use nukes to advance their foreignpolicy goals. Fears that Vladimir Putin will be provoked to employ "tactical" nukes has even helped deter President Biden from sending adequate aid to Ukraine.

The answer isn't to heighten our fear of nuclear attacks but to render the use of such terrible weapons ineffectual via a system of missile defense.

Em. Prof. David Lewis Schaefer College of the Holy Cross Worcester, Mass.

#### Alito on Free Exercise and Judicial Ethics

The well-deserved tribute to Justice Samuel Alito (Weekend Interview by David Rivkin Jr. and James Taranto, July 29) regrettably omits his vigorous defense of the free exercise of religion. The most compellingly persuasive recent Supreme Court church-state opinion was Justice Alito's in Fulton v. City of Philadelphia (2021). It is an extensively documented demolition of Justice Antonin Scalia's surprising 1990 nullification of the First Amendment guarantee. Employment Division v. Smith.

Justices Amy Coney Barrett and Brett Kavanaugh said in Fulton that they agreed with Justice Alito's "textual and structural arguments against Smith." They would have flatly overruled Scalia's precipitous reversal of Supreme Court precedent (which has harmed a multitude of religious observers), they said, if they had been comfortable with an alternative.

Justice Alito's unanimous opinion in Groff v. DeJoy this year, supporting religious accommodation for employees, was disappointingly timid. But the lure of exhibiting unity on a

court criticized for frequent division may have been too great to authoritatively overrule what the full court recognized to be a "mistake" made almost half a century ago.

NATHAN LEWIN Potomac, Md. Mr. Lewin has argued 28 cases before the Supreme Court.

The real problem isn't the failure, as Justice Alito puts it, of the organized bar to defend him and certain colleagues from criticism. It is the unwillingness of those justices to recognize how far from common-sense ethical norms their behavior has strayed.

If the justices won't adopt a comprehensive code of ethics similar to the one imposed on every other federal court in the land, Congress should do it for them. For more than 200 years, Congress has regulated the court's size, jurisdiction and rules. A mandatory code of ethics fits well within these congressional powers.

RONALD C. MINKOFF New York County Lawyers' Association

#### What Is Missing From the Discussion of Sex

None of the essays in "Have We Ruined Sex?" (Review, July 29) offer a spiritual perspective. In many Judeo-Christian traditions, sexual relations are understood to be the expression of the unitive and procreative meaning of marriage. Sexual relations within a marriage are seen as a gift between spouses, part of which is an openness to bring new life into the world, to share with God in creation itself.

St. John Paul II's "Theology of the Body" defines love and the sexual union between a man and woman, joined in marriage, as a gift of self for the sake of the other, in contrast to the self-absorbed pleasure-seeking hookup culture that sexual relations have been reduced to. This understanding of sexuality and marriage deserves equal time.

DEACON STEVEN DOVE Port St. Lucie, Fla.

Love is about giving; sex is about getting. Love is about you; sex is about me. The purpose of a man and a woman falling in love with each other is about having children, rearing them, loving them and encouraging them to do the same. The pleasure of sex is an incentive to do this, not its purpose. The satisfaction we receive when we fulfill our primary purpose, to live and to love, to raise the next generation, is the real joy and satisfaction, not the momentary pleasure of a random hookup. We seem to have forgotten this.

CRISTINE F. GOODMAN Los Altos Hills, Calif.

Coleman Hughes writes, "The real issue was a culture that not only sanctioned but encouraged young people to have sex without any expec-

#### Keep Blowing the Whistle

Whistleblower Joseph Ziegler's "A Special Counsel for Hunter Biden" (op-ed, July 28) is an articulate example of courage under fire. But for his character and adherence to principle, and that of others who come forward, we citizens would remain ignorant of information critical to making fair and impartial judgment. May others be inspired by his example. DAVID HUGHES

be acknowledged.

Short Hills, N.J.

Letters intended for publication should be emailed to wsj.ltrs@wsj.com. Please include your city, state and telephone number. All letters are subject to editing, and unpublished letters cannot

tation of courtesy, follow-through or commitment." Rather, the bedrock issue is a culture that puts personal freedom and self-affirmation in the highest place, which inevitably leads to conditional, even transactional, relationships. Counterintuitively, a culture that encourages responsible constraints on personal freedom can liberate people to experience relationships that are life-giving rather than

superficial or predatory. THOMAS M. DORAN Plymouth, Mich.

#### You Lose the Argument the Second You Say 'Asylum'

A letter (July 29) responding to "It's Time to Bring Back Asylums" (Review, July 22) equates "asylums" to "horrible places. . ., the locus for unspeakable abuse and neglect." So long as we refer to inpatient psychiatrictreatment facilities as asylums, that is the "One Flew Over the Cuckoo's Nest" image most people will see. In reality, psychiatric hospitals and facilities, where I worked as a nurse in the 1960s and 1970s, were respectful of patients' needs and effective in getting them able to live in the community.

It often took close to a month for medications to resolve the worst psychoses, so that treatment could begin and patients could, usually after another month, return to a functional state that allowed them to return home. We need to be realistic about the time it takes and the space needed for treatment. Bring back psychiatric hospitals, but don't call them asylums. ROSEMARY CARMODY

Tucson, Ariz.

#### Pepper ... And Salt

THE WALL STREET JOURNAL



"After the merger, your counterparts will eliminate any redundancies."

### Trump's Jan. 6 Trial: We Owe It to History



**DECLARATIONS** By Peggy Noonan

onald Trump is now criminally charged for actions taken before and after Jan. 6, 2021. He is accused of directing a conspiracy to subvert the Constitution with an intent to retain power after losing the 2020 presidential election.

However the politics of the indictment play out, it is right and proper that the case go to a courtroom and a jury in Washington, the scene of the alleged crimes. This both reasserts the primacy of the rule of law and reminds us how a constitutional republic works: Should the executive branch abuse its power, the judiciary will adjudicate.

We owe this to history. Get to the end of the story, formally and finally. It is argued that the indictment uncomfortably,

Meanwhile, Hunter Biden's legal problems become newly substantial to voters in the American middle.

Trump's thinking: Did he believe what he said about the stolen election, or was he lying? This speaks to intent. His defenders argue that he believed it, and that even if he didn't, he'd still be operating under First Amendment protections. His estranged attorney general, William Barr, disagreed, telling CNN: "He can say whatever he wants, he can even lie. . . . But that does not protect you from entering into a conspiracy.

The question of what Mr. Trump believed strikes me as beside the point. Based on long observation, he doesn't "believe"; he's not by nature a believer. His longtime method of operation is to deploy concepts and approaches strategically to see what works. Put another way, he makes something up, sticks with it if it flies, drops it if it doesn't, and goes on to "believe" something else.

But to sum up, the gravity of this story means the criminal charges had to be brought, with all that will follow—the arraignment, the pretrial motions, the trial, the presentation of evidence, the summations, the verdict, the sentencing if he is convicted. Other considerations, and they are real, are

Is the indictment poorly timed? Yes, in a presidential cycle, while the Hunter Biden story reaches a new level, and after a lot of time has passed. The indictment, when it was announced, wasn't as electrifying for normal people as the media thought it would be. It felt like something that had already happened. We have been through last year's Jan. 6 Select Committee hearings, saw all the dramatic testimony from those around the president. We've read the books, seen the documentaries. Didn't this thing already go to

And there will be no clarifying sense at this point of, "At least now we'll all figure out where we stand." We all know where we stand. To supporters of the former president it will look like political overkill from the corrupt. Democrat-owned Justice Department, which will never stop going after Mr. Trump. If he dropped dead they'd go after him for dying the wrong way.

And yet: All this may be taking place late, but it must take place.

I mentioned Hunter Biden, whose case, until the indictment, was to be the subject of this column. Something is happening in that story, some big shift is occurring. In the past month or so it has broken through in a new way.

The story is becoming more real,



Donald Trump at Reagan Airport before his Thursday arraignment.

more substantial, especially I suspect to people in the middle. In the old understanding of the Hunter story, a druggy sex addict recorded his adventures on a mislaid laptop. An embarrassment, but every family has one. The emerging Hunter story is different in nature. It is: This guy was actually good at something, being a serious influence peddler and wiring things so he never got

Some on the right have always thought this. I think it's being picked up and watched now by less politically aligned and engaged people. The story has taken on a different level of sleaze. It's starting to look not like family loyalty but enabling, and not only enabling but doing so in search of profit.

In May and late July two Internal Revenue Service whistleblowers, Supervisory Special Agent Gary Shapley and Special Agent Joseph Ziegler, put their careers on the line in congressional testimony. It was credible; they were impressive. They said the IRS had impeded its own investigation of Hunter Biden's income and its sources, including from overseas business dealings. Mr. Ziegler said the investigation was "limited and marginalized" by Justice Department officials. Mr. Shapley told CBS News that his efforts to follow money trails that involved "dad" or "the big guy," Hunter's euphemisms for his father, were blocked by the Justice Department.

Also in late July, in federal court in Wilmington, Del., the plea bargain deal blew up. It dealt with tax and gun-possession charges Hunter. Judge Maryellen Noreika told federal prosecutors and defense attorneys to go back and try again. the deal didn't look normal and she wasn't there to "rubber-stamp" it.

That was followed by the congressional testimony of Devon Archer, who was Hunter's business partner and said to be his best friend. In closed-door testimony to the House Oversight Committee, Archer said that as vice president, Joe Biden took part in phone conversations with representatives of Burisma, the Ukrainian energy company on whose board Mr. Archer and Hunter Biden sat. Mr. Archer's full testimony was released Thursday. He confirmed that the vice president attended a dinner with Hunter's foreign business associates, and soon after \$3.5 million was

wired into one of Hunter's business entities.

It is unseemly, to say the least.

Another thing breaking through: when speaking of Hunter Biden, people use language like "the president's troubled son." There's always the sense he's a kid, that he tragically lost his mother as a child, had a troubled adolescence as the younger, less impressive son.

Hunter Biden is 53. At that age some men are grandfathers. He was doing business with Ukrainian and Chinese companies not as a wayward 25-year-old but as a middleaged man. An age when adults are fully responsible for their actions. Here is the unexpected political

turn in the story. The president's calling card to middle America has always been "middle class Joe," the family man from Scranton, a normal guy of a certain assumed dignity who lived, as he said, on his salary, and who had known personal tragedy. Fully true or not, that was his political positioning, and it served him well. But the Hunter story is threatening to shift his father's public reputation into Clinton territory—the sense that things are sketchily self-seeking, too interested in money. Hillary Clinton lost in 2016 because of that aspect of her political reputation.

I suspect the Hunter question is going to linger and grow through the election. It's a story people can understand—ne'er-do-well scrounges for money through influence-peddling, name-peddling, accesspeddling, whatever. How much money was involved? Where did it go?

This isn't whataboutism. These are legitimate questions.

For seven years Democrats have scored Republican officeholders for not wanting to talk about Donald Trump. Why do they concede nothing about Hunter, not even admitting the perceptions are bad? Why aren't they honestly troubled?

Mainstream media has work to do. This is a story. Let the chips fall

### Warren and Graham Emulate History's Failed Regulators

By Richard N. Langlois

 $\P$  o the envy of the world, American companies dominate technology, especially the Big Five: Alphabet, Amazon, Apple, Meta and Microsoft. Since the federal government played some role in the development of the underlying technologies—semiconductors. puters, software and the internet these world-beating high-tech firms might be counted as a success of U.S. "industrial policy."

#### The ICC and FCC stifled innovation in railroads and radio, respectively. Why do the same to Big Tech now?

So why has a bipartisan movement risen to hobble the American national champions? Senators Lindsey Graham (R., S.C.) and Elizabeth Warren (D., Mass.) have proposed a Digital Consumer Protection Commission to license and regulate high-tech firms. Their model is such independent bodies as the Interstate Commerce Commission and the Federal Communications Commission.

Mr. Graham and Ms. Warren assure us that their new commission would "preserve innovation while minimizing harm presented by emerging industries," but a careful look at history suggests otherwise. The ICC, the FCC and other agencies frequently hindered innovation, sometimes drastically. They were generally politicized and opaque. And they often worked against the longterm interests of consumers.

Railroads were the first great irruption of American industrial policy, as (usually corrupt) land grants and subsidies fueled overbuilding and the misallocation of resources. By the late 19th century, the railroads had come to play a role like the one hightech companies play today: They lowered transportation and transaction costs, dramatically altering the country's economic geography and

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opening up a vast array of economic possibilities.

The railroads harmed small merchants who were tied to the older system of roads and canals. But even those who benefited from railroads-notably farmers and producers of raw materials-feared the power of the enterprises that provided them with large new markets. The anxieties of innumerable small players generated powerful political energy, culminating in the Interstate Commerce Act of 1887, which created the ICC-and with it the template of the independent regulatory commission.

The historian Gabriel Kolko famously argued that the ICC was created by and for the railroads themselves, as a solution to a problem of intense competition. But more-recent research has shown that the interests of shippers were also at play, and by the early 20th century the ICC had essentially been captured by the shippers. The result for the railroads was absurdly low rates of return and an inability to raise capital. The ICC also became a bottleneck through which virtually all railroad business decisions had to pass.

Thus began the long and steady decline of the American railroad industry, which wasn't arrested until surface freight was deregulated (and the ICC ultimately abolished) in the 1970s. Throughout its life, the ICC repeatedly stood in the way of innovation, including containerized shipping.

Radio, the high-tech industry of the 1920s, offers similar lessons. Broadcasting calls for regulation, since stations can interfere with one another if they transmit on nearby frequencies at the same time and place. But this can be dealt with by creating property rights in electromagnetic spectrum, something toward which the common law was already groping. (Such a system would eventually be put in place during the Clinton administration.) Instead, Congress created the Federal Radio Commission, which became the FCC when television arrived.

Spectrum allocation immediately

became intensely politicized. The fastest route to a station license required a detour through Capitol Hill. Like the ICC, the FCC became an information bottleneck, and this favored the well-capitalized major networks. The FCC also held back innovation, including famously delaying the advent of cellular telephony for decades by refusing to grant it spectrum.

Even for radio, where spectrum was abundant, the FCC made content a central criterion for receiving a license. This meant wholesome, mainstream, nondissident fare. The commission demanded that all stations give equal time to alternative viewpoints, effectively a tax on speech. Many on both sides of the political spectrum today look back with nostalgia on the days when everyone heard exactly the same news in the comforting voice of Walter Cronkite. But they forget the severe limitations that heavyhanded commission regulation placed on the volume of content and the way it silenced dissenting voices of all kinds. The problems of regulation

weren't limited to the ICC and the FCC. They were structural problems of independent commissions. Mr. Graham and Ms. Warren complain that the leaders of the big-tech firms weren't elected by voters. But they were elected by millions of consumers and shareholders voting with their dollars. Regulatory commissions are elected neither by voters nor by consumers, and they have shown themselves opaque even to Congress, whose oversight committees inevitably came to share the views and values of the regulated industries.

It is fashionable nowadays to dismiss the Great Deregulation of the late 20th century as an unfortunate if fleeting episode of "neoliberalism." In fact, dismantling some of America's rigid and retrogressive regulatory institutions unleashed powerful forces of innovation and consumer benefit. Before we attempt to rebuild those structures, we need to examine the lessons of

Mr. Langlois is an economics professor at the University of Connecticut and author of "The Corporation and the Twentieth Century. The History of American Business

#### It's DOJ vs. DOJ in the 2024 Election



BUSINESS WORLD By Holman W. Jenkins, Jr.

The odds are not small that Donald Trump could be the next president of the United States. Joe Biden has made it clear to all concerned he wants Mr. Trump to be his GOP opponent. So far, the indictments have only strength-

ened Mr. Trump. They make it hard, apparently, for any GOPer effectively to challenge him.

You're a career employee in Joe Biden's Justice Department, serving as U.S. attorney for his home state, a job you wouldn't have if not sponsored by the state's two Democratic senators, both lifelong Joe allies. Are you going to throw the book at his son Hunter? Of course not. The answer could not be otherwise. More worrisome to the public even than evidence of favoritism would be an inkling that Mr. Biden's DOJ was going out of its way to undermine its own president.

You're in the unique position of a Justice Department special counsel, given unlimited resources to investigate a single person, the president's political enemy, Donald Trump. Do you play it conservatively despite knowing that an indictment today would be more politically useful to your president than a conviction after the election?

The unsolvability paradox is redolent in the department's own policy of not taking investigative acts before an election. Of course, not taking acts it would normally take is also a way of influencing an election.

It's an impossible situation. The only hope would be an attorney general of such soaring, Lincolnesque stature that his conflicted, inevitably politicized decisions compel unques-

ioning buy-in This does not describe Merrick

Garland, estimable though he may be. Thus today's truly terrible pass. The 2024 election will be arbitrated by a debate about how corrupt the Justice Department is or isn't.

Two antecedents strike me as important. Clearer than ever, the Obama administration should have, on the spot, fired FBI chief James Comey for his improper, protocolbusting acts in the Hillary Clinton email case. His acts made a mockery of the political accountability Mr. Obama's department should rightly have shouldered for the vexed decision whether to prosecute Mrs. Clinton. Allowed to carry on, Mr. Comey committed the further improper acts that put Mr. Trump in the White House and fanned the collusion

#### What will voters take to the polls? The collusion-hoax findings, or the accusations against Trump?

The worst institutional failure, though, is the press's handling of the collusion hoax-a failure of intelligence, judgment and character by many reporters and editors. The failure has continued in matters related to Hunter's laptop and Biden family influence-peddling. How different would our world be

if the American people had been able to rely on their national press for dispassionate, skeptical and honest reporting and analysis of both Mr. Trump and his enemies?

If, in holding Mr. Trump accountable for his election lies, it had also been seen holding his enemies ac-

countable for their lies? Every incentive at every point would have been different, for the FBI, for Adam Schiff, for Mr. Trump himself, for voters. Would Messrs. Trump and Biden be candidates today? Think it through and the answer is probably not.

A properly functioning press facilitates accountability through politics and shared truths. It alleviates the demand for accountability through prosecution. Now the inherently suspect Trump and Hunter Biden prosecutions will be central in 2024. The inherently suspect Mueller investigation will be recalled mainly for having concealed, for two years, the fact that the U.S. government never possessed evidence of collusion. For systematic if bureaucratic truth telling, we had to rely on Inspector General Michael Horowitz and special counsel John Durham because, let's face it, the press preferred a coverup. It still does. Mr. Trump writes in Newsweek

linking his current prosecution to the collusion farrago and Mr. Durham's findings. The 2024 election might as well be billed DOJ vs. DOJ.

The latest indictment strikes me as more of the same and disappointingly weak. Mr. Trump's lying about the 2020 election, it concedes, is protected speech. The crime emphasized over and over is "conspiracy," but conspiracy is the crime of agreeing and planning with another to commit some other crime. That crime, which special counsel Jack Smith calls fraud, consists of Mr. Trump appealing to public officials and the courts to act on his false claims, which, in the absence of evidence, none did. The process worked. All our processes assume some claims are false and even will be made in bad faith. A scintilla of evidence that Mr. Trump intended or planned the Jan. 6 riot would have been the case to bring, but Mr. Smith apparently found none.

Mr. Smith's indictment does deliver Mr. Biden a Jan. 6 talking point but no indictment was needed for

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**SPORTS** 

### Pac-12 Melts Down as Five Schools Leave

After Oregon and Washington joined the Big Ten, Arizona, Arizona State and Utah left for the Big 12. The defections mark a major—and possibly final—blow to the Pac-12 Conference.

By Laine Higgins

The rapid consolidation of college sports accelerated into a frenzy on Friday as five more Pac-12 schools switched conferences, moves that instantly melted down a century-old institution as schools raced to align themselves with the richest conferences.

Oregon and Washington said they would jump to the Big Ten. Later Arizona, Arizona State and Utah later announced they would leave for the Big 12. The moves left the Pac-12 with just four remaining members committed beyond 2024.

the move The Big Ten council of presidents and chancellors voted to approve Oregon and Washington as new members on Friday evening, expanding the conference to 18 teams a little more than a year after the league grabbed two other Pac-12 members, UCLA and Southern California. In 2024, the conference will swell to an unprecedented size, two schools larger than the soon-to-be 16-team Southeastern

Conference. Hours later, the Big 12 officially added Arizona, Arizona State and Utah about a week after another Pac-12 member, Colorado, said it would leave for the Big 12.

The moves came after a chaotic week in which the Pac-12 tried and failed to save itself. Commissioner George Kliavkoff was unable to nail down a new television deal for the league despite more than a year of negotiations with several cable and streaming partners.

The defections mark what may be a final blow to the Pac-12, the self-described "Conference of Champions" which now faces

> an uncertain future with Cal, Oregon State, Stan-

ford and Washington State. "Today's news is

Starting in 2024, the incredibly disapnumber of teams in the pointing," the Pac-12 Big Ten after Oregon and said in a statement Washington complete late Friday night. "We remain focused on securing the best possible future for each of our member universities.'

The moves are part of a dramatic realignment of the college-sports landscape that finds the biggest names gravitating toward two powerful conferences that are flush with giant broadcast deals: the Big Ten and the SEC. The consolidation began in earnest two summers ago when Oklahoma and Texas said they would leave the Big 12 for the SEC.

Previous defections have emerged as shocking done-deals, but the more recent moves have played like a semipublic panic, as schools that weren't yet aligned



with the big conferences scrambled to secure a better future. The last few days have seen hastily called leadership meetings in the Pac-12, Big 12 and Big Ten, in addition to governance board meetings at the various schools involved.

"We have tremendous respect and gratitude for the Pac-12, its treasured history and traditions. At the same time, the college athletics landscape has changed dramatically in recent years," Washington athletic director Jennifer Cohen said in a statement. "The Big Ten's history of athletic and academic success and long-term stability best positions our teams for future success."

In a joint statement released Friday afternoon, Cal chancellor Carol

The Big Ten council of presidents and chancellors voted to approve Oregon and Washington as new members on Friday evening.

Christ and athletic director Jim Knowlton said, "We aren't watching and waiting from the sidelines."

The Pac-12's mass exodus is a stunning turn of events from just two years ago, when the Pac-12 formed a vague "Alliance" with the Big Ten and Atlantic Coast Conferences in the wake of the SEC expanding. Back then in 2021, the Big 12 wasn't invited because they were presumed dead and the three Alliance members tacitly agreed not to poach each other's schools.

"There is no signed document. There is an agreement among three gentlemen...to do what we say we're going to do," Kliavkoff told reporters in August 2021.

The ACC is unchanged, but now the Big Ten and the Big 12 have four Pac-12 members each and Kliavkoff has learned a cardinal lesson of collegiate athletics the hard way.

There are no gentlemen in college sports," said an official in the Big 12. "There is no honor in college

Discussions between Washington and Oregon and the Big Ten began last summer after USC and UCLA exited, but the financial realities for the incoming schools will be different. Because the Bruins and Trojans announced their plans before the Big Ten struck a historic television deal worth approximately \$7.5 billion over six years, both California schools are slated to earn an equal share of revenue as the Big Ten's 14 existing members.

That won't be the case for Oregon and Washington. The Big Ten offered the newcomers a partial share of revenue, between roughly 50% and 65% of what the other 16 schools are slated to earn, said a person familiar with the matter. This is similar to what the Big Ten offered Maryland and Rutgers when they joined the league in 2014.

"We think these shares are more generous than what was available to the University of Oregon as our new media deal was being negotiated," Oregon president John Karl Scholz told trustees on Friday.

The dollar amounts aren't set in stone, as the annual disbursement steadily increases each year for the duration of the new contract from current levels. Tax records indicate the Big Ten disbursed \$58 million per school during the 2021-22 fiscal

Schools in the SEC are also slated for major paydays once their new 10-year, \$3 billion television deal with ESPN takes effect in 2024. The upshot is a dramatically widening revenue gap between the two richest conferences, the Big Ten and  $\S$ 

For the outgoing schools, changing conference affiliations at this point may be more about stability than maximizing the financial pay-

SEC, and everyone else.

"You are dying in your conference, you don't know if it will exist. you can't get a media deal, you just lost your two big schools in Califor- ≥ nia," said one person familiar with the situation. "Of course you would take a slightly lower amount."

### Violent Clubhouse Incident Preceded Trip to Rehab for Yankees Pitcher

By Lindsey Adler

THE NEW YORK YANKEES' announcement that pitcher Domingo Germán would seek treatment for alcohol abuse was preceded by an incident during which Germán appeared to be intoxicated in the team's clubhouse and wreaked havoc within the facility, according to people who were present.

These people said that Germán appeared intoxicated when he arrived at Yankee Stadium on Tuesday and was soon involved in confrontations with teammates and manager Aaron Boone. He flipped over a couch in the clubhouse, smashed at least one television, and was held for a period of time in the facility's "nap room" while being monitored by team security.

Germán's agent, Dan Lozano, didn't respond to multiple requests for comment.

Germán-who has pitched for the Yankees since 2017 and recently threw the major leagues' first perfect game in 11 years—has a disciplinary history with the team. He was suspended under Major League Baseball's domestic violence policy in late 2019. He served an 81-game suspension and missed all of the 2020 season.

The 2019 incident, for which Germán wasn't criminally investigated or charged, began when he was drinking at a teammate's charity event. Upon his return to the ្ន team in spring training 2021, Germán said: "I'm willing to change, to be a different person and I'll show that with my actions and my

The Yankees have only said that the decision to enter rehab this

week was precipitated by an "incident' that the team didn't detail, and that he will not pitch for the Yankees again this year.

The problems began after Germán was unable to make his scheduled start on Monday night

against the Tampa Bay Rays. As a result, the Yankees called up pitcher Johnny Brito from the minor leagues and optioned reliever Ron Marinaccio back to Triple A. Germán, according to people who were present, entered the

clubhouse playing loud music and

making jokes while Marinaccio was packing his bag, which irritated teammates, who confronted him about his lack of decorum in a difficult moment for a teammate.

It is not believed that alcohol was involved in any of the circumstances that led to Germán's inability to start Monday's game. Germán was later cleared by a doctor and entered Monday's game in relief for the Yankees that night behind Brito.

The next afternoon, Germán arrived at the ballpark and appeared

intoxicated, according to multiple people who interacted with him that afternoon. He entered the clubhouse and argued with teammates. He flipped at least one couch while teammates and staff tried to get him to calm down.

During the outburst, Germán verbally lashed out at Boone, along with others. Boone declined to comment on his interactions with Germán on Tuesday.

The team, in an effort to get Germán to contain the situation, briefly sent him into a sauna in an

attempt to sweat out the alcohol, according to people who were present. Eventually, Germán was held in the team's nap room while his teammates prepared for Tuesday night's game. Team security was stationed outside of the room

while Germán recuperated. It is unclear what time Germán left the ballpark, but the Yankees worked with the MLBPA to get assistance for him that evening.

Under MLB's collective bargaining agreement with players, a team must make a mandatory referral to the joint MLB-MLBPA "Treatment Board," which is "responsible for creating and supervising individualized treatment programs" when a player is intoxicated in the workplace or if the team "reasonably suspect(s) that the player may suffer from an alcohol...problem."

The referral is mandatory, but player participation in a meeting with the board is elective. From there, the board handles the logistics of arranging care for the

Boone declined to comment on Thursday on any team or MLB policies Germán may have violated.

General manager Brian Cashman, who said on Wednesday that "hopefully the steps that are being taken today will really benefit him for the remaining part of his life," didn't respond to requests for further comment.

In a statement issued by the team on Wednesday, the Yankees said: "It is critical that Domingo completely focuses on addressing his health and well-being. We will respect his privacy as he begins this process."



The New York Yankees announced that pitcher Domingo Germán would seek treatment for alcohol abuse.



One S.O.B. The scourge of UPS and Yellow makes a name for himself **B3** 

You Didn't! Executive recruiters share their wildest tales **B5** 



| FINANCE | TECHNOLOGY | MANAGEMENT

THE WALL STREET JOURNAL.

Saturday/Sunday, August 5 - 6, 2023 |

**DJIA** 35065.62 ▼ 150.27 0.43%

NASDAO 13909.24 ▼ 0.4%

**STOXX 600** 459.28 ▲ 0.3%

**10-YR. TREAS.** ▲ 1, yield 4.060%

OIL \$82.82 \( \square\) \$1.27

**GOLD** \$1,939.60 ▲ \$7.60

**EURO** \$1.1012 **YEN** 141.73



# The Battle Over Self-Driving Cars Is Raging in San Francisco

his city's inhabitants embraced computers, the Internet and cellphones before the rest of the world caught on. They are not so sure about self-driving cars. Suddenly, orange and white driverless Cruise and Waymo cars seem to be everywhere. Some first responders say they get in the way, and pedestrians fill social media with reports of the cars' antics. They have collided with at least two pets. An anti-car activist group placed orange traffic cones on the hoods of the vehicles, freezing them in place while creating viral videos of the stunt.

San Francisco's reaction is a preview of the challenges Cruise, majority owned By Meghan Bobrowsky AND MILES KRUPPA

Alphabet's Waymo and General Motors' Cruise struggle to win over the most tech-forward city in the U.S., a major hurdle in their nationwide expansion

by General Motors, and Waymo, part of Google parent Alphabet, will face as they expand to cities across the U.S. Both companies have invested billions in driverless cars, hoping they will become massive businesses, and they still need to win hearts and minds.

A city of about 800,000 people, San Francisco has already played host to thousands of self-driving car test miles, and some residents are regular users. Now the companies want to offer ridehailing businesses that can compete with Lyft and Uber.

If the companies get their wishes, San Francisco will become ground zero for one of the first big urban experiments in transportation using autonomous vehi-Please turn to page B4



Without a driver, a Cruise in San Francisco stops, top, to let a pedestrian cross in the Castro. The wheel without a driver of a Cruise in the Mission District, above.

### **Antitrust Suit Over** Google Search Is Narrowed by Judge

By Miles Kruppa and Jan Wolfe

A federal judge narrowed a major antitrust case against Alphabet's Google ahead of a trial that is slated to begin next month, rejecting an argument made by a bipartisan group of 38 state attorneys general who sued the company in

2020 over its search dominance. In a decision unsealed Friday, U.S. District Judge Amit Mehta rejected a legal theory pushed by the state attorneys general in their December 2020 lawsuit. But he allowed the Justice Department and the state attorneys general to make other arguments during the nonjury

trial he will oversee in September. The decision eliminates a sizable claim against Google while preserving the core of the government's case against the search giant, clearing the way for the antitrust trial.

Google handles about 90% of search-engine queries worldwide. The Justice Department sued Google in October 2020, alleging that it maintains a monopoly "through exclusionary distribution agreements that steer billions of search queries to Google each day," including contracts that make Google the default search engine on Apple's Safari browser and

Mozilla's Firefox browser.

"People have more ways than ever to access information, and they choose to use Google because it's helpful," Google chief legal officer Kent Walker said in a statement. "We look forward to showing at trial that promoting and distributing our services is both legal and pro-competitive."

Colorado Attorney General Phil Weiser, who led the state attorneys general in the suit, said he was pleased it would proceed to trial.

'We will continue to evaluate how to best press forward and establish Google's pattern of illegal conduct that harms consumers and competition," Weiser said in a statement. A Justice Department spokesman didn't respond to a request for comment.

Next month's trial will be one of the most significant U.S. antitrust proceedings since the government sued Microsoft in the 1990s, a case that posed challenges to the tech company's operations.

The state attorneys general had argued that Google undermined competitors such as restaurant and travel booking sites by using its dominance in search to restrict their advertisements, for example. The complaint echoed concerns Please turn to page B5



### **Collecting \$175,000** A Year to Watch Netflix

With few clients, some young consultants are stressing out about not having enough to do

LINDSAY ELLIS

JOINING THE BOTTOM of the consulting-firm food chain typically means working 12-hour days, juggling work during vacations and fixing PowerPoint fonts late at night. These days, many rookie consultants are just hoping to be on a project—any project.

For the first time in years, recent hires have too little to doand that's stressing them out more than the round-the-clock

work they anticipated. Some young consultants "on the bench" or "on the beach"—lingo for being between clients-say they spend downtime exercising, watching Netflix or napping, while still getting paid. Such a scenario might sound too good to be true for many in corporate America. For this cohort of high achievers, who thought they'd pull themselves up the ladder through their work on thorny business challenges, it's

Please turn to page B5

### Saudi Arabia **Charts Solo** Path on **OPEC Policy**

By Benoit Faucon and Summer Said

Saudi Arabia is increasingly driving an oil-production strategy to boost prices that is at odds with other members of the Organization of the Petroleum Exporting Countries, in a push to fund the kingdom's ambitious development proj-

For now, it is working, as oil prices have ticked steadily higher in recent weeks. But Saudi Arabia's unilateral moves to cut output carry a significant longer-term risk of splintering the alliance if Riyadh forces other smaller producers to join the cuts, according to industry analysts and others familiar with

OPEC's internal dynamics. On Friday, members of OPEC and its Russia-led allies met virtually to discuss the outlook for oil demand, which would help the group plan its production strategy in the coming months. The cartel in a brief statement said it would adjust production levels depending on market condi-

Riyadh on Thursday said the kingdom would extend a production cut of one million barrels of oil a day into September, after reducing output by the same amount in July and August in an attempt to prop up Please turn to page B11

### Yellow Soars, CVS and Amazon Get a Boost

THE SCORE | THE BUSINESS WEEK IN 5 STOCKS

#### **AMAZON**



Amazon beat expectations in the latest quarter, while Apple's sales are still in a lull. Amazon's earnings nearly doubled analysts' estimates as its core con-

sumer e-commerce business recovers from a pandemic hangover. Meanwhile, the company reported a continued deceleration in its profit-driving cloud-computing business, as business customers cut back spending. Apple's revenue declined for the third consecutive quarter—its most prolonged sales slump since 2016—as overall iPhone revenue missed estimates and fell compared with last year. Apple shares lost 4.8% Friday, while Amazon **shares gained 8.3%%**.

### \$6.75 billion Amazon's largest

profit since the final quarter of 2021

#### **CVS HEALTH**



CVS sales got a shot in the arm in its latest quarter. The retail pharmacy giant posted a 10.3% increase in its second-quarter sales, driven by growth in its

healthcare benefits segment. Earlier this year, CVS acquired Oak Street Health, which operates primary-care clinics for patients enrolled in Medicare, for \$10.6 billion. The company also completed its roughly \$8 billion acquisition of home-healthcare company Signify Health in March. CVS on Monday said it is cutting about 5,000 jobs—primarily corporate positions—to help reduce costs as the company focuses on healthcare services. CVS shares added 3.3% Wednesday.

#### 5,000

Jobs CVS said Monday it will cut, primarily in corporate positions



Trucking company Yellow's shutdown threatens about 30,000 jobs.

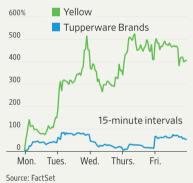
#### YELLOW



It looked like a memestock rally. Yellow **shares surged 149%** Monday, a day after the 99-year old U.S. trucking giant said it was shutting down. The

failure of the indebted company, known for its cut-rate prices, threatens nearly 30,000 jobs, including around 22,000 Teamsters members. Tupperware shares jumped 26% Tuesday, continuing a run-up that more than quadrupled the value of the stock since the start of July.

#### Performance of Yellow and Tupperware this week



#### ADVANCED MICRO DEVICES



Chip maker stocks lost some juice on Wednesday. Advanced Micro Devices posted quarterly sales and earnings that slightly beat estimates, but it faces a

gers and reduced spending on data-center components. The chip maker has been one of the hottest semiconductor stocks this year amid AI excitement, with shares up roughly 80% year-to-date. AMD's results followed disappointing reports from Taiwan Semiconductor Manufacturing and Texas Instruments. Advanced Micro Devices shares dropped 7% Wednesday.

sluggish market for personal comput-

#### CATERPILLAR



Construction is booming, giving Caterpillar's sales a boost. The construction machinery maker reported surging quarterly sales, as demand for its construction

products rose despite higher prices. Caterpillar has faced higher materials costs and raised prices, but that hasn't caused customers to pull back. The company expects demand for its equipment to remain strong amid elevated U.S. spending on infrastructure, in part brought by the \$1 trillion bipartisan infrastructure bill passed in 2021. Caterpillar **shares gained 8.9%** Tuesday.

--Francesca Fontana

#### **EXCHANGE**



TAX REPORT | LAURA SAUNDERS

### The Upside of Losing a Key Deduction

Congress is pushing higher earners into Roth 401(k)s, but they could come out ahead in the end



Many retirement savers are furious about a law set to take effect in January, and at first glance it's easy to see why.

The provision, enacted in late 2022, denies a key tax deduction to workers aged 50 and older who had \$145,000 or more in wages the prior year. They'll no longer be able to put "catch-up" contributions into traditional 401(k) or similar plans, which allow upfront deductions on dollars going in but impose income taxes on future withdrawals. Catch-up contributions, which help bump up workers' savings late in their careers, currently add \$7,500 to the \$22,500 annual limit for many savers.

Instead, these savers can only put catch-ups into *Roth* 401(k) accounts—so they won't be tax deductible, although future withdrawals can be tax-free. As many of these savers are in peak earning years, putting after-tax dollars into a Roth account when one's tax rate is higher can reduce and even erase the benefit of later tax-free payouts.

So here's a surprise: Affected savers shouldn't be mad, says Betty Wang, a Denver-based financial adviser. "I tell them, 'Congress is doing you a favor by forcing you to save in a Roth account. In the long run, you'll likely come out ahead.' "

Other advisers agree. Matt Hylland, a planner in Cedar Rapids, Iowa, says he tells some clients, "That tax deduction feels good now but often leads to burdens later on."

Why this contrarian view? First, the planners' advice isn't for the millions of Americans who are undersaved for retirement. Instead it's for super-savers who often fund tax-deductible 401(k)s to the max.

Next, they aren't reversing the conventional wisdom on how to choose between traditional and Roth plans. This holds that Roth contributions are best when the saver's tax rate on them is lower

than the expected rate on withdrawals.

Instead, they are adding nuance due to uncertainties. Does a 50-yearold really know how long she'll be employed, or where she'll live in retirement?

Both factors matter: If someone retires at 60 and taxable income dips, then the following years could be a great time to move traditional IRA or 401(k) savings into Roth accounts at a lower tax cost. Savers who know they're moving from high-tax states like New York to low-tax states like Florida for retirement probably shouldn't fund Roth accounts just before they move.

Yet plans can change. If the saver winds up not retiring until 70 or decides not to move, the cost of getting money into a tax-free Roth account may be higher or even prohibitive. A surge in savings due to compound growth in the years just before retirement can also complicate planning, especially for setit-and-forget-it savers. The upshot is that as with investment diversification, tax diversification is important.

Many married savers also miss a crucial point on required retirement withdrawals. It's that after one spouse dies, the survivor often must switch from married, filing-jointly tax status to single-filer status with higher rates taking effect at lower income levels. However, annual required minimum distributions, or RMDs, may not drop much if at all—and that income can push survivors into higher tax rates, especially as RMDs rise with age.

For example, says Hylland, a couple in their early 80s with \$4 million of traditional IRAs or 401(k)s would have RMDs of about \$200,000 annually. With this withdrawal plus other income like Social Security, they'd likely have a top tax rate of 24%. But if one spouse dies, the survivor's top rate could jump to 35%.

Wang faced this issue with a widow who needed less than \$150,000 to live on but was forced to take taxable RMDs of \$370,000. Having dollars in Roth accounts, which don't have required withdrawals, could have provided her with a lower tax rate and welcome flexibility.

To be sure, Congress didn't enact the recent change to help higher earners. For lawmakers, a key lure of Roth accounts is that they provide tax revenue upfront within a 10-year budget window, while tax-deductible IRAs and 401(k)s lose it. This is one reason recent law changes have favored Roth accounts—and why it could be complicated for Congress to restrict them in major ways.

The January date for the new Roth 401(k) requirement may be delayed to give employers more time to get ready and also allow Congress or the Internal Revenue Service to fix a drafting glitch in the current provision.

Here are more Roth benefits to consider when strategizing retirement savings.

#### ■ Roth 401(k)s provide Roth access.

Many savers can't contribute to Roth IRAs because their income is too high or else don't because "backdoor" Roth contributions would be complex and partly taxable. In addition, current Roth IRA contributions are limited to \$6,500 per year, plus \$1,000 more for savers age 50 and older. Savers with Roth 401(k)s can typically put in much more.

■ Roth benefits can cascade. Taxfree Roth withdrawals don't count as income, so they don't leave taxpayers more susceptible to meanstested Medicare surcharges called IRMAA or the 3.8% net investment income tax.

#### ■ Roth contributions start the fivevear clock. To withdraw tax-free

Roth earnings without penalty, the saver must be at least 59 ½ and have held the account for five years in many cases. Even a small amount in a Roth account can start that five-year clock running.

#### Roth accounts can be better than taxable investment accounts.

Among the reasons: Payments of earnings in investment accounts (such as dividends or interest) are taxable, while they are tax-free in Roth accounts. If someone sells assets in an investment account before death, the net gain is taxable—unlike in Roths. Also, Roth IRA and 401(k) owners can pull out their own contributions tax-free without penalty even before five years, although with 401(k)s the employer also has to allow these payouts.

Many nonspouse heirs of IRAs and 401(k)s whose owners died after 2019 must drain the accounts within 10 years of the owner's death. However, heirs of traditional IRAs or 401(k)s often must make taxable withdrawals for each of those 10 years. Heirs of Roth accounts can wait until the end to withdraw.

WSJ COMIC | DALE HRABI & KAGAN MCLEOD

### A Piece of Work | The 'Doll Movie' Fiasco











#### **EXCHANGE**

#### By Esther Fung

t a rally in Atlanta last month, Teamsters President Sean O'Brien addressed hundreds of union members with the combative attitude that has come to define his leadership style.

"We've organized, we've strategized, and now it's time to pulverize this white-collar crime syndicate known as UPS," he said to cheers and applause from hundreds of UPS truckers and warehouse workers. A month earlier O'Brien had tweeted a photo of a tombstone with the logo of Yellow, the trucking company that he was also wrestling with at the time.

At a time when the share of U.S. workers represented by unions has dropped to historic lows, O'Brien is taking on employers using 21stcentury tools like aggressive socialmedia posts and inflammatory rhetoric.

O'Brien is celebrating a big victory and reeling from a stunning defeat. He secured a new five-year contract with UPS that promises sizable raises for 330,000 Teamsters and wins back some concessions workers made in prior deals. He was also confronting the abrupt collapse of Yellow, which left 22,000 Teamsters out of work.

With a shaved head and the muscular frame of a man who played linebacker in high school, O'Brien looks like he stepped out of central casting. The 51-year-old grew up in a blue-collar family in Medford, Mass., and joined the union at 18, after one semester of college. He started off as a trucker, hauling heavy equipment for a crane-rental company.

His father was a lifelong Teamster and his two brothers are members. In fact, O'Brien is a fourth-generation Teamster, tracing his roots back to a great grandfather, who made deliveries in a horse-drawn wagon in Boston soon after immigrating from Ireland.

O'Brien brandishes his initials S.O.B. in his social media handle and his bio says, "Fighting for workers is a full-contact sport." His deft use of social media, his airing of labor grievances in TV appearances and his combative stance against companies have made him popular among the rankand-file workers.

He showed up at the Hollywood writers' picket lines outside studios in Los Angeles. In the early days of the writers' strike, Teamsters-represented truck drivers have turned around rather than cross picket lines to enter studio lots, disrupting film shoots.

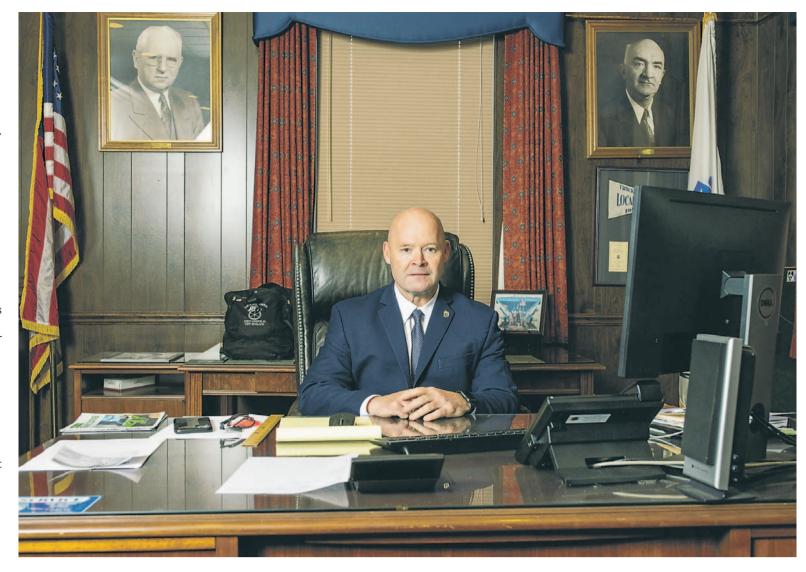
His rapid rise to the top of a union with 1.2 million members has included some detours. During the last round of UPS contract talks, in 2017, O'Brien was ousted as lead negotiator by then-president James P. Hoffa, son of the legendary Teamsters boss.

The Teamsters union is best known for representing brown-clad UPS workers and truck drivers, as well as the union's corruption scandals and alleged past ties to organized crime. The Teamsters also represent workers who package fruit and vegetables in California, brewers in St. Louis and zookeepers in Pennsylvania.

Now it has its sights on America's biggest e-commerce company, which employs vast numbers of drivers and warehouse workers.

"We have a strategy. We want to organize Amazon—500,000 members doing the same job that you do every day," O'Brien told the UPS workers at the Atlanta rally. Amazon declined to comment.

Robert Travis, president of the Independent Pilots Association, representing around 3,400 UPS pi-



### The Teamsters Boss Who Calls Himself S.O.B.

Sean O'Brien's tough tactics resulted in a deal with UPS and a defeat at Yellow

#### Sean O'Brien

- First Teamsters job: Driver for a crane-rental company
- All in the family: O'Brien is a fourth-generation Teamster. His two brothers are Teamsters, as was his father and three uncles
- **Children:** Sean Jr., 22, and Joseph, 19
- Comeback kid: In 2017, then-Teamsters President James P. Hoffa fired O'Brien from his role as lead contract negotiator with UPS. In 2021, O'Brien won an election to succeed Hoffa.

Teamsters' headquarters, opposite the Capitol in Washington, D.C. Travis said O'Brien came to the lobby to greet him and bring him up to his office.

"My interaction with Mr. Hoffa was limited. I tended to communicate more with that administration's No. 2." said Travis, referring to O'Brien's predecessor, who retired in 2022. "With Sean O'Brien, he makes himself accessible to the other pilot associations and unions. And I found that to be very refreshing.'

In 2018, the UPS agreement was voted down by rank-and-file members, but the union pushed ahead with the contract on a technicality. After Hoffa announced his retirement, the union held an election for his replacement in 2021. In a race between a candidate who was endorsed by Hoffa and O'Brien. O'Brien won. He officially took office in 2022.

"The last two contracts, 2013, 2018, there was a lot of flexibility given to UPS," said O'Brien in an interview in February. "Whatever concessions have been given, UPS has taken advantage of. And it hasn't been in the best interests of our members.'

As the latest UPS-Teamster negotiations kicked off in the spring, O'Brien promoted the union's agenda in media appearances. This was a change from the way union leaders handled the negotiation in 2018, where they were more tightlipped. The Teamsters also brought in rank-and-file members to serve on the negotiating committee, offering a more personal perspective in the talks.

"The rhetoric is more bellicose, more inflammatory, and certainly much more populist" than past union administrations, said Bruce

Chan, an analyst at Stifel who covers UPS, FedEx and other freight

companies.

Chan said one of the early signs that collective bargaining was becoming a bigger challenge for companies in the transportation industry was when the Teamsters pushed back against proposed operating changes by Yellow early this year.

The latest UPS-Teamster agreement included a 48% average total wage increase over the next five years for existing part-time workers. The agreement also means UPS drivers will remain the highest-paid delivery drivers in the country, with the average top rate at \$49 an hour. The drivers currently make around \$42 an hour after they've been employed for

The agreement, which has yet to be ratified by membership, comes

Sean O'Brien in 2021, above, and addressing Teamstersrepresented UPS workers last month, below.

amid the fallout at Yellow, where thousands of Teamster-represented drivers, clerks, forklift operators are now out of a job.

Yellow's financial troubles started years ago, with prior bankruptcy scares and bailouts. It was debt-laden when a recent freight downturn added further pressure. Yellow management sought to streamline its operations and defer pension contributions.

The Teamsters said members had given concessions over the years to Yellow and would no longer do so. In July O'Brien threatened a strike, spooking customers, who pulled their freight from Yellow and hastened its end.

In a lawsuit filed against the Teamsters a few days before the company ceased operations, Yellow alleged that O'Brien rebuffed its efforts to negotiate for months, "choosing instead to direct profanities at Yellow and its executives and even to gloat at Yellow's impending demise.

O'Brien denied the claim, saying that the company had been mismanaged.

Some Teamsters-represented workers at Yellow said on social media they felt like the union could have done more for them. and that their plight had been overlooked in favor of the UPS

Yellow workers are represented by more than 150 locals, which are now working to find them jobs in freight and other industries, a Teamsters spokeswoman said, adding that the union has reached labor agreements with other freight companies in recent months.

"I know there's going to be criticism because of the position we are taking with Yellow, but it's necessary," O'Brien said at the Atlanta event. "We're going to have fights, we're going to have sacrifices, we're going to have losses. But at the end of the day, the biggest thing we have to do is stay united."



By WILL FEUER

Nikola Chief Executive Michael Lohscheller, an auto industry veteran, has stepped down due to a family health matter, and Nikola Chairman Steve Girsky has taken over as CEO of the electric-vehicle Girsky is Nikola's fourth CEO in

almost as many years after the 2020 departure of Nikola founder Trevor Milton, who was later convicted of defrauding investors. Lohscheller, who took over as

CEO of Nikola earlier this year, previously served as chief financial officer and then CEO of German automaker Opel, now owned by Stellantis. Before that, he was CFO of Volkswagen's U.S. business. Nikola credited Lohscheller with reducing the company's cash burn and improving production capabilities.

Girsky previously served as CEO of the special-purpose acquisition company that merged with Nikola and took the company public in 2020. He previously served as vice chairman of General Motors, From 2005 to 2006, he was special ad-

viser to the CEO and CFO of GM. Shares for Nikola dropped 26% to \$2.50 a share. The stock is down nearly 69% over the past 12 months.

On Friday, Nikola reported a drop in sales for the second quarter and said its loss widened from a year ago. The company reported a loss of \$217.8 million, or 31 cents a share, compared with a loss of \$173 million, or 41 cents a share on a smaller base of shares, in the same quarter a year ago.

The company's adjusted loss came to 20 cents a share, below the 22 cents a share that analysts surveyed by FactSet were expecting.

Sales fell to \$15.4 million from \$18.1 million but came in above analysts' forecasts for \$15 million, according to FactSet.

Nikola produced 33 trucks in the second quarter, down from 50 a year ago, and shipped 45 trucks, down from 48. Production was hampered during the quarter due to a planned pause in May at its plant to



The electric-vehicle maker credited Michael Lohscheller with reducing the company's cash burn and improving production capabilities.

modify the assembly line for new

Toward the end of the quarter, Nikola said a fire broke out behind the company's headquarters in Phoenix. The company said in June that it suspected foul play.



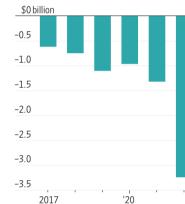
### The Battle Over Self-Driving Cars in San Francisco





A Cruise self-driving car stalls at an intersection in the Mission District of San Francisco, above. Left, a Waymo with a passenger in the front seat, turns onto Market Street in the city.

Cruise's annual loss



Source: General Motors, a majority owner of Cruise

Continued from page B1 cles. The city, now known for its tech population, has also been a hub for political protest, flower children and fierce guardians of the city's original character.

The California Public Utilities Commission, which regulates passenger transportation, is scheduled to vote this month on whether to allow GM's Cruise to expand its presence in San Francisco and to allow it and Alphabet's Waymo to charge for rides at all times. The vote has been delayed twice, and the agency will hold a hearing next week to hear responses from the companies to a list of safety concerns.

'We think that autonomous vehicles are amazing and we believe that someday they will be safer than human drivers," said Jeffrey Tumlin, director of transportation for San Francisco's transit authority. "So far, the industry has not demonstrated that."

Cruise and Waymo are fighting back. Executives at both companies have begun presenting their pitches to the public and government officials with greater urgency, armed with data they say shows the safety benefits of their

When consumers were asked,

'What is the maximum level of

18%

but activate only in certain events such

Features that are usually inactive.

15%

Features that actively help the driver

while the driver remains in control

able with?', they replied:

No automation

**Emergency only** 

**Driver assist** 

vehicles.

Cruise Chief Executive Kyle Vogt said in an interview that officials would cause more people to be harmed if they slowed the rollout of self-driving cars, citing company data that linked their increased presence to reduced collisions. Cruise has quintupled the number of cars it has on San Francisco roads since the beginning of the year, Vogt said. Most of its almost 400 vehicles nationwide are in the tech hub.

"Anything new, especially a technology that comes across as borderline magic, is going to have a lot of questions and create a lot of attention," Vogt said. "Attention draws controversy."

Waymo asked riders to write letters to state officials last month. The company might not be able to continue operating in San Francisco, it said, if the state voted "no."

Cruise took out full-page ads in several newspapers stating, "Humans are terrible drivers," citing nearly 43.000 crash fatalities from car accidents in the U.S. last year.

For now, Cruise is offering paid rides at night in San Francisco. Waymo doesn't have the state's

permission to offer paid rides yet, but people can ride in its cars free of charge. Both have waiting lists to get on the apps.

The group behind the traffic cones, Safe Street Rebel, coordinated the stunt as a weeklong protest of Cruise and Waymo's expansion ahead of the state commission vote. Members trolled the streets wearing gloves and facial coverings, searching for cars in areas where they are frequently spotted such as the streets around the Panhandle park. The cones confused the cars sensors, some of

stopping them in place. After the state commission moved back its vote, the activists claimed partial credit for the delay and applauded state officials for applying more scrutiny to the expansion plans.

which are placed on their roofs,

Cruise and Waymo have burned through billions of dollars in their attempts to build on-demand taxi services, which they hope will eventually produce greater profits without the need for human drivers. So far, their businesses have produced minimal revenue.

GM reported \$102 million of sales and \$3.3 billion of costs and

expenses related to Cruise last year. Chief Executive Mary Barra said in June the company was at the very early stages of a shift to autonomous vehicles, and executives have said the company is targeting as much as \$50 billion in annual revenue by the end

of the decade. Waymo has raised more than \$5.7 billion in announced funding from Alphabet and outside investors since 2020. Alphabet, which has come under shareholder pressure to reduce spending on Waymo and other speculative ventures, doesn't separately report on its financial

Amazon.com's Zoox has also tested its self-driving technology on the streets vice in Austin. of San Francisco and is developing a cus-

performance.

tom, boxy vehicle specially designed for taxi services. The company declined to say when it would begin deploying the cars in the city.

Cruise and Waymo executives condemned the Safe Street Rebel activists who put cones on their cars and uploaded the videos to TikTok. Wavmo said it was a form of vandalism. The group later removed the videos.

'This is a moving, multi-ton vehicle. It is not a toy," Tekedra Mawakana, Waymo's co-chief executive, said in an interview. The company plans to engage the authorities for help when its cars are vandalized, she added.

Vogt said he didn't think it was the time to be "playing silly games."

Safe Street Rebel said the group wasn't damaging property with the protest. The activists view the cars as a threat to other ways of getting around the city such as walking, biking and public transit,

Beyond San Francisco, there are hundreds of self-driving cars in Phoenix, with more being deployed for testing in Los Angeles, Miami, Dallas, Austin, Texas and Nashville, Tenn. Three years ago, there were only test vehicles in a handful of cities.

Cruise applied in March for permission from the California Department of Motor Vehicles to expand statewide and operate its cars at speeds of up to 55 miles an

Since then, Cruise has sent emails to officials in at least 14 California cities and counties as small as 12,200-person Newman in the remote San Joaquin Valley, informing them of the company's plans to expand there, according to documents filed with the state's motor vehicles department. The company said it would put five vehicles in each of the new markets, according to one of the emails.

A Cruise spokesman said it notified the officials as part of its statewide application and ultimately wants to operate everywhere in California, but plans to roll out its vehicles in major cities

Waymo began offering driverless rides in Los Angeles in February, and this week it announced plans to offer the ride-hailing ser-

In May, San Francisco city officials sent a letter to the state expressing concerns about the proposed expansion in the city. They listed incidents in which a Waymo drove into a construction site, nearly rolling into an open trench, and a firefighter needed to break a Cruise's window to stop it from driving into an active fire scene.

City officials said the number of reported incidents involving Cruise and Waymo vehicles has tripled in recent months. Tumlin, the transportation director, said officials need more publicly available data from the self-driving car companies to draw conclusions about their safety, and the city is making progress toward that goal.

Cruise and Waymo both said their cars haven't caused any traffic fatalities. In their first million miles driven, Waymo said its selfdriving vehicles in fully autonomous mode didn't cause any collisions with human drivers.

A Cruise spokesman said it just takes one ride to convert a skeptic to a believer. About 90% of people who ride are willing to ride in one a second time, he said. Sebastian Thrun, who previ-

ously led the Google Self-Driving Car Project that is now known as Waymo, said people would start to see the benefits if the cars were allowed to operate more widely. When he ran the project, all it took was seven to eight minutes in the car for people to relax and become more comfortable with the technology, he said.

Janie Richardson, a retired deputy city attorney, was crossing the street in the early evening in June with her two dogs in the Pacific Heights neighborhood of San Francisco when she said a self-driving Cruise vehicle entered the intersection and hit one of her black labs, Delilah.

A Cruise technician arrived on the scene about 10 minutes later, she said, and handed her a piece of paper titled "Handout for Others Involved in an Incident with Cruise." Among other details, it listed insurance information for the car, according to a copy of the letter reviewed by The Wall Street

Delilah wasn't injured, but Richardson, who said she previously hadn't given the self-driving cars much thought, now wants them out of San Francisco. A Cruise spokesman declined to comment on the specific case.

Vogt criticized the city for promoting what he called misleading data. Cruise has spoken with city officials more than 50 times over the past year to hear their concerns and has made changes to the service based on the feedback,

Waymo-Co-CEO Mawakana pushed back on the idea that residents are opposed to the vehicles, citing the 100,000-plus people who have signed up for the waiting list to access Waymo's taxi service.

"I have people pinging, emailing and complaining every day about how long they've been waiting to get into the service," Mawakana said.



'A technology that comes across as borderline magic is going to have a lot of questions.

> KYLE VOGT Cruise chief executive

Maya Waldman, who works in education, signed up to be an unpaid test rider for Waymo during an earlier stage in San Francisco and has ridden more than 5,000 miles in the cars.

Waldman, who said she didn't know much about self-driving cars before the program, now feels safer in them than in traditional ride-hailing services. Among other things, she's not at the mercy of a random assortment of human

"Every time I hail a Waymo, it's the same driver," she said. "When I get into a Lyft or Uber, which I do still use sometimes, I never know what I'm going to get."



**→ Partial self-driving** 

Features that relieve the driver of all control for periods of time

14%

Full self-driving Features that completely relieve the driver of all control for the entire drive

12%

Source: J.D. Power 2022 U.S. Mobility Confidence Index



A pedestrian snaps a photo of a driverless Cruise in the Mission District, above. Far right, sensors on the hood of a Cruise.

### Tank Tops, Toilet Trips and Lies: What Headhunters Can See

Recruiters share their wildest stories from working with applicants seeking jobs and the companies considering hiring them

By Francesca Fontana



We spoke with executive recruiters about hiring today. Interviews have been edited and condensed

for length and clarity.

#### Faking a car accident

We had placed a candidate in a temporary position, a light industrial role in Houston. It was his first week, and that day he was late for work. He said it was because he got in a car accident, and he ended up just not showing up at all.

We didn't ask for one, but he sent us a picture of his car as proof that he was really in an accident. One of our recruiters noticed that the photo didn't look like it was in the right season. I think in the picture the leaves on the trees in the background had turned, but it was summer out.

We ended up just searching "car accident" in Google Images and that picture was one of the first results that came up. It was, like, stock photography. We then informed him that it would be his

He could have overslept or something, and people are pretty understanding that mistakes happen and no one's perfect. The best thing you can do is just be honest about it, not make something up. The whole thing was so silly, because no one even asked him to send anything

–Keith Wolf, Murray Resources

#### **Dressing for success**

Early in my career, I was recruiting for a midlevel remote developer position for a tech company. I always prepare my



candidates for their interviews, so I hopped on the phone with him and went over the basics: The interview would be over Zoom, but make sure you're still professional from the waist up, don't wear a

hat, that kind of thing. He seemed ready to go, and I had confidence—he had a great back-

The interview only ended up being like 15 minutes long, which is

not a good sign, and the client sent us a feedback email pretty quickly, giving us a heads up that this candidate had been calling from inside his garage, wearing a white tank top and a backwards

hat and smoking a cigar. We were like, this cannot be real.

My account manager assured me that this wasn't my fault, and he called the candidate to give him the feedback and ask what his reasoning was behind all of it. The candidate said he just needed to take a load off, due to his nerves and stuff. He really thought that what he was doing wasn't a big deal, which is pretty wild.

The candidate had decent longevity at other companies, so we were really confused. But we didn't work with him after that, unfortunately.

—Molly Hansen, Hirewell

#### **Bathroom calls**

The thing I am most surprised by is when candidates are comfortable going to the bathroom while on a call with you. We can hear everything. My colleague once asked me, "Are you sure that wasn't just a sink running?" and I was like, "No, I think running a sink usually isn't followed by a flush." I've had it happen more times than I can count on two

One time, I also had an initial phone screen scheduled with a candidate about a software engineer job and they picked up the call while in the shower. I could hear water running, and they said, "Oh, I'm actually in the shower right now." I asked, "Are you just getting into the shower?" And they said, "No, no, I'm in the shower." I was just like, you could have just let this go to voice mail! It was pretty mind-blowing. And I told them that we should resched-

Funnily enough, the person ended up being a great candidate

and I placed them in a role. –Matthew Mulcahy, Hirewell

### **Underworked** And Stressed Out About It

Continued from page B1far from ideal.

And those are the ones with jobs. Wrestling with slower business and the hangover of a hiring spree, firms including KPMG and Ernst & Young are laying off recruits. McKinsey and Bain, meanwhile, have set some recent graduates' starting dates in 2024. It's the first time in decades big consulting firms have undertaken layoffs and delayed starting dates for new hires in an uncertain economic environment, according to Michael Mische, a former KPMG and AT Kearney principal who leads the University of Southern California's consulting program.

Asutosh Padhi, McKinsey's managing partner for North America. said fluctuations in workload from being too busy to not busy enough—can feel drastic for earlycareer consultants. Still, firms fear cutting jobs when work is slack because they need to ensure they'll have senior staff in the future. McKinsey hires with a long-term view, he said.

"If at any point we stop recruiting and if we stop hiring, we feel the impact for the next six to eight years," he said.

Alicia Pittman, a managing director and senior partner at Boston Consulting Group who oversees development and performance reviews in North America, said consultants without a client assignment can learn through projects that improve how their own company works. But it's understandable that some are stressed.

"We hire the most hard-charging people, who want to learn, they want to develop," she said. "They're always saying, 'Am I getting the right experience, am I doing the right things, am I going to

learn?' Young consultants say they worry the slump will cause them to be pushed out or tarnish their performance reviews, derailing them from what is often a fast track to elite corporate or entre-

preneurial roles.

Too many consultants with too much downtime creates problems for the broader campus-to-industry talent pipeline, too. Consulting firms are some of the biggest recruiters at top universities. They hired nearly half of last year's M.B.A. graduates from Yale Univer-≧sity, Dartmouth College and the ≧University of Virginia, with a me-ලිdian salary of \$175,000. After sev-<sup>™</sup>eral years of grinding, many pollinate the leadership ranks of finance, business and tech with the lessons learned from advising corporate clients.

The current climate, though, is a "hiring death spiral" that threatens the flow of talent up and down that pipeline, said Mische.

The economic uncertainty of the past year has pushed businesses into cost-cutting mode, and consulting firms are early targets. Among 100 U.S. companies surveyed by market-research firm Source this year, 65% said they had paused most consulting projects, while 75% had canceled some.

Consulting firms acknowledge that work has slowed since the pandemic boom. Delaying start dates helps ensure that new hires have case work to do when they start, Keith Bevans, Bain's global head of consultant recruiting, told The Wall Street Journal in April. Bain didn't respond to interview requests for this article.

#### 'Pls fix'

Companies hire consultants to address strategic and operational questions. What are places to focus in an emerging industry? Where should we locate our corporate facilities? How can we improve our work processes? For new staff, that means analyzing data, researching new fields and polishing Power-Point slides before big meetings. Dayslong client-site visits mean they rack up travel points, and the

assignments or work on internal projects. Still, there's free time, and many are working from home when they're not on client teams.

One benched consultant said he's had two client-facing projects since starting last fall. When he can't find any thing work-related to fill the time, he goes for walks, buys groceries, takes naps or streams shows like Amazon Prime Video's "Fakes."

Another hired around the same time said she has done billable client work for one three-month stretch. With an eye on the project pipeline, she uses her spare time for prepping meals and spending time with family. She's also job hunt-

A third, London-based Claudia Zhu, had a two-week break between projects in January. In May, she had another. Zhu, who is 25 vears old and works at a large firm, used some of the time to work on internal business development or clean up slides from past

Otherwise, she sometimes hit the treadmill in the morning and cooked instead of buying meals. After a busy period last year, she says, "there was a very clear decrease in demand in the market."



Sendero's chief people officer, Melody Mattox.

tleneck will make it more so this year. McKinsey had one million ap plicants for 10,000 roles in 2022. Some companies are now pull-

ing back on recruiting. Sendero Consulting, a roughly 240-person firm with offices around the U.S.. expects to bring on 30 student hires, down from the 80 it planned for last year, said Melody Mattox, chief people officer.

Bain has told M.B.A. recruits that if they wait to start until next April, the firm will pay them \$40,000 to work for a nonprofit or \$30,000 to learn a new language in the meantime. It's offering the hires \$20,000 to pursue other interests until the April date. "Go on an African safari or take a painting class!!" one document read.

#### 'Up or out'

Young consultants leave their firms for jobs elsewhere, or when they're "counseled" out—in other words, urged to find a new job. In "up or out" cultures, consultants are periodically either promoted or shown the door.

Less voluntary attrition in consulting, as the job market for white-collar professionals cools, explains some of the cuts, consultants and career coaches say.

Several consultants said they felt their firms have raised performance standards after loosening them during the pandemic.

At BCG, workers are shown where they sit on a performance grid. One side measures performance, the other measures potential. High achievers are placed in green boxes on the grid. Falling outside the green zone, to some consultants, raises doubts about a future at the firm. The firm said staff can move between designations, and that performance standards haven't increased.

During the thick of Covid-19. McKinsey took the challenges of working through a pandemic into account in consultants' performance reviews, but such dynamics are less applicable now, said Padhi, McKinsey's managing partner for North America.

-Chip Cutter and Jean Eaglesham contributed to this article.

### Judge Narrows Google Case

Continued from page B1 that companies including Expedia and Yelp have raised about Google's business practices.

In his decision, Mehta said the state attorneys general failed to find evidence supporting their allegations of anticompetitive con-

Mehta's decision isn't surprising after previous investigations into similar claims against Google failed to result in charges, said Laura Phillips-Sawyer, an associate professor at the University of Georgia School of Law.

The Justice Department in January brought a separate case alleging Google abuses its role as one of the largest brokers, suppliers and online auctioneers of ads placed on websites and mobile applications. That case is in Virginia, not in Mehta's Washington, D.C., courtroom.

Google's search engine supports a more than \$160 billion in sales advertising business that makes up the majority of parent company Alphabet's annual revenue.

Justice Department The brought the search case during the final weeks of the Trump administration. Eleven Republicanled states joined as plaintiffs.

In December 2020, two months after the Justice Department sued, a group of 38 states filed a follow-on lawsuit. That case made overlapping arguments, as well as broader claims relating to how Google displays search results.

Mehta tossed out a part of the case brought by the state attornevs general—a legal theory the Justice Department didn't adopt.

He granted summary judgment to Google on that part of the case, saying the state attorneys general hadn't shown that Google's approach to displaying results hurt competitors.

Mehta also dismissed claims related to Google's agreements with mobile-device manufacturers that use the company's Android software, along with contracts related to its Assistant program and internet-connected products.

Mehta allowed the state attorneys general to continue arguing another claim, that Google's Search Ads 360 tool for large brands discriminated against ad features on Microsoft's Bing search engine. Google has said there is no evidence it used the product to harm competitors.

#### 50% Many McKinsey, Bain and BCG consultants don't stay in the 40 field forever. Here's where those with M.B.A.s go next: ■ 5 years after starting consulting career ■ 10 years ■ 15 years 30 20 10 Sales mgmt. Product executives

Note: Percentages don't add to 100%, as not all categories are shown Source: Burning Glass Institute analysis of more than 18,000 résumés

client presentations they develop require hours of aligning boxes and rewriting text-often responding to bosses' late-night "pls fix" emails.

"Nobody *needs* a consultant," Mische said. Many junior ones could get pushed out before they get the experience that makes them valuable because of one hard fact, he said: "You're either making money for the firm or you're a cost for the firm.'

The Journal spoke with more than 30 current, former and prospective consultants. Those between projects say they don't try to hide that they're unstaffed: Many use the time to vie for new She's not complaining about a little extra free time, however: "It was very much needed."

Too much time on the bench makes it harder for consultants to develop the strategic-thinking and communication skills that catapult them into their next jobs, said Matt Sigelman, a former McKinsev consultant who is president of the Burning Glass Institute, a think tank focused on the future of

"Part of the social capital that someone builds at a firm like one of these is developed in the intense pressure-cooker of a client-team room," he said.

#### Pressure, polish One reason young

consultants don't have enough work right now is that there are so many of them, as firms staffed up to tackle a pandemic surge in business. Head count at McKinsey grew to about 46,000 in 2023 from 17,000 in 2012. Bain previously said it has added dozens of teams

Getting these jobs is competitive, and many prospects fear the bot-

in recent years.

Trailing P/E ratio 25.53 19.36

**Dow Jones Industrial Average** 

35065.62

Year ago

26.82

Last

29.15

0.81

#### MARKETS DIGEST

13909.24

**▼** 50.48

or 0.36%

All-time high:

16057.44, 11/19/21



S&P 500 Index

4478.03

4400 4300 4200 4100 4000

Trailing P/E ratio <sup>a</sup>

Last Year ago

22.56

20.27

14400 14000 13600 13200 12800 12400 65-day moving average \_\_\_\_\_\_

**Nasdaq Composite Index** 

Trailing P/E ratio \*† 32.02

P/E estimate \*†

Dividend yield \*†

#### Major U.S. Stock-Market Indexes

			Latest				52-Week —			chg —
	High	Low	Close	Net chg	% ch	g High	Low	% chg	YTD :	3-yr. ann.
Dow Jones										
Industrial Average	35506.88	35033.76	35065.62	-150.27	-0.43	35630.68	28725.51	6.9	5.8	9.3
Transportation Avg	16503.20	16285.80	16319.79	-74.96	-0.46	16695.32	11999.40	11.8	21.9	<b>17.</b> 4
Utility Average	904.79	882.55	886.07	-10.63	-1.19	1061.77	838.99	-12.6	-8.4	2.1
Total Stock Market	45448.33	44806.71	44841.11	-220.32	-0.49	45969.67	36056.21	7.3	16.4	10.0
Barron's 400	1031.55	1019.59	1020.73	-3.18	-0.31	1036.97	825.73	7.1	10.9	12.7
Nasdaq Stock Mark	et									
Nasdaq Composite	14119.22	13897.93	13909.24	-50.48	-0.36	14358.02	10213.29	9.9	32.9	8.3
Nasdaq-100	15523.31	15258.69	15274.92	-78.62	-0.51	15841.35	10679.34	15.7	39.6	11.2
S&P										
500 Index	4540.34	4474.55	4478.03	-23.86	-0.53	4588.96	3577.03	8.0	16.6	10.6
MidCap 400	2709.25	2678.07	2681.58	-0.91	-0.03	2728.44	2203.53	7.1	10.3	12.3
SmallCap 600	1271.52	1256.06	1259.51	-0.75	-0.06	1315.82	1064.45	1.6	8.8	12.6
Other Indexes										
Russell 2000	1977.49	1955.14	1957.46	-3.94	-0.20	2021.35	1655.88	1.9	11.1	8.9
NYSE Composite	16252.32	16059.83	16071.06	-54.36	-0.34	16427.29	13472.18	5.2	5.8	8.4
Value Line	589.25	582.60	582.97	-1.34	-0.23	606.49	491.56	1.8	8.7	7.7
NYSE Arca Biotech	5226.34	5172.08	5178.79	-28.65	-0.55	5644.50	4390.11	1.6	-1.9	-3.4
NYSE Arca Pharma	868.01	858.60	860.37	-3.17	-0.37	892.45	737.84	7.4	-0.9	9.1
KBW Bank	89.01	87.70	87.90	-0.17	-0.19	115.55	71.96	-19.0	-12.8	5.9
PHLX <sup>§</sup> Gold/Silver	120.77	119.08	119.63	1.18		<b>0.99</b> 144.37	91.40	10.8	-1.0	-9.1
PHLX <sup>§</sup> Oil Service	94.19	92.86	93.16	-0.17	-0.18	93.94	56.08	45.5	11.1	35.6
PHLX <sup>§</sup> Semiconductor	3751.33	3660.29	3699.20	-8.88	-0.24	3861.63	2162.32	21.2	46.1	18.7
Cboe Volatility	17.39	14.57	17.10	1.18		7.41 33.63	12.91	-19.1	-21.1	-10.4

§Nasdaq PHLX

				— Latest ———	YTD
Region/Country	y Index	Close	Net chg	% chg	% chg
World	MSCI ACWI	689.00	-0.58	-0.08	13.8
	MSCI ACWI ex-USA	306.24	2.04	0.67	8.9
	MSCI World	2986.54	-3.59	-0.12	14.7
	MSCI Emerging Markets	1018.02	2.21	0.22	6.4
Americas	MSCI AC Americas	1698.19	-8.13	-0.48 ▮	16.5
Canada	S&P/TSX Comp	20236.04	115.30	0.57	4.4
Latin Amer.	MSCI EM Latin America	2465.13	17.04	0.70	15.8
Brazil	BOVESPA	119507.68	-1078.09	-0.89	8.9
Chile	S&P IPSA	3550.61	11.48	0.32	11.9
Mexico	S&P/BMV IPC	53991.42	546.33	1.02	11.4
EMEA	STOXX Europe 600	459.28	1.35	0.29	8.1
Eurozone	Euro STOXX	457.74	2.36	0.52	11.7
Belgium	Bel-20	3731.41	16.62	<b>0.45</b>	0.8
Denmark	OMX Copenhagen 20	1970.75	-16.91	-0.85	7.4
France	CAC 40	7315.07	54.54	0.75	13.0
Germany	DAX	15951.86	58.48	0.37	14.6
Israel	Tel Aviv	1851.01		Closed	3.0
Italy	FTSE MIB	28586.37	-116.37	-0.41	20.6
Netherlands	AEX	772.71	2.64	0.34	12.1
Norway	Oslo Bors All-Share	1421.21	15.39	1.09	4.3
South Africa	FTSE/JSE All-Share	76960.61	213.41	0.28	5.4
Spain	IBEX 35	9368.38	61.28	0.66	13.8
Sweden	OMX Stockholm	829.58	6.18	0.75	6.1
Switzerland	Swiss Market	<b>1109</b> 8.48	11.30	0.10	3.4
Turkey	BIST 100	7400.57	179.06	2.48	- 1
U.K.	FTSE 100	7564.37	35.21	0.47	1.5
U.K.	FTSE 250	18934.62	100.97	0.54	0.4
Asia-Pacific	MSCI AC Asia Pacific	<b>166.</b> 44	0.44	0.27	6.9
Australia	S&P/ASX 200	7325.30	13.62	0.19	4.1
China	Shanghai Composite	3288.08	7.62	0.23	6.4
Hong Kong	Hang Seng	19539.46	118.59	0.61	-1.2
India	S&P BSE Sensex	65721.25	480.57	0.74	8.0
Japan	NIKKEI 225	32192.75	33.47	0.10	23.4
	Straits Times	3292.39	-11.67	-0.35	1.3
Singapore	Straits Tilles	24,412,	11.07		
Singapore South Korea		2602.80 16843.68	-2.59	-0.10   -0.30	16.4 19.1

**Trading Diary** 

Volume, Advancers, Decliners							
	NYSE	NYSE Amer.					
Total volume* 8	881,626,866	8,704,758					
Adv. volume* 3	350,361,363	4,883,977					
Decl. volume*	516,060,823	3,376,330					
Issues traded	3,021	324					
Advances	1,609	154					
Declines	1,319	141					
Unchanged	93	29					
New highs	111	5					
New lows	38	11					
Closing Arms†	1.83	0.60					
Block trades*	4,270	116					
	Nasdaq	NYSE Arca					
Total volume*5,	349,454,363	302,974,157					
Adv. volume*1,9	984,773,568	141,528,840					
Decl. volume*3,3	331,685,450	160,711,516					
Issues traded	4,456	1,769					
Advances	2,003	873					
Declines	2,272	880					
Unchanged	181	16					
New highs	69	10					
New lows	113	12					
Closing Arms†	1.48	0.92					
Block trades*	38,027	1,488					

\* Primary market NYSE, NYSE American NYSE Arca only †(TRIN) A comparison of the number of advancing and declining issues with the volume of shares rising and falling. An Arms of less than 1 indicates buying demand; above 1indicates selling pressure.

#### Percentage Gainers...

Sources: FactSet; Dow Jones Market Data

			rest sess	1011 —		- 5Z-VVEE	·K ——
Company	Symbol	Close	Net chg	% chg	High	Low	% chg
US Cellular	USM	33.76	16.26	92.91	35.00	13.79	10.3
Telephone Data Sys	TDS	14.84	6.94	87.85	17.42	6.44	-8.1
Applied Optoelectronics	AAOI	11.01	4.42	67.07	11.48	1.60	491.9
Tupperware Brands	TUP	4.77	1.25	35.51	12.86	0.61	-57.9
Alector	ALEC	8.77	2.15	32.38	13.50	5.65	-32.8
OraSure Technologies	OSUR	5.94	1.45	32.29	7.82	3.11	87.4
SunCar Tech CI A	SDA	17.18	4.18	32.15	45.73	3.80	68.6
ICZOOM Group CI A	IZM	9.05	2.04	29.10	9.48	1.61	
Dream Finders Homes	DFH	30.38	6.44	26.90	30.67	8.17	140.7
BigCommerce Holdings	BIGC	12.08	2.55	26.76	21.80	6.81	-35.8
Biodexa Pharma ADR	BDRX	6.40	1.30	25.49	1664.00	3.51	-99.5
ESGL Holdings	ESGL	12.83	2.36	22.54	24.72	7.00	28.7
Amneal Pharmaceuticals	AMRX	4.11	0.75	22.32	4.27	1.24	29.2
Willdan Group	WLDN	24.48	4.23	20.89	28.75	10.98	-11.0
Centrus Energy	LEU	42.25	7.22	20.61	55.59	24.88	8.9

#### **Percentage Losers**

		— Lā	atest Sess	ion —		- 52-Wee	ek ——
Company	Symbol	Close	Net chg	% chg	High	Low	% ch
Mesoblast ADR	MESO	1.64	-2.35	-58.90	5.12	1.30	-53.0
Assertio Holdings	ASRT	2.91	-2.44	-45.61	8.01	2.07	-27.
INVO BioScience	INVO	2.00	-1.16	-36.71	33.00	1.71	-90.7
ParaZero Technologies	PRZO	1.49	-0.59	-28.26	4.15	1.45	
Cheetah Net Supply Chain	CTNT	2.66	-0.97	-26.72	6.90	2.55	
Nikola	NKLA	2.50	-0.90	-26.36	8.97	0.52	-68.9
Opendoor Technologies	OPEN	3.54	-1.27	-26.33	6.39	0.92	-38.3
ContextLogic	WISH	6.24	-2.14	-25.54	57.60	6.22	-88.
Fortinet	FTNT	56.77	-18.99	-25.07	81.24	42.61	6.3
DigitalOcean	DOCN	35.11	-11.57	-24.79	53.88	23.38	-23.4
Redfin	RDFN	10.85	-3.50	-24.39	17.68	3.08	4.5
WW International	WW	8.20	-2.49	-23.29	12.13	3.28	32.7
Icahn Enterprises	IEP	25.09	-7.59	-23.23	55.16	18.03	-53.3
GrafTech International	EAF	4.05	-1.18	-22.56	7.46	3.75	-41.8
Electriq Power Holdings	ELIQ	4.42	-1.23	-21.77	11.85	3.00	-55.2

#### **Most Active Stocks**

Company	Symbol	Volume (000)	% chg from <b>-</b> 65-day avg	Latest S Close	ession % chg	52-W€ High	eek
Mullen Automotive	MULN	318,243	35.0	0.12	-12.45	23.25	0.10
T2 Biosystems	TTOO	190,954	177.5	0.25	-28.57	15.00	0.05
Nikola	NKLA	169,488	128.7	2.50	-26.36	8.97	0.52
Tivic Health Systems	TIVC	160,778	1126.2	0.07	24.26	2.76	0.04
ProSh UltraPro Shrt QQQ	SQQQ	159,971	34.7	18.57	1.36	69.55	16.38
$^{\circ}$ Common stocks priced at \$2 a share or more with an average volume over 65 trading days of at least							
5,000 shares †Has traded fewer than 65 days							

#### **Consumer Rates and Returns to Investor**

1530.46

#### **U.S.** consumer rates

SET

Sources: FactSet; Dow Jones Market Data

Thailand

A consumer rate against its benchmark over the past year						
,M.	much					
		6.50%				
1	30-year fixed-rate	te				
<u></u>	mortgage	5.50				
	10-year Treasury ▼ note yield	4.50				
[00]	▼ note yield					

ASONDJFMAMJJA

2023

1 . . . . . . . 2.50

#### **Selected rates** 30-year mortgage, Rate

Johnstown, PA

1.45

Bankrate.com avg†:	7.49%
Lee Bank	5.63%
Lee, MA	800-843-4100
Cedar Rapids Bank and Trust	6.00%
Cedar Rapids, IA	319-862-2728
El Dorado Savings Bank	6.00%
South Lake Tahoe, CA	800-874-9779
The Home National Bank	6.13%
Thorntown, IN	765-436-2222
1st Summit Bank	6.24%

-8.3

888-262-4010

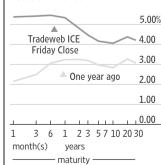
nterestrate		ate (%)— ) Week ago	52-V Low 0	Range (		3-yr chg (pct pts)
Federal-funds rate target	5.25-5.50	5.25-5.50	2.25	•	5.50	5.25
Prime rate*	8.50	8.50	5.50		● 8.50	5.25
SOFR	5.30	5.31	2.25	•	5.31	5.20
Money market, annual yield	0.57	0.56	0.12		0.57	0.32
Five-year CD, annual yield	2.85	2.86	1.83		2.86	2.16
<b>30-year mortgage,</b> fixed <sup>†</sup>	7.49	7.42	5.43	(	7.49	4.45
L5-year mortgage, fixed†	6.75	6.69	4.76		6.75	4.05
<b>Jumbo mortgages,</b> \$726,200-plus	7.56	7.48	5.41	(	7.56	4.48
Five-year adj mortgage (ARM)†	6.35	6.22	4.19		6.35	3.11

New-car loan, 48-month 7.26 7.26 5.07 6.35 3.11

New-car loan, 48-month 7.26 7.26 5.07 7.64 2.99

Bankrate.com rates based on survey of over 4,800 online banks. \*Base rate posted by 70% of the nation's largest banks.† Excludes closing costs.

#### Treasury yield curve Yield to maturity of current bills, notes and bonds



Yen, euro vs. dollar; dollar vs. major U.S. trading partners 12% WSJ Dollar Index

2023

**Forex Race** 

2022

Sources: J.P. Morgan; Bloomberg Fixed Income Indices; ICE Data Services

Sources: Tradeweb ICE U.S. Treasury Close; Tullett Prebon; Dow Jones Market Data

#### **Corporate Borrowing Rates and Yields**

Bond total return index	Close	Yield	(%) — Week ago	— 52-V High	Veek — Low	Total Return ( 52-wk 3-y	-
U.S. Treasury, Bloomberg	2103.680	4.430	4.440	4.560	3.070	<b>-4.671</b> -5.46	8
U.S. Treasury Long, Bloomber	g 3107.630	4.320	4.150	4.570	3.150	<b>-15.136</b> -14.82	1
Aggregate, Bloomberg	1975.050	4.940	4.870	5.210	3.580	<b>-4.097</b> -4.73	6
Fixed-Rate MBS, Bloomber	g <b>1953.290</b>	5.110	4.850	5.380	3.500	<b>-5.102</b> -4.11	2
High Yield 100, ICE BofA	3312.520	7.994	7.823	8.753	6.786	<b>4.016</b> 1.65	9
Muni Master, ICE BofA	564.637	3.520	3.328	3.936	2.513	<b>-0.431</b> -1.50	1
EMBI Global, J.P. Morgan	800.249	7.710	7.541	9.159	7.084	<b>3.103</b> -3.90	1

#### Track the Markets: Winners and Losers

A look at how selected global stock indexes, bond ETFs, currencies and commodities performed around the world for the week.

26.82	and commodities performed around th	ne world for the week.
23.06	■ Index ■ Currency, ■ Co	ommodity, Exchange-
0.83	vs. U.S. dollar tra	aded in U.S.* <b>traded fund</b>
	Nymex ULSD	3.81%
	Nymex crude	2.78
	S&P 500 Energy	1.15
14400	WSJ Dollar Index	0.56
	Norwegian krone	_
14000	Shanghai Composite	_
14000		iSh 1-3 Treasury
		Euro area euro
13600		KOSPI Composite
		S&P 500 Consumer Discr
13200		
		Indonesian rupiah
12800		Chinese yuan
12000	_	Japanese yen
		Indian rupee
12400		BOVESPA Index
		VangdTotIntlBd
12000	-0.60	iSh 7-10 Treasury
	-0.62	iSh TIPS Bond
	-0.66	S&P BSE Sensex
	-0.78	U.K. pound
	-0.82	VangdTotalBd
	-0.83	S&P 500 Financials
liners	-0.86	iShNatlMuniBd
E Amer.	-0.89	iShiBoxx\$HYCp
	-0.91	S&P SmallCap 600
04,758	-0.91	Canadian dollar
83,977	-1.06	
76,330		
324	-1.06	Comex gold
154	-1.11	Dow Jones Industrial Average
141	-1.17	Australian dollar
29	-1.21	Bloomberg Commodity Index
5	-1.21	Russell 2000
11	-1.30	S&P MidCap 400
0.60	-1.32	Swiss franc
116	-1.38	S&P/TSX Comp
	-1.51	iShJPMUSEmgBd
'SE Arca	-1.53	iShiBoxx\$InvGrdCp
974,157	-1.67	S&P/BMV IPC
528,840	-1.69	FTSE 100
711,516	-1.73	NIKKEI 225
1,769	-1.79	S&P 500 Industrials
873	-1.84	Comex copper
880	-1.89	Hang Seng
16	-1.90	S&P 500 Consumer Staples
10	-2.03	S&P 500 Materials
12	-2.09	S&P 500 Health Care
0.92		
1,488	-2.10	Lean hogs
	-2.16	CAC-40
Arca only.	-2.20	S&P 500 Real Estate
nd declining falling. An	-2.25	Dow Jones Transportation Average
id; above 1	-2.27	S&P 500
,	-2.28	Mexican peso
	-2.31	Nymex natural gas
	-2.33	South Korean won
k ——	-2.44	STOXX Europe 600
% chg	-2.69	Euro STOXX
10.3	-2.85	Nasdaq Composite
-8.1	-2.85	S&P 500 Communication Svcs
491.9	-2.88	Soybeans
-57.9	-3.02	Nasdaq-100
-32.8	-3.09	Comex silver
87.4	-3.10	FTSE MIB
68.6	-3.14	DAX
	-3.14	IBEX 35
140.7		
-35.8	-3.29	iSh 20+ Treasury
-99.5	-3.62	Nymex RBOB gasoline
-99.5 28.7	-3.98	Russian ruble
29.2	-4.14	S&P 500 Information Tech
-11.0	-4.57	South African rand
8.9	-4.66	S&P 500 Utilities
0.7	-7.05	Corn

Sources: FactSet (indexes, bond ETFs, commodities), Tullett Prebon (currencies).

#### Methodology

Corn

Wheat

Performance reflects price change (except DAX, Bovespa, and Tel Aviv 35, which reflect total returns). Commodities are represented by the continuous front-month futures contract. Bond exchange-traded fund performance may diverge from that of their underlying index. Bond categories are represented by the following ETFs: U.S. Bonds Total Market: Vanguard Total Bond Market; 1-3 Yr U.S. Treasurys: IShares 1-3 Year Treasury; U.S. 7-10 Yr Treasurys: iShares 7-10 Year Treasury; 20+ Yr U.S. Treasurys: IShares 20+ Year Treasury; Treasury Inflation-Protected Securities (TIPS): iShares TIPS; Investment Grade Corporate Bonds: iShares iBoxx \$ Investment Grade Corporate; High Yield Corporate Bonds: IShares IBoxx \$ High Yield Corporate; Municipal Bonds: iShares National Muni; International Bonds: Vanguard Total International; Emerging Market Bonds: iShares J.P. Morgan USD Emerging Markets.



\*Continuous front-month contracts

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#### **Currencies**

U.S.-dollar foreign-exchange rates in late New York trading

8.0762 1.8734 1.3372 851.90	57.3	Country/currency Vietnam dong Europe	in US\$	,	
1.8734 1.3372 351.90			.00004213	23735	0.
1.8734 1.3372 351.90		Europe			
L.3372 351.90	-7.8				
351.90		Czech Rep. koruna	.04536	22.044	-2.
	-1.3	<b>Denmark</b> krone	.1478	6.7678	-2.
04.47	0.4	Euro area euro	1.1012	.9081	-2
.04.4/	-15.3	<b>Hungary</b> forint	.002826	353.80	-5
1	unch	Iceland krona	.007588	131.79	-6
7.0797	-12.4	Norway krone	.0985	10.1507	3
3.2750	-4.3	Poland zloty	.2483	4.0277	-8
		Russia ruble	.01043	95.875	30
1.5221	3.7	Sweden krona	.0945	10.5805	1
7.1708	4.0	Switzerland franc	1.1455	.8730	-5
7.8114	0.1	Turkey lira	.0371	26.9281	44
32.685		Ukraine hryvnia	.0271	36.9500	0
		<b>UK</b> pound	1.2749	.7844	-5
15153 L41.73	8.1	Middle East/Afri	ica		
145.40		Bahrain dinar	2.6522	.3771	un
3.0500		Egypt pound		30.9449	
1.5550	3.4	Israel shekel		3.6538	3
1.6426		Kuwait dinar	3.2538		0
35.265		Oman sul rial	2.5974		_
55.130		<b>Qatar</b> rial	.2744		
L.3427	0.1	Saudi Arabia riyal		3.7516	-
					_
		South Africa rand	.0541	10.4002	ŏ
			Close Net C	ha %Cha`	YTD%
		WS I Dollar Index			0.1
	303.62	303.62 <b>3.3</b> 321.10 <b>-12.6</b> 31.667 <b>3.3</b>	303.62 3.3 South Africa rand 321.10 -12.6 81.667 3.3	803.62 <b>3.3 South Africa</b> rand .0541 821.10 <b>-12.6</b> 81.667 <b>3.3</b> Close Net C	803.62 <b>3.3 South Africa</b> rand .0541 18.4682 821.10 <b>-12.6</b> 81.667 <b>3.3</b> Close Net Chg % Chg

Sources: Tullett Prebon, Dow Jones Market Data

#### C

Commodities							
		Frid			YTD		
	Close	Net chg	% Chg	High	Low	% Chg	% chg
DJ Commodity	1002.17	4.69	0.47	1113.32	930.59	-5.14	-4.44
Refinitiv/CC CRB Index	279.46	0.98	0.35	301.75	253.85	-0.56	0.62
Crude oil, \$ per barrel	82.82	1.27	1.56	97.01	66.74	-6.95	3.19
Natural gas, \$/MMBtu	2.577	0.012	0.47	9.680	1.991	-68.04	-42.41
Gold, \$ per troy oz.	1939.60	7.60	0.39	2048.00	1623.30	9.40	6.59

Contract

Settle

.6582

.05803

1.1032

35483

4498.00

2710.20

1965.50

1985.80

2005.30

2466.60

101.84

4544.25 **4548.00** 

15336.50 **15354.00** 

15534.75 **15551.25** 

**1.1013** .0066

.6555

.05691

1.0940

1.0952

35459

4493.75

2684.20

1958.70

1980.20

2002.00

2465.90

101.55

101.23

interest

.0025 182,543

.00071 233,573

.0066 728,801

-162

-2.90

-85.75

-5.40

-5.40

-14.60

-.52

-23.75 2.185.860

-84.75 256,305

-5.30 511.926

2,336

8,213

29,433

Source: FactSet

High hilo

.6619

Mexican Peso (CME)-MXN 500.000: \$ per MXN

.05832

1.1046

1.1065

Mini DJ Industrial Average (CBT)-\$5 x index

35921

Mini S&P Midcap 400 (CME)-\$100 x index

Open

.6561

.05778 .05717

1.0948

1.0972

35295

35708

Mini S&P 500 (CME)-\$50 x index

4523.50 4560.75

2691.30 2721.20

Mini Nasdaq 100 (CME)-\$20 x index

Mini Russell 2000 (CME)-\$50 x index

2022.20

15441.00 15610.25

15659 75 15808 25

1969.70 1987.70

1988.00 2007.60

101.90

Mini Russell 1000 (CME)-\$50 x index

U.S. Dollar Index (ICE-US)-\$1,000 x index

Aug

Sept

Sept

Sept

Dec

March'24 2015.00

#### MARKET DATA

127-200 **129-280** 2-01.0

SHV 110.08

TLT 96.53 1.77 -3.0

JPST

DIA

SPYV 43.83 -0.07 12.7

SPYG 61.12 -0.88 20.6

SCHD 74.16 52.90

SCHG 75.25 -0.44

VEU 54.81 0.24

SCHA 45.14 MDY 489.89 SDY 124.41

63.99

435.43

153.49 -0.15

231.77

46.18

61.59

283.09

243.54

74.48 78.28

58.34 0.76

204.52 -0.45 -0.63

141.11 45.26 -0.35 0.94

222.90 97.92

**VTV** 144.73

**USFR** 50.38

VNQ 83.03

VOO 410.38 BSV 75.59 VCSH 75.74

VTEB BND BNDX 49.66 71.70 48.50

VXUS 56.53

Amount

**VYM** 108.51

106.47

22.60 55.13 0.74 -0.31

50.06

41.14 91.50 0.02 0.0

350.65 -0.38 5.8

446.81 35.60

52.29

0.03

0.31 32.57

-0.40 -0.45

-0.58 -1.36 -1.16

-1.31 0.04

-0.49

-0.81

-0.49 0.35

0.33 57.69 0.19

0.34

0.83 0.31 0.27

-0.45

**-0.18** 13.6

Payable / Record

-0.1

Futi	ures (	Contr	ac	:ts					_		tract			Ope
									0pen	High hilo	Low	Settle	Chg	interes
	Me	etal & P	etr	oleum	Futur	es		Soybe	ean Meal	( <b>CBT)</b> -100 to	ns; \$ per ton.			
			ntrac				Open	Aug	452.00	457.90	443.20	444.10	-7.10	1,060
	Open	High		Low	Settle	Cha	interest	Dec	399.00	407.70	396.10	397.70	80	206,955
Canna	r-High (C	-			Settle	cing	meerese	Soybe	ean Oil (CE	<b>T)</b> -60,000 lb	s.; cents per	lb.		
Coppe: Aug	3.8305	3.8430	בטו טכ	3.8035	2 8/150	-0.0310	644	Aug	67.98	68.00	67.20	68.00	1.01	651
Sept	3.8995	3.9280		3.8255		-0.0320	113,624	Dec	60.15	61.72	60.06	61.52	1.48	192,904
	: <b>MX)</b> -100 t		ortro		3.0073	-0.0320	113,024	Roug	h Rice (CB <sup>.</sup>	<b>r)</b> -2,000 cwt	.;\$percwt.			
Aug	1934.90	1945.00	er tro	1920.00	1939.60	7.60	3,267	Sept	16.01	16.13	15.90	15.95	13	7,792
Sept		1954.60		1927.50	1946.90	7.00	2,472	Nov	16.20	16.30	16.08	16.14	13	1,949
Oct	1950.20	1964.60		1936.00	1956.60	7.20	33,584	Whea	<b>It (CBT)</b> -5,0	00 bu.; cents	per bu.			
Dec	1969.60	1984.20		1954.50	1976.10	7.20	369,909	Sept	627.75	653.75	627.25	633.00	6.00	135,053
Feb'24	1991.30			1975.90	1996.50	7.40	14,852	Dec	656.00	681.25	655.00	660.25	5.25	114,493
April	2010.40			1997.20	2016.10	7.40	6,917	Whea	<b>t (KC)</b> -5,00	0 bu.; cents p	er bu.			
	ium (NYM		07·¢			7.40	0,717	Sept	770.25	785.00	752.00	752.50	-15.00	69,147
Aug	iuiii (Niiv	1 <b>)</b> - 50 ti 0y	UZ., Φ	per troy o.	1253.70	7.20		Dec	785.50	799.00	768.00	769.25	-12.75	70,323
Sept	1252.00	1272.50		1239.00	1264.60	7.20	15,368	Cattle	-Feeder (	<b>CME)</b> -50,00	0 lbs.; cents p	oer lb.		
	um (NYM)		. ¢ n		1204.00	7.20	17,500	Aug	247.500	249.975	247.200	249.525	1.575	10,454
Aug	908.60	914.00	., p p	908.40	919.40	6.60	1	Sept	251.275	254.150	250.900	253.450	1.800	19,522
Oct	920.20	931.50		914.10	928.50	6.70	67,223	Cattle	e-Live (CM	<b>E)</b> -40,000 lb	s.; cents per l	b.		
	920.20 (CMX)-5,00		¢ nor		720.70	0.70	07,223	Aug	178.500	181.125	178.425	180.900	2.400	28,709
Aug	23.600	23.625	φ þei	23.375	23.617	0.031	36	Oct	181.475	183.725	181.300	182.900	1.600	138,208
Sept	23.710	23.895		23.275	23.716	0.031	98,652	Hogs-	Lean (cm	E)-40,000 lb:	s.; cents per ll	b.		
	Oil, Light		NVA				70,002	Aug	101.300	101.700	100.500	101.025	.025	17,674
Sept	81.73	83.24		81.51	82.82	1.27	331,246	Oct	82.050	83.500	81.650	83.075	1.025	86,218
Oct	81.22	82.66		81.04	82.27	1.19	227,918	Lumb	<b>er (CME)</b> -2	7,500 bd. ft.,	per 1,000 b	d. ft.		
Nov	80.79	82.11		80.56	81.75	1.14	135,476	Sept	498.50	499.00	495.00	495.50	-2.00	4,236
Dec	80.18	81.53		80.05	81.21	1.09	234,824	Nov	510.00	510.50	503.50	505.00	-5.50	2,174
June'24		78.47		77.21	78.25	0.93	126,923	Milk (	<b>CME)</b> -200,0	00 lbs., cents	per lb.			,
Dec 24	74.70	75.73		74.56	75.55	0.85	127,404	Aug	17.07	17.35	17.03	17.20	.11	5,181
	rbor ULS					0.00	127,404	Sept	17.21	17.67	17.19	17.48	.29	5,432
Sept	3.0852	3.0954		3.0390	3.0622	0127	83,272			0 metric tons				-,
Oct	3.0533	3.0599		3.0131	3.0373	0060	54,189	Sept	3,486	3,551	3,485	3,510	19	103,242
	ne-NY RI					0000	24,107	Dec	3,487	3,533	3,483	3,498	10	135,840
Sept	2.7780	2.8199	11)	2.7608	2.7831	.0184	115,702	Coffe	e (ICE-US)-	37,500 lbs.; co	ents per lb.			
Oct	2.5434	2.5724		2.5282	2.5460	.0127	78,371	Sept	164.00	165.00	161.00	161.35	-3.40	77,677
	al Gas (NY		2 1 1 1			.0127	70,371	Dec	163.40	164.30	160.60	160.95	-3.05	65,277
Sept	2.556	2.619	JIVIIV	2.529	2.577	.012	331,239			<b>CE-US)</b> -112,0				,
Oct	2.658	2.720		2.635	2.681	.012	116,650	Oct	24.07	24.11	23.57	23.69	33	388,499
Nov	3.055	3.100		3.027	3.075	.012	114,400	March'2		24.28	23.77	23.88	31	
Jan'24	3.710	3.752		3.688	3.737	.012	87,716			ic (ICE-US)-				
March	3.367	3.400		3.348	3.387	.013	76,655	Sept				39.52	07	819
April	3.080	3.103		3.063	3.092	.007	69,795	March'2	24			42.01	.01	3,008
April	5.000	5.105		5.005	3.072	.007	07,770			50,000 lbs.; c	ents per lh	12.02	.01	2,000
		Agric	ulti	ure Fut	turas			Oct	85.00	86.05	85.00	85.27	01	110
		Agric	ши	ai e i u	Lui Co			Dec	84.85	85.14	83.81	84.29	41	
Corn (C	<b>CBT)</b> -5,000	bu.; cents p	oer bu	u.						CE-US)-15,00			1	10//61/
Sept	482.50	493.50		480.25	484.25	3.50	362,535	Sept	299.45	306.25	298.35	301.40	2.15	7,604
Dec	495.75	506.50		493.00	497.25	3.75	590,256	Nov	284.50	290.00	283.75	287.65	2.60	2,048
Oats (c	<b>CBT)</b> -5,000	bu.; cents į	per bi	u.				1400	204.50	270.00	203.73	207.05	2.00	2,040
Sept	426.75	434.75		414.75	419.75	-4.75	1,018			Interest	Rate E	ituras		
Dec	440.00	453.75		431.25	439.00	-5.00	3,109							
Soybe	ans (CBT)		cent							Bonds (CB				
Aug		1446.00		1430.25	1444.00	15.25	735	Sept		128-120		128-020		
Nov	1224 00	12/E 7E		1222 EA	1222 25	0.00	200 022	Doc	120_070	120_050	127-200	120_220	2 01 0	156

Contract

**5 Yr. Treasury Notes (CBT)**-\$100,000; pts 32nds of 100% Sept 106-125 107-010 105-307 **106-287** 17.0

 2 Yr. Treasury Notes (CBT) - \$200,000; pts 32nds of 100%

 Sept
 101-161
 101-227
 101-100
 101-212
 5.6

 Dec
 101-310
 102-067
 101-272
 102-050
 6.0

**Currency Futures** 

.7008

.7036

.7470

1.2655

1.1552

Bonds | wsj.com/market-data/bonds/benchmarks

Global Government Bonds: Mapping Yields

1,2055 ); \$ per CHF 1.1437

.7097

.7476

1.2757

1.1510

1.1624

 Three-Month SOFR (CME)-\$1,000,000; 100 - daily

 May
 94.8575
 94.8575
 94.8575
 94.8575

 Dec
 94.6250
 94.6700
 94.5900
 94.6550

 $\textbf{Japanese Yen (CME)-} \$12,\!500,\!000;\$\,per\,100\$$ 

.7073

.7113

.7512

1.2796

1.1654

Australian Dollar (CME)-AUD 100,000; \$ per AUD Aug .6552 .6611 .6548 .6574

 Sept
 ./493
 ./312

 British Pound (CME)-£62,500; \$per £

 Aug
 1.2735
 1.2792
 1.2692

 Canadian Dollar (cME)-CAD 100,000; \$ per CAD

 Aug
 .7486
 .7508
 .7468
 .7473

.7023

1.2735 1.2713

Swiss Franc (CME)-CHF 125 Sept 1.1491 1.1547

119-250

106-220 107-147

Settle

1-21.0 1.308.344

29.0 4,816,118

17.0 5,608,756

5.6 3,679,053

avg. .0025 27,757 .0350 1,272,773

.0041 223,325

-.0016 140,106

42,277

746

584

-.0017

.0054 200,465

.0028

.0030

.0025

3,379

314,306

17.7

High hilo

**Treasury Bonds (CBT)**-\$100,000; pts 32nds of 100%

Open

120-180 122-090 120-190 122-150

106-125 107-010 106-272 107-187

Yields and spreads over or under U.S. Treasurys on benchmark two-year and 10-year government bonds in selected other countries; arrows indicate whether the yield rose(▲) or fell (▼) in the latest session

	Country/			——— Yield	(%)			Spread Under/Over U.S. Tr	easurys, in basis	points
Coupon (%)	Maturity, in years	Latest(•)-	1 0 1	2 3 4	5 Previous	Month ago	Year ago	Latest	Prev	Year ago
4.750	<b>U.S.</b> 2	4.791 ▼		•	4.894	4.938	3.035			
3.375	10	4.060 ▼		•	4.188	3.856	2.674			
0.250	Australia 2	3.929 ▲		•	3.915	4.191	2.672	-85.4	-97.3	-38.2
3.000	10	4.200 🛦		•	4.098	4.015	3.152	<b>13.4</b>	-8.1	45.5
0.000	France 2	3.264 ▲		•	3.250	3.415	0.234	-151.9	-163.7	-282.0
3.000	10	3.097 ▼		•	3.115	3.003	1.360	-96.9	-106.4	-133.7
3.100	Germany 2	2.984 ▼		•	3.012	3.225	0.316	-179	-187.5	-273.8
2.600	10	2.569 ▼		•	2.603	2.457	0.804	-149.7	-157.6	-189.4
3.600	Italy 2	3.648 ▼		•	3.661	3.937	1.239	-113.5	-122.7	-181.5
4.350	10	4.213 ▼		•	4.243	4.198	2.843	<b>14.6</b>	6.4	14.6
0.005	Japan 2	0.029 🛦	•		0.022	-0.069	-0.094	-475.4	-486.5	-314.8
0.400	10	0.646 ▼	•		0.654	0.375	0.175	-342.0	-352.5	-252.2
0.000	Spain 2	3.432 ▲		•	3.431	3.553	0.601	-135.1	-145.6	-245.3
3.550	10	3.590 ▼		•	3.629	3.469	1.911	-47.6	-55.0	-78.7
0.625	<b>U.K.</b> 2	4.841 ▼		•	4.964	5.321	1.826	<b>5.8</b>	7.6	-122.8
4.250	10	4.384 ▼		•	4.474	4.414	1.888	31.8	29.4	-80.9

Source: Tullett Prebon, Tradeweb ICE U.S. Treasury Close

C	or	p	or	at	e D	)el	ot
_			c c.				-

Prices of firms' bonds reflect factors including investors' economic, sectoral and company-specific expectations

#### Investment-grade spreads that tightened the most...

investment grade spreads		•			Caus	a dé la baala a si	- to
Issuer	Symbol	Coupon (%)	Yield (%)	Maturity	Current	ad*, in basis poi One-day change	Last week
John Deere Capital		4.050	4.93	Sept. 8, '25	15	-15	25
HSBC Holdings	HSBC	4.375	5.93	Nov. 23, '26	147	-12	148
Citigroup	c	8.125	5.74	July 15, '39	132	-8	137
Credit Suisse	cs	7.500	5.85	Feb. 15, '28	170	-7	179
Mercedes-Benz Finance North America	MBGGR	4.800	5.18	March 30, '26	68	-7	58
Societe Generale	SOCGEN	7.367	7.66	Jan. 10, '53	337	-7	334
Australia and New Zealand Banking	ANZ	5.088	5.07	Dec. 8, '25	26	-6	n.a.
Bank of America	BAC	3.500	5.14	April 19, '26	65	-5	62
And spreads that widene	d the n	nost					
Royal Bank of Canada	RY	5.000	5.54	Feb. 1, '33	136	52	138
Nestle Holdings	NESNVX	4.000	4.97	Sept. 12, '25	16	20	n.a
Bank of America	ВАС	5.875	5.52	Feb. 7, '42	110	15	113
BHP Billiton Finance	ВНР	5.000	5.23	Sept. 30, '43	84	7	89
Bank of Montreal	вмо	5.300	5.34	June 5, '26	86	7	77
Toyota Motor Credit	тоуота	3.650	5.16	Aug. 18, '25	35	7	n.a
National Australia Bank	NAB	4.900	5.25	June 13, '28	96	5	90
Procter & Gamble	PG	1.900	4.63	Feb. 1, '27	45	5	n.a

					Bond Price	ce as % of face v	/alue ——
Issuer	Symbol	Coupon (%)	Yield (%)	Maturity	Current	One-day change	Last week
Navient	NAVI	5.625	9.39	Aug. 1, '33	75.947	1.17	76.480
Dish DBS		5.125	19.44	June 1, '29	51.375	1.13	50.000
Bath & Body Works	BBWI	6.750	7.87	July 1, '36	90.986	0.74	90.554
Occidental Petroleum	ОХҮ	6.450	6.16	Sept. 15, '36	102.619	0.64	104.656
Ford Motor Credit		4.389	6.64	Jan. 8, '26	95.039	0.54	95.542
Bausch Health	BHCCN	11.000	18.96	Sept. 30, '28	74.500	0.50	73.843
Intelsat Jackson Holdings	INTEL	6.500	8.30	March 15, '30	91.000	0.50	91.500
And with the bigges	t price decre	eases					
						0.72	

Hughes Satellite Systems		6.625	10.83	Aug. 1, '26	89.530	-0.72	89.764
Deutsche Bank	DB	4.500	6.99	April 1, '25	96.179	-0.01	96.210

\*Estimated spread over 2-year, 3-year, 5-year, 10-year or 30-year hot-run Treasury; 100 basis points=one percentage pt.; change in spread shown is for Z-spread. Note: Data are for the most active issue of bonds with maturities of two years or more Source: MarketAxess

#### Exchange-Traded Portfolios | wsj.com/ETFresearch

1333.25

8.00 309,933

1322.50

Friday,	August 4	1, 2023 Closing	Cha	YTD	ETF	Symbol	Closing Price	Chg (%)	<b>Y</b> 1
ETF	Symbol		(%)	(%)	iShEdgeMSCIUSAQua	QUAL	136.76	-0.56	20
CnsmrDiscSelSector	XLY	171.55	1.45	32.8	iShGoldTr	IAU	36.77	0.33	(
CnsStapleSelSector	XLP		-0.99	0.1	iShiBoxx\$HYCpBd	HYG	74.65	0.59	1
DimenUSCoreEg2	DFAC		-0.40	13.8	iShiBoxx\$IGCpBd	LQD	105.90	1.04	(
EnSelSectorSPDR	XLE	86.92	0.14	-0.6	iShJPMUSDEmBd	<b>EMB</b>	86.24	1.33	2
FinSelSectorSPDR	XLF		-0.40	2.1	iShMBS	MBB	91.74	0.92	-1
HealthCareSelSect			-0.35	-2.5	iShMSCIACWI	ACWI		-0.21	13
IndSelSectorSPDR			-0.61	10.2	iShMSCI EAFE	EFA	72.16	0.28	9
InvscQQQI			-0.47	39.7	iSh MSCI EM	EEM		-0.12	7
InvscS&P500EW			-0.45	7.1	iShMSCIEAFEValue	EFV	49.68	0.55	8
iShCoreDivGrowth	DGRO		-0.59	4.4	iShNatlMuniBd		105.74	0.44	(
iShCoreMSCIEAFE	IEFA	67.52	0.33	9.5	iSh1-5YIGCorpBd	IGSB	50.20	0.32	(
iShCoreMSCIEM	IEMG	50.58	0.02	8.3	iSh1-3YTreaBd	SHY	81.07	0.20	-(
iShCoreMSCITotInt	IXUS	63.10	0.29	9.0	iShRussMC	IWR		-0.50	,
iShCoreS&P500			-0.47	16.9	iShRuss1000			-0.47	10
iShCoreS&P MC		267.72	0.01	10.7	iShRuss1000Grw			-0.48	28
iShCoreS&P SC			-0.01	9.2	iShRuss1000Val			-0.36	11
iShCoreS&PTotUS	ITOT		-0.46	16.7	iShRussell2000 iShS&P500Grw	IWM		-0.20 -0.86	11 20
iShCoreTotalUSDBd	IUSB	44.88	0.81	-0.1	iShS&P500GrW iShS&P500Value	IVW		-0.86	12
iShCoreUSAggBd	AGG	96.68	0.82	-0.1	iShSelectDiv			-0.55	-4
iShEdgeMSCIMinUSA		74.30	-0.55	3.1	iSh7-10YTreaBd	IEF	95.05	1.06	
ISHEUGEWISCHVIINUSA	OSIVIV	74.30	-0.55	5.1	12U1-TO LI LEARD	IEF	95.05	T.00	-0

#### **Borrowing Benchmarks** | wsJ.com/bonds

#### **Money Rates** Key annual interest rates paid to borrow or lend money in U.S. and

1326.00 1345.75

August 4, 2023

128-070 130-050

**ETF** i Sh Short Trea Bd

iShTIPSBondETF

iShUSTreasuryBd JPMEquityPrem

JPM UltShIncm

ProShUltPrQQQ SPDRBbg1-3MTB

SPDR Gold SPDRPtfDevxUS

SPDRS&P500Value

SPDRS&P500Growt

SchwabUS BrdMkt

SchwabUS LC Grw

SchwabUS SC SPDR S&PMdCpTr

TechSelectSector UtilitiesSelSector

VangdInfoTech

VangdSC Val

VangdExtMkt

VangdSC Grwth

VangdDivApp VangdFTSEAWxUS

VangdFTSEDevMk VangdFTSEEM

VangdFTSE Europe

VangdGrowth VangdHlthCr

VangdHiDiv

VangdMC VangdMC Val VangdMBS

VangdRealEst

VanadSTCpBd

VangdS&P500ETF VangdST Bond

Low

2.25

5.25

VangdIntermBd

VangdIntrCorpBd

VangdIntermTrea VangdLC

SPDRPtfS&P500

SPDR S&P 500 SchwabIntEquity

SchwabUS Div SchwabUS LC

SPDR S&P Div

SPDR DJIA Tr

iSh20+YTreaBd

international markets. Rates below are a guide to general levels but don't always represent actual transactions. —52-WEEK High Lo Inflation

Switzerland

Britain

	June index	Chg From (%)						
	level	May '23	June '22					
U.S. consu	ımer price inc	dex						
All items	305.109	0.32	3.0					
Core	308.910	0.26	4.8					
International rates								

	Week Latest ago		– 52-Week High Low		
Prime rates					
U.S.	8.50	8.50	8.50	5.50	
Canada	7.20	7.20	7.20	4.70	
Japan	1.475	1.475	1.475	1.475	
Policy Rates					

U.S.	8.50	8.50	8.50	5.50	
Canada	7.20	7.20	7.20	4.70	
Japan	1.475	1.475	1.475	1.475	
<b>Policy Rates</b> Euro zone	4.25	4.00	4.25	0.50	

**Dividend Changes** 

Otonomo Technolo Sempra

Foreign

Australia	4.10	4.10	4.10	1.85
Australia	4.10	4.10	4.10	1.00
Sec	ondary	mar	ket	
Fannie Mae	•			
30-year morte	gage yields			
30 days	6.644	6.391	6.812	4.529
60 days	6.676	6.394	6.988	4.569
Notes on data	:			
U.S. prime rate loans posted b U.S. banks, and prime rates at practices vary Money Rates t Friday.	y at least 70 is effective en't directly widely by lo	)% of the July 27, compa cation. (	2023. <b>0</b> 2023. <b>0</b> rable; le complet	est <b>Other</b> nding e
Sources: Rurea	u of Labor 9	Statistic	s: FactS	et

Latest ago

2.25 5.25 2.25 5.00

60 days	6.676	6.394	6.988	4.569	vangdSnortTrea
Notes on dat	a:				VangdSC
U.S. prime ra loans posted U.S. banks, an prime rates practices vary Money Rates Friday. Sources: Bure	by at least 70 d is effective aren't directly widely by lo table appear	0% of the July 27, y compa cation. C s Monda	2023. <b>0</b> 2023. <b>0</b> rable; le complet ay throu	est O <b>ther</b> nding e igh	VangdTaxExemptBd VangdTotIntlBd VangdTotIntlStk VangdTotIntlStk VangdTotWrldStk VangdValue WisdTrFRTrea
	lavable /				۸m

Increased						BCE Inc	BCE	6.9	.725	Q	Oct16/Sep15
Hawkins	HWKN	1.3	.16/.15	Q	Sep01/Aug18	BrightSphere Invt Group	BSIG	0.2	.01	Q	Sep29/Sep15
Iron Mountain	IRM	4.3	.65/.6185	_	Oct05/Sep15	Canadian Natural Rscs	CNQ	4.5	.6744	Q	Oct05/Sep15
			,	_	/	Diana Shipping	DSX	15.9	.15	Q	Sep08/Aug14
Marcus Corp	MCS	1.7	.07/.05	Q	Sep15/Aug25	ENLADR	Е	4.5	.47252		Oct06/Sep19
Papa John's International	PZZA	2.3	.46/.42	Q	Aug25/Aug14	Gildan Activewear	GIL	2.4	.186	Q	Sep18/Aug24
Sturm Ruger	RGR	2.7	.36/.32	Q	Aug30/Aug15	ING Groep ADR	ING	5.2	.42666	SA	Aug21/Aug14
TEGNA	TGNA	2.7	.1138/.095	Q	Oct02/Sep08	Kinross Gold	KGC	2.4	.03	0	Sep08/Aug24
UFP Industries	UFPI	1.2	.30/.25	Q	Sep15/Sep01	Nutrien	NTR	3.2	.53	Q	Oct13/Sep29
Vistra	VST	2.9	.206/.204	Q	Sep29/Sep20	Patria Investments	PAX	6.3	.251	o	Sep08/Aug16
Wingstop	WING	0.5	.22 /.19	Q	Sep08/Aug18	RenaissanceRe Pfd. F			.35938	0	Sep00/Aug10
1							RNRpF	6.3		_	
Initial						RenaissanceRe Pfd. G	RNRpG	5.9	.2625	Q	Sep01/Aug31
Allegiant Travel	ALGT	2.1	.60		Sep01/Aug15	SiriusPoint 8% Pfd. B	SPNTpB	8.0	.50	Q	Aug31/Aug15
St I						Smith & Nephew ADR	SNN	2.6	.462	SA	Nov01/Oct06
Stocks						Teekay Tankers	TNK	2.3	.25	Q	Aug25/Aug14
Fangdd Network Group ADR	DUO		1:15		/Aug04	United Maritime	USEA	11.9	.075	Q	Oct06/Sep22
National CineMedia	NCMI		1:10		/Aug04	Vermilion Energy	VET	1.9	.0749	Q	Oct16/Sep29

	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4-14	.00	ocpor/ nugro					-	
					Smith & Nephew ADR	SNN	2.6	.462	SA	Nov01/Oct06
					Teekay Tankers	TNK	2.3	.25	Q	Aug25/Aug14
ıp ADR	DUO		1:15	/Aug04	United Maritime	USEA	11.9	.075	Q	Oct06/Sep22
a	NCMI		1:10	/Aug04	Vermilion Energy	VET	1.9	.0749	Q	Oct16/Sep29
ogies	OTMO		1:15	/Aug04						
	SRE		2:1	/Aug22	Special					
					ConocoPhillips	COP	1.8	.60		Oct16/Sep28
					Permian Resources	PR	1.7	.05		Aug23/Aug15
na ADR	BBAR		.08369	Aug21/Aug14		S	ources:	FactSet; [	Dow Jo	ones Market Data

KEY: A: annual; M: monthly; Q: quarterly; r: revised; SA: semiannual; S2:1: stock split and ratio; SO: spin-off.

New Highs and Lows	Stock Sym Hi/Lo Chg Stock			52-Wk % Sym Hi/Lo Chg
The following explanations apply to the New York Stock Exchange, NYSE Arca, NYSE American and Nasdaq Stock Market stocks that hit a new 52-week intraday high or low in the latest session. % <b>CHG</b> -Daily percentage change from the previous trading session.	Lar-Z-Boy LZB 33,92 -0.1   SapiensIntl   LandseaHomes LSEA 12.45 9,7   SchultzeSpacil   LandseaHomesWt LSEAW 0.39 11.7   ScienceApplicat   LaureateEduc LAUR 13,56 1.3   SirusPoint   LennoxIntl LII 37,987 -0,5   SolarWinds	SPNS         30.29         2.9 P         Wiscom         WIX         10.28 2-5.8 ContextLogic           SAMAU         10.71         0.6 XPO         XPO         76.77         4.2 CrownCastle           SAIC         123.53         0.8 Yelp         YELP         47.59         5.0 DZS           SPNT         10.55         1.6 Zillow A         26         55.68         2.3 DareBioscience           SWI         12.2 0         9.1 Zillow C         2         57.19         2.4 Datasea	CCI         103.19         -1.1 kczartifeSci         KZR         2.12 -0.9 PowerbridgeTech         PowerbridgeTech         Prenetics         Prenetics         Prenetics         ProSomnus           DARE         0.70         -3.6 LibertySirius C         LSXMK         22.24 -11.4 ProSomnus         ProSomnus         0.00	PHIO 2.44 -2.0 PBTS 0.25 -3.8 PRE 0.64 2.8 OSA 1.50 -15.6 REBN 0.67 -2.8
Friday, August 4, 2023  52-Wk %   52-Wk %   52-Wk % Stock Sym Hi/Lo Chg Stock Sym Hi/Lo Chg Stock Sym Hi/Lo Chg	MGIC Investment MTG 18.14 1.9 StandexIntl MarathonPetrol MPC 139.85 1.3 StealthGas Markel MKL 1482.66 -0.5 SummitMaterials	SXI         156.95         6.0           GASS         5.38         3.5           Is SUM         39.32         4.7    LOWS  DelekLogistics DeltaApparel Deswell	DKL         41.10         -5.5         LixteBiotech         LIXT         3.11         -0.6         RedHillBio         R           DLA         6.95         -14.1         MaiaBiotech         MAIA         2.02         -1.4         ResMed         R           DSWL         2.47         0.2         MiraPharm         MIRA         6.00         -19.0         SWK Holdings         S	RDHL 1.04 -1.9 RMD 178.16 -18.5 SWKH 15.86
Color	Matson MATX	TFII 133.78 -0.9 AllarityTherap ALLR 2.22 -5.1 EBGT EBGT TMTCU 11.00 3.6 Aptorum APM 1.83 -2.1 Earloworks	EBET         0.04 -23.8         MarriottVacations VAC         109.00 -2.0         SensientTech         S           EAR         3.80 -1.8         MartiTech         MRT         1.10 -1.9         SharecareWt         S	SNES 0.85 -3.4 SXT 61.35 -0.3 SHCRW 0.08 -3.3 SN 25.84 -10.5
Affac AFP ACRI No. 2 -0.3 Camtek CAMT 48.29 -0.6 Forestar FOR 31.26 1 AFP ACRI UN abrdnincmPfdA ACPPA 25.65 -2.4 CatchalnvtA CHAA 10.62 0.9 FusionAcquilA FSMB 10.49 0.9	NaturalResPtrs   NRP   68.46   7.1   TargaResources	TNC 86.80 3.1 Aravive ARAV 0.25 -12.9 Entravision TTI 5.55 -3.6 ArtesianRscs A ARTNA 44.93 0.4 EquityCommnwith	EVC 3.79 -14.3 Moderna MRNA 107.60 -1.6 ShuttlePharm S	
Accelent         ACEL         12.05         7.7         Veral resure for the property of the proper	6 NewOrientalEduc EDU 57.94 1.6 Textron Noble NE 53.38 -0.2 ThirdCoastBcshs NorthernOil&Gas NOG 42.41 1.6 TidewaterWt	TXT         79,46         1,1         AshfordHospPfdG AHTp6         12.42         1.6         EsteeLauder           S TCBX         21,40         AshfordHospPfdD AHTp0         12.80         -0.5         EversourceEner           TDWWS         4,95         -0.4         AshfordHospPfdD AHTp0         14.77         -0.8         EversourceEner	EL         170.05         -0.7         NanoStringTech         NSTG         3.21         8.9         SolarEdgeTech         S           ES         67.01         -1.3         NanoVibronix         NAOV         2.63         -0.4         Soligenix         S           EXR         123.67         -9.9         NatiStorage         NSA         32.15         -4.9         SplashBeverageWt S	SEDG 182.35 -3.8 SNGX 0.56 -4.7 SBEV.WS 0.03 -29.9
AmericoldRealty COLD 33.71 0.8 Constellation IA CSTA 10.78 GlobalIndemnity GBLI 34.98 3  AmnealPharm AMRX 4.27 22.3 Constellation Fig. 104.71 2.8 GoldenStarAcon GODN 10.28	2 NUSTARLogNts NSS 26.42 0.5 TopBuild 5 OddityTech ODD 56.00 -8.6 Tradeweb 4 OakWoodsAcqnUn OAKUU 11.02 2.1 TransDigm OldRepublic ORI 29.89 -0.7 TrioTech	TW 83.77 0.4 Avangrid AGR 34.82 -1.0 ForteBiosci TDG 914.29 0.1 Azitra AZTR 2.28 2.9 Fortrea TRT 6.50 1.3 Bajjiayun RTC 5.76 -13.4 Funko	FBRX         0.81         -8.9         NearIntelligence         NIR         0.98         -14.0         StryveFoodsWt         <	SPWR 8.63 -4.5 SRFM 1.35 -7.3
Andersons         ANDE         53.37         0.6 ornstructionPtrs         ROAD         34.45         0.5 Gorman-Rupp         GRC         33.42           ApogeeEnt         APOB         49.90         -0.1 Cooper-Standard         CPS         21.74         17.2 GreenlightCapRe         GLRE         11.43           ApolloGibMort         APO         87.82         0.2 Curtisx-Wright         CW         20.325         1.9 Greif A         Greif A         GEV         7.551         -0.5           ApolloStratil Wt         AP68.WS         0.34         6.8 Daylita         DVM         109.60         7.1 HackettForuu         HCKT         23.92         -1	OmniAbWt OABIW 1.18 -1.0 TsakosEnergyPfdl 1 OtterTail OTTR 90.84 0.3 US Cellular 2 ParPacific PARR 32.60 0.7 US Lime&Min 4 ParkerHannifin PH 421.90 -1.0 UWM	ETNPPE   25.70   0.3   BeamTherap   BEAM   27.08   -0.3   GMedInnov   CUSAM   35.00   92.9   BenitecBiopharm   BNTC   21.3   -8.5   Gaucho   CUSAM   215.40   1.4   BiofronteraWt   BFRIW   0.7   -0.1   GeneralMills   CUSAM   CUSA	VINO         0.45         0.8         NextEraEnergy         NEP         50.28         -0.2         Synaptogenix         S           GIS         73.52         -1.2         NiSunIntIEntDevt         NISN         2.97         -5.1         System1         S	SWVL 1.03 -3.9 SNPX 0.62 3.6 SST 2.52 -5.9 GLG 0.46 -4.4
AtlCoastalA ACAH 10.90 4.5 Digimarc MRC 38.35 2.4 HamiltonLane HLNE 93.58 -C AuroraAcqnWt AURCW 0.30 -10.7 DrReddy'sLab RDY 6.50 0.4 HerculesCapital HTGC 17.96 3 AuroraTeCh ATAKU 10.80 1.9 DrRefKings DKNG 34.49 5.8 HollyEnergy HEP 20.46 2	3 Parsons	WMK.WS         0.35         6.6         BlackHills         BKH         56.60         -1.6         GeneticTech           OLED         161.16         13.7         BlueOceanWt         BOCNW         0.03         -24.5         GogoroWt           UNM         51.15         -0.1         BlueStarFoods         BSFC         0.76         9.4         GoldenMinerals	GENE         0.77         -1.3         NOVOCURE         NVCR         28.45         -1.9         Telus         T           G6ROW         0.25         -8.2         NUSkinEnts         NUS         26.19         -2.3         TempestTherap         T           AUMN         1.15         -3.4         NXU         NXU         0.44         -4.5         TempoAutoWt         T	TU 16.68 -0.7 TPST 0.89 -3.3 TMPOW 0.02 30.4
BWXT feh         BWXT bladex         7.02         7.6         breamFinders bladex         DFH bladex         36.7         26.9         JBHunt         JBHT JBHT bladex         209.21         -0           BrickHathwy A brickHathwy B BRKB         875.11         -1.1         EssentGroup         ESNT         53.2         2.5         HuronConsulting         HuRN         104.56         -1.2           BerkHathwy A brickHathwy B BRKB         355.11         -1.1         EssentGroup         ESNT         53.3         3.2         IES Holdings         IESC         67.93         14	1 PonoCapitalThree PTHR 11.93 0.1 UrstadtBiddle	URBN         37.16         0.5         CadrenalTherap         CVKD         0.81         1.3         Gulf Resources           UBP         23.08         0.5         CelularityWt         CELUW         0.03 -24.2         HarborCustom           UBA         23.13         0.6         CerevelTherap         CERE         22.03 -5.4         InvoBioScience	GURE         2.10         -3.2         180LifeSci         ATNF         0.81         -8.9         TreasureGlobal         T           HCDI         2.29         -2.8         OriginAgritech         SEED         3.41         -2.2         TrioPetroleum         T	TNXP 0.96 -2.5 TGL 0.61 2.6 TPET 0.70 -3.5 TSVT 6.05 -1.1
Booking         BKNG         3166.76         7.9         EverestConsol         MNTNJ         11.42         -0.7         IngersollRand         IR         67.74         -0.7           BorrDrilling         BORR         9.01         0.3         EvolutionPetrol         EPM         10.11         -3.3         InstalledBldg         IBP         156.27         2	2 PrimeImpact I A PIAI 10.78 0.6 VelocityFinl 3 Primerica PRI 218.58 -1.3 Vertiv 6 Priveterra II TMKRU 10.78 0.4 Vistra 9 ProfireEnergy PFIE 1.45 6.0 VulcanMatis	VEL         14.50         7.8         CheetahNetSupply CTNT         2.55 -26.7         Incannex           VRT         36.60         3.5         Cineverse         CNVS         1.44 -5.8         Infinera           VST         28.85         2.1         ClarivatePfdA         CLVT         6.60 -2.0         InfinityPharm           WMC         229.24         -0.1         Iclarivate         CLVT         6.60 -2.0         InfinetionPtlIWt	INFN         3.95         -0.2         OutfrontMedia         OUT         11.54         -16.3         UGI Un         U           INFI         0.12         -0.7         PanbelaTherap         PBLA         1.70         -8.0         UniversePharm         U	UGI 24.35 -3.6 UGIC 61.48 -2.5 UPC 1.63 -6.8 VEDU 0.34 -3.6
Bristow         VTOL         31.89         -0.6         EyePointPharm         EYPT         13.23         3.0         Kirby         KEX         83.45         C           CACI Intl         CACI         356.86         -0.1         Fastly         FSLY         21.19         3.7         Koppers         KOP         38.98         1	1 RadianGroup RDN 28.11 1.4 WattsWater 2 RalphLauren RL 135.76 -0.4 WeatherfordIntl 0 RocketCos. RKT 11.54 10.5 WinVestAcqnRt	WTS         192.20         1.3         ClearwayEnergy C WEN         24.58         1.1         JanOne           WFRD         85.69         0.3         CompleteSolaria         CSLR         2.90         -7.1         Janover	JAN         0.82         -9.2         ParanovusEntTech PAVS         1.40         3.4         Wang&Lee         V           JNVR         1.28         -3.6         ParaZeroTech         PRZO         1.45         -28.3         YoshiharuGlbl         Y	WLGS 0.78 -5.6 YOSH 0.50 -6.5 ZVIA 2.45 -1.6

How to Read the Stock Tables

61.93 -0.04 25.1

48.19 -0.06 17.6

68.92 -0.14 16.1 StratlncOpptylns 9.19 +0.03 2.6

MktNeutl 14.58 +0.01 6.

Divlncom I 30.24 -0.23 5.6

NA ...

DoubleLine Funds

Edgewood Growth Instituti

Income

Intl Stk

TotRetBdI

Stock

8.68 +0.07 1.3

EdgewoodGrInst 39.92 -0.09 27.5 BluCh

| dx2040inspre 21.37 -0.01 12.8 | dx2045inspre 22.27 -0.03 13.1 | Growth A | 120.92 -0.15 18. | RisDv A | 88.23 -0.29 7.

88.23 -0.29 7.4

48.75 + 0.21 13.1 |dx2035lnsPre 20.76 + 0.01 11.0 | lncomeAdv 2.26 + 0.01 4.

12.29 +0.09 2.7 ldx2030lnsPre 18.34 +0.04 9.3 FrankTemp/Frank Adv

234.89 +0.26 10.7 ldx2040InsPre 21.37 -0.01 12.8 FrankTemp/Franklin A

Fidelity Invest

Balanc

TotRet

9.19 +0.03 5.2 Calamos Funds

22.89 +0.02 2.7 Columbia Class I

51.95 -0.04 19.4 Dimensional Fds

74.88 -0.03 12.7 | 5GlbFxdInc 10.10

FdInvA

GwthA

HI TrA

ICAA

IncoA

N PerA

NEcoA

TgtRe2060

Wellsl

NA ... NA ... NA ... NA ...

MFS Funds Class I R2040 27.60 -0.04 NA GrowthI 164.37 +0.11 24.3 Puttang Funds Class A Valuel 48.62 -0.37 2.6 Puttang Funds Class A 9.2

Schwab Funds

TIAA/CREF Funds

1000 Inv r

S&P Sel

Natixis Funds LSGrowthY 22.75 -0.06 39.7

Neuberger Berman Fds LCVal Inst 42.53 -0.21 -1.2

Northern Funds

Stkldx 47.66 Old Westbury Fds

PrmcpAdml r154.61 +0.07 18.2

RealEstatAdml117.64 -1.00 2.8 SmCapAdml 97.80 -0.15 12.1

SmGthAdml 81.45 -0.31 15.9

Funds | TIAA/CREF Funds | STIGradeAdml | 10.02 +0.03 | 2.5 | Windsrll | 41.93 -0.07 | 13.3 | Western Asset | 47.66 -0.25 | 17.7 | Eqidxinst | 31.86 -0.15 | 17.8 | STIGradeAdml | 23.74 +0.11 | 2.2 | VANGUARD | INDEX FDS | CoreBondi | 10.52 +0.09 | NA | NA | CorePlusBdl | 9.34 +0.09 | NA | NA | CorePlusBdl | 9.34 +0.09 | NA | NA | CorePlusBdl | 9.34 +0.09 | CorePlusBdl | 9.34 +0.09

STBondAdml 9.92 +0.04

43.99 -0.05 13.3 TotIntBdldxInst 29.09 +0.07 3.4

40.98 +0.05 7.8 WCMFocIntlGrwlns 22.18 +0.06 12.8

TgtRet2055 47.77 -0.05 13.3 TotStinst 108.47 -0.53 17.4 TgtRetlnc 12.82 +0.05 5.7 ValueInst 56.44 -0.28 4.4

24.64 +0.08 2.4 WCM Focus Funds

Yld Net Sym % PE Last Chg % Chg Hi Lo Stock

#### BIGGEST 1,000 STOCKS

The following explanations apply to NYSE, NYSE Arca, N	NYSE American and Nasday Stock Market listed securities.	1 0.30 47.89 34.76 Fortis FTS 4.2 18 40.16	0.36 14.63 24.38 15.36 Mattel MAT 33 20.45 -0.05	50.54 207.16 116.08 Seagen SGEN dd 193.47 -0.03
Prices are composite quotations that include primary ma (formerly Boston), Chicago Stock Exchange, Cboe, NYSE The list comprises the 1,000 largest companies based or	E National and Nasdaq ISE. on market capitalization. Underlined quotations are those	0.30 47.89 34.76 Fortis FTS 4.2 18 40.16 20.44 78.71 57.43 Fortive FTV 0.4 35 77.38 23.69 77.14 45.25 FortuneBrands FBIN 1.3 18 70.64 8.86 37.26 28.02 FOX 67.04 1.5 16 33.06 9.24 34.42 26.35 FOXB FOX 1.6 15 31.08	0.36 14.63 24.38 15.36 Mattel MAT 33 20.45 -0.05 6.61 94.97 68.01 McCormickVtg MKCV 1.8 34 87.60 -0.40 0.83 5.37 94.39 70.60 McCormick MKC 1.8 34 87.34 -0.83 0.10 8.91 29.935 230.58 McDonald's MCD 2.1 26 287.02 -4.03 MCD 0.09 1 24.44 437.47 431.75 McKesson MCD 0.6 16 421.77 -1.35 MCR 0.6 1	50.54 207.16 116.08 Seagen SGEN dd 193,47 - 0.03 -8.15 176,47 136,54 Sempra SRE 3.4 18 141.94 - 1.37 -5.66 74.66 56.85 ServiceCorp 42.07 614,36 337 ServiceNow NOW 79 551.63 - 8.77 7.37 63.69 46,74 Shell SRE 3.8 7 61.15 0.56
stocks with large changes in volume compared with the highlight those issues whose price changed by 5% or more footnotes:  h-Does not meet	ore if their previous closing price was \$2 or higher.	2.55 161.25 109.70 Franco-Nevada	1.31 21.82 264.19 141.30 Medpace MEDP 31 258.75 0.71 -0.04 8.13 95.60 75.77 Medtronic MDT 3.3 30 84.04 -0.45 -0.54 53.17 1365.64 754.76 MercadoLibre MELI 87 1296.16 -26.95 0.10 -5.36 119.65 84.52 Merck MRK 2.8 86 105 -0.73	15.27 283.80 195.24 SherwinWilliams <b>SHW</b> 0.9 30 273.56 0.33 3.29 36.64 22.98 ShinhanFin <b>SHG</b> 4.7 4 27.01 0.02 22.39 320.54 172.50 ShockwaveMed <b>SWAV</b> 40 251.65 0.87 66.90 71.43 23.63 Shopffy <b>SHOP</b> dd 57.93 -1.11
I-New 52-week high. I-New 52-week low. If-Late filing Idd-Indicates loss in the most recent If-Late filing If-Demorary exem	vj-In bankruptcy or receivership or being reorganized under the nption from Nasdaq Bankruptcy Code, or securities	9,38 10.18 4.58 FulfTruck YMM 54 7.25 40.98 72.20 28 Futu FUTU 18 57.31	0.02 -3.85 1.40 0.70 MetaData AIU dd 1 -0.01 188.21 326.20 88.09 MetaPlatforms META 36 310.73 -2.46 META 32 75 63 53 -0.89	0.69 133.08 86.02 SimonProperty <b>SPG</b> 6.4 18 118.29 -0.08 -17.29 7.95 3.32 SiriusXM <b>SIRI</b> 2.0 16 4.83 -0.15 38 85 176 16 97 36 SiteOnel andscape <b>SITE</b> 39 162 90 2 17
four quarters. requirements.  FD-First day of trading. t-NYSE bankruptc  Stock tables reflect composite regular trading as of 4 p.m. a	assumed by such companies.  cy and changes in the closing prices from 4 p.m. the previous day.	30.01 87.83 53 GE HealthCare <b>GEHC</b> 0.2 21 75.90 12.86 39.05 23.10 GFLEnvironmental <b>GFL</b> 0.2 dd 32.99 -2.16 40.66 28.46 GSK <b>GSK</b> 5.8 4 34.38	-0.12	19.94 123.69 76.16 Skyworks SWKS 2.3 16 109.30 0.22 26.90 76.94 46.58 SmithAO AOS 1.7 41 72.64 0.34 6.28 33.09 21.77 Smith&Nephew SNN 2.6 56 28.58 0.10
Friday, August 4, 2023	YTD 52-Week Yld Net %Chg Hi Lo Stock Sym % PE Last Chg	50.18 67.57 32.10 GXO Logistics <b>GXO</b> 38 64.11 1 17.12 226.30 167.93 Gallagher <b>AJG</b> 1.0 43 220.81 -8.58 55.13 43.46 Gaming&Leisure <b>GLPI</b> 6.0 16 47.62	0.21 -7.50 190.17 138.68 MidAmApt MAA 3.9 28 145.21 -0.62 0.57 6.46 162.02 122.33 Middleby MIDD 17 142.55 0.62 0.63 19.04 8.19 4.31 MitsubishiUFJ MUFG 2.3 8 7.94 0.09 0.00 18.31 3.47 2.10 MizuhoFin MFG 2.7 9 3.36 0.04	-5.88 163.07 130.68 Smucker 20.11 13.89 7.33 Snap 20.12 5.09 20.11 13.89 7.33 Snap 20.75 Snap-0n 5NAP dd 10.75 -0.04 5NA 2.4 15 272.23 -1.29 20.16.11 205.66 119.27 Snowflake 20.04 16.67 5.62
YTD 52-Week Yld Net %Chg Hi Lo Stock Sym % PE Last Chg	7.91 38.48 24.59 Carlyle CG 4.3 29 32.20 0.54	4 13.20 281.50 86.29 Generac GNRC 47 113.95	-0.19 7.84 48.11 24.85 Mobileye MBLY dd 37.81 0.24 1-39.77 217.25 107.60 Moderna MRNA 40 108.19 -1.76 148 -8.26 374 256.19 MolinaHealthcare MOH 19 302.96 0.78 26.77 70.90 46.69 MolsonCoorsB TAP 2.5375 65.31 0.19	-11.01 115.72 60.21 SOQUIMICH SQM 8.0 5 71.05 0.74 106.07 11.70 4.24 SOFITECH SQFI dd 9.50 -0.55 1.35 52 345 80 182 34 SolarEdge SpDG 25 182 65 -7 14
1.87 92.16 66.47 AECOM ACM 0.8 33 86.52 -0.30 -31.71 29.89 19.52 AES AES 3.4 dd 19.64 -1.01	n I 38.38 60.04 33.10 CarrierGlobal CARR 1.3 23 57.08 -1.02	72.91 117.96 48.29 GeneralElec <b>GE</b> 0.3 14 113.06	-1.62 31.96 189.15 73.58 monday.com MNDY dd 160.99 -5.00	18.24 100.94 61.72 Sorry SOW 0.4 16 90.19 0.16 5.00 80.57 60.71 Southern SO 4.1 22 67.84 -0.78 38.90 87.59 42.42 SocOpper SCCO 4.2 23 83.88 0.11 -2.79 40.39 28.40 SouthwestAir LUV 2.2 83 32.73 0.47 10.77 8.39 4.57 Southwesterfilms SWM 1 6.48 -0.01 6.48 -0.01
-6.80 145.53 93.53 AGCO 21.13 16.89 3.77 AMC Ent 26.10 351.23 194.23 Ansys -10.30 50.58 30.15 APA ARS 51 304.65 -0.82 APA 2.4 7 41.87 0.21	2 8.66 257.86 197.22 CaseysGenStores <b>CASY</b> 0.7 20 243.78 -1.15 2 1.62 115.08 31.45 Catalent <b>CTLT</b> 202 45.74 -0.33	5 1 23.69 34.18 23.28 Gentex GNTX 1.4 22 33.73 -10.38 187.72 145.30 GenuineParts GPC 2.4 18 155.50	-1.67 8.56 60.47 42.80 MonsterBey MNST 41 55.11 -2.87 -0.17 22.05 363.19 230.16 Moody's MCO 0.9 44 340.05 2.00 -0.19 4.43 100.99 74.67 MorganStanley MS 3.8 16 88.79 -0.35	19.42 116.84 65 Splunk SPLK dd 102.81 -1.61 82.55 182 69.28 Spotify SPOT dd 144.12 -1.30 31.06 104.42 70.24 StanleyBlackDck SWK 3.3 19 98.45 -0.69
22.33 9.03 4.45 ASETech ASX 5.5 9 7.67 0.05 24.09 771.98 363.15 ASML ASML 0.8 34 678.04 -2.97 -23.95 21.53 13.43 AT&T T 7.9 dd 14 -0.09	55 21.23 128.50 86.70 Celanese	6 -8.35 89.74 60.62 GileadSciences GILD 3.8 18 78.68 4.69 70.96 26.24 GitLab GTLB dd 47.57 23.49 136.88 92.27 GlobalPayments GPN 0.8 41 122.65	-0.01 1.79 261.16 163.28 Morningstar MORN 0.7416 220.46 4.95 4.95 4.95 4.95 4.95 4.95 4.95 4.95	41.11 69.02 43.04 Stantec STN 0.9 37 67.65 1.49 1.49 115.48 81.67 Starbucks SBUX 2.1 31 100.68 -1.65 -5.71 94.73 58.62 StateStreet STT 3.8 10 73.14 0.14 6.23 136.46 69.12 SteelDynamics STLD 1.6 6 103.79 -1.65
-1.95 115.83 93.25 AbbottLabs ABT 1.9 37 107.65 0.11 -8.59 168.11 130.96 AbbVie ABV 4.0 30 147.73 - 1.32 -6.86 89.85 66.87 AcadiaHealthcare ACHC 26 76.67 -0.44 16.92 327.93 242.00 Accenture ACN 1.4 26 312 -519. 19.63 93.67 70.94 ActivisionBilz 17.11 1.33 93.15 -0.10	2 -19.77 98.53 61.34 Centene CNC 14 65.80 -0.26 4 -3.20 33.50 25.03 CenterPointEner CNP 2.6 25 29.03 -0.32 2 -6.31 10.38 5.67 Centrais FIRras FRR 0.6 41 7.43 0.01	-6.87 85.32 64.65 GoDaddy GDDY 34 69.68	-0.89 50.97 22.74 7 NIO NIO NIO dd 14.72 -0.74 3.31 -11.89 48.42 38.05 NNNREIT NNN 5.6 20 40.32 0.18 -0.42 -2.30 24.83 14.05 NOV NOV 1.0 19 20.41 0.13 NOV 1.0 19 20.41 0.13 NGC 4.04 17.91 45.80 30.25 NRG Energy NRG 4.0 dd 37.52 -0.14	36.83 20.71 11.57 Stellantis STLA 7.5 3 19.43 -0.14 22.37 254 159.21 Steris STE 0.9186 226.01 0.51 82.92 34.33 13.71 Stevanato STW 0.2 57 32.87 0.52 39.85 55.85 29.09 STMicroelec STM 0.4 11 49.65 -1.59
56.56 552.94 274.73 Adobe ADBE 50 526.88 3.12 58.88 153.36 75.02 AdvDrainageSys WMS 0.4 22 130.23 4.40 78.82 132.83 54.57 AdvMicroDevices AMD 4d 115.82 2.67	2 23.42 36.27 17.83 ChampionX CHX 1.0 29 35.78 0.14 0 -5.05 262 181.22 CharlesRiverLabs CRL 21 206.90 5.36 7 45.10 242.59 101.44 ChartIndustries GTLS dd 167.20 -2.93	4 2.87 389.58 287.75 GoldmanSachs <b>GS</b> 3.1 15 353.22 6 11.18 4.03 2.19 Grab <b>GRAB</b> dd 3.58 3 1456 87 94 58 17 Graco <b>GGG</b> 1.2 26 77 05	-6.04         17.91         45.80         30.25 NRG Energy         NRG         40. dt         37.52         -0.14           0.14         37.04 647453 381655 NVR         NVR         13 632097         72.95           0.06         35.23 225.57 132.08 NXP Semi         NXPI 1.9 20 213.70 - 2.25           0.09         -19.40         69.22 48.65 Nasdaq         NADA 0.8 22 49.45         0.17           1.33         4.16         74.48         47.22 Nationaldrid         NGG         5.3         5         62.83         0.14	16.04 306.93 200.80 Stryker SYK 1.1 40 283.71 8.09 14.21 9.58 5.38 SumitomoMits SMFG 3.1 11 9.16 0.20 -10.52 172.67 117.63 SunComms SUI 2.9 70 127.96 -1.72 11.09 53.21 37.96 SunLifeFinancial SLF 4.3 13 51.57 0.40
9.86 69.50 39.73 AerCap AEG 3.8 dd 5.37 0.05	5 23.52 484.27 297.66 CharterComms CHTR 14 418.863.92 8 0.81 135.93 107.54 CheckPoint CHKP 18 127.18 - 4.78 0.72 574.66 430.16 Chemed CHE 0.3 34 514.13 -1.75 1 8.87 182.35 135 Chemiers Prepara LNG 1.0 5 163.76 -1.57	2 27.33 811.60 483.19 Grainger GWW 1.1 20 708.27 3.96 27.56 19.46 GraphicPkg GPK 1.7 10 23.13 5 22.12 10.96 5.71 Grifols GRFS 0.01483 10.38	14.61 60.27 59.19 34.97 NatlInstruments <b>NATI</b> 1.9 44 59.14 0.16 0.21 -5.26 7.79 4.71 NatWest <b>NWG</b> 6.2 6 6.12 0.06 0.06 29.50 80.53 58.08 NetApp <b>NTAP</b> 2.6 13 77.78 -1.54	-3.21 37.23 26.43 SuncorEnergy SU 5.0 7 30.71 0.39 4.39 48.59 37.10 Sunoco SUN 7.5 13 44.99 0.05 1311.80 347.97 50.28 SuperMicroComp SMCI 32 338.09 16.88
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66.15         146.57         81.43         Amazon.com         AMZN        111         139.57         10.66           9.56         3.24         2.40         Ambev         ABEV         3.61         7.98         0.08           -1.7.30         13.37         9.40         Amcor         AMCR 5.0         15         9.85         0.08           -2.86         99.75         78.02         Amdocs         DOX         2.0         19         88.30         -0.63	15.22 66.79 41.80 Coca-Colaturo CCEP 2.9 16 63.74 -0.28 4.80 59.51 40.20 Cognex CGNX 0.6 50 49.37 -1.61 24 15 71.86 51.33 Cognizant Tech CTSH 1.6 17 71 0.53	1 19.78 156.44 116.39 Hilton HLT 0.4 32 151.35 1.50 87.88 59.78 Hologic HOLX 39 75.93	-0.19 15.71 172.97 95.02 NovoNordisk NVO 0.8 41 156.60 -0.93 0.05 92.87 8.29 3.39 NuHoldings NU dd 7.85 0.08 27.27 182.68 102.86 Nucor NUE 1.2 8 167.76 -4.02 -0.25 13.55 33.73 16.29 Nutanix NTNX dd 29.58 0.39	36.54 153.84 90 TakeTwoSoftware <b>TTWO</b> dd 142.18 -3.57 -2.50 17.15 12.22 TakedaPharm <b>TAK</b> 3.7 22 15.21 0.05 10.50 47.48 27.53 Tapestry <b>TPR</b> 2.9 11 42.08 -0.92 12.20 85.30 57.22 TargaResources <b>TRBP</b> 2.4 22 82.47 0.66 -11.08 183.89 125.08 Target <b>TGT</b> 3.3 23 13.25.5 -0.20
-8.46 97.53 73.28 Amera 9.40 23.07 16.09 AmericaMovil 24.53 19.08 11.65 AmerAirlines -14.44 105.60 80.30 AEP  AEE 3.1 19 81.40 -1.52 AMX 1.7 16 19.91 0.29 AAL 0.0 4 15.84 -0.14 AEP 4.1 21 81.24 -0.75	9 146.71 114.43 31.55 CoinbaseGlbl COIN dd 87.31 -3.44 -3.21 83.81 67.84 ColgatePallm CL 2.5 43 76.26 -0.32 5 28.22 46.44 28.39 Comcast A CMCSA 2.6 28 44.84 -0.33	34.95 32.62 21.43 HondaMotor HMC 2.2 11 30.85 -11.71 220.96 166.63 Honeywell HON 2.2 23 189.21	-3.42 -10.35 102.73 52.23 Nutrien NTR 3.2 9 65.47 0.92 0.06 41.30 56.34 30.48 nVentElectric NVT 1.3 20 54.36 -0.77 1.30 205.73 480.88 108.13 NVIDIA NVDA 0.0232 446.80 1.65	50.21 19.15 7.88 TechnipFMC FTI 1.1 dd 18.31 0.06 10.89 49.34 28.41 TeckResourcesB TECK 0.9 17 41.94 -0.21 -5.16 448.71 325 TeledyneTech TDY 24 379.26 -2.69
11.95 182.15 130.65 AmerExpress AXP 1.5 17 165.41 -1.00   -18.79 150.98 109.98 AmericanFin AFG 2.3 11 111.49 -1.26   21.00 38.94 28.79 AmHomes4Rent AMH 2.4 37 36.47 -0.22   -4.03 64.88 45.66 AIG AIG 2.4 10 60.69 -0.45	6 2.81 12.24 8 SABESP SBS 2.4 13 10.96 0.02 2 -16.51 41.30 32.05 ConagraBrands CAG 4.3 23 32.31 -0.20 5 56.88 41.22 16.60 Confluent CFLT dd 34.89 -1.17	2 41.03 132.30 66.01 DR Horton <b>DHI</b> 0.8 9 125.71 3.36 19.76 14.51 HostHotels <b>HST</b> 3.6 16 16.59 15.02 108.43 74.18 Houllbankey <b>HST</b> 3.2 27 7100.25	-0.28 2.81 O P Q -0.21 -0.21 42.91 33.28 OGE Energy OGE 4.8 16 34.68 -0.58 -0.68 71.57 50.50 ONEOK OKE 5.9 12 65.25 -0.71	-4.71 276.43 182.65 Teleflex <b>TFX</b> 0.6 31 237.88 -1.59 -14.04 7.81 4.87 Ericsson <b>ERIC</b> 3.2 15 5.02 0.11 22.66 9.28 6.49 TelefonicaBras <b>VIV</b> 4.9 17 8.77 0.02 7.00 4.53 3.10 Telefonica <b>TEF</b> 6.1 12 3.82 0.02
-12.79 282.47 178.17 AmerTowerREIT AMT 3.3 89 184.77 -0.98 -6.86 162.59 122.77 AmerWaterWorks AWK 2.0 30 141.97 -0.16 1 13.78 33.71 21.49 AmericoldRealty COLD 2.7 dd 32.21 10.76 358.02 249.35 Ameriprise AMP 1.6 18 344.86 -6.28	5.6 13 89.51 -1.02 7 15.65 273.44 208.12 ConstBrands A STZ 1.3 dd 268.02 -0.71 8 1 20.57 104.70 69.75 ConstellationEner CEG 1.1 44 103.94 2.80	2 29.64 340.06 204.01 Hubbell HUBB 1.5 26 304.23 67.29 581.40 245.03 HubSpot HUBS d4 483.69 0 -5.45 571.30 423.29 Humana HUM 0.7 18 484.28	0.87     64.04 111.35     54.93 ON Semi     ON     23 102.31     -0.39       -2.35     9.70 975.72     680 OR RoelllyAuto     ORLY     26 925.93     -4.85       -6.31     0.84     77.13     55.51 OccidentalPetrol OXY     1.1     11     63.52     1.31       -2.87     6.19     110.94     44.12     Okta     OKTA     dd     72.56     -0.38	0.88 31.95 23.02 Telekmindonesia <b>TLK</b> 3.5 18 24.06 -0.15 33.56 47.17 23.62 TempurSealy <b>TPX</b> 1.0 20 45.85 -0.09 -6.80 38 23.95 Tenaris <b>TS</b> 0.0 6 32.77 0.90 -22.22 9.29 3.14 TencentMusic <b>TME</b> 17 6.44 -0.09
11.84 194.79 135.14 AmerisourceBrgn <b>ABC</b> 1.0 23 185.33 -6.03 12.06 164.75 110.87 Ametek <b>AME</b> 0.6 29 136.57 -1.28 -7.37 296.67 211.71 Amgen <b>AMGN</b> 3.5 16 243.28 125.8 17.60 31.38 16.13 AmkorTech <b>AMKR</b> 1.1 12 28.20 -0.05	3 17.58 399.62 244.22 Cooper COO 0.0 67 388.79 -1.03 451.0 94.77 52.28 Copart CPRT 37 88.35 -0.96 6 67.06 32.63 18.75 Core&Main CNM 15 32.26 0.32 6 -2.84 23.50 14.01 CorebridgeFin CRBG 4.7 6 19.49 0.01	1 18.43 209.21 156.28 JBHunt JBHT 0.8 25 206.50 6 -13.55 15.74 9.13 HuntingtonBcshs HBAN 5.1 8 12.19 2 -1.66 26.0.0 188.51 Huntinglogalls HII 2.2 17 226.84	-1.74 43.46 429.24 240 OldDomFreight <b>ODFL</b> 0.4 35 407.11 -5.93 1 5.58 2 9.89 20.27 OldRepublic <b>ORI</b> 3.5 11 27.97 -0.21 10.92 64.70 41.33 Olin <b>OLN</b> 1.4 10 58.72 -0.16 0.24 13.20 33.71 25.61 OmegaHealthcare <b>OHI</b> 8.5 32 31.64 0.31	22.97 119.20 67.81 Teradyne 106.09 314.67 101.81 Tesla 16.40 173.27 122.86 TetraTech <b>TER</b> 0.4 32 107.41 -0.15 <b>TSLA</b> 72 253.86 -5.46 <b>TTEK</b> 0.6 30 169 -0.11
14.66 90.28 65.21 Amphenol APH 1.0 28 87.30 -1.18 14.83 200.10 133.48 AnalogDevices ADI 1.8 27 188.35 -3.14 -0.82 30.27 11.94 AngloGoldAsh AU 2.3 27 19.26 0.18 -5.91 67.09 44.51 ARIDRAY RIJD 11.19 56.49 -0.49	8 3.63 37.73 28.98 Corning GLW 3.4 45 33.10 -0.47 4 -4.70 68.43 52.76 Corteva CTVA 1.1 43 56.02 0.33 8 23.97 17.50 10.13 Cosan CSAN 2.0 dd 16.19 -0.14 9 5 34 92 36 65 12 CoStar CSGP 86 81 41 0.49	7 7.58 24.80 19.34 ICICIBank 4 15.18 11.03 4.96 ICL Group 4 23.56 564.74 317.06 IdexxLab 9 1 20.54 14.85 8.14 ING Groep 10 1 20.54 14.85 8.14 ING Groep	0.04 99.23 61.85 Omnicom ONC 3.4 12 81.60 -0.32 0.08 105.89 36.83 15.44 OnHolding ONON123 35.33 -0.15	7.02 11.45 7.08 TevaPharm <b>TEVA</b> dd 9,76 0.19 1.95 188.12 145.97 Texaslpstruments <b>TXN</b> 2.9 20 168.44 -3.36 -26.96 2739 1266.21 <b>TexasPacLand TPL</b> 0.8 32 1712.24 101.01 19.98 118.16 83.29 TexasRoadhouse <b>TXRH</b> 2.0 25 109.12 -1.81
-5.93 27.36 15.11 AnnalyCap NLY 13.1 dd 19.83 0.39 -11.20 45.33 19.91 AnteroResources AR 6 27.52 -0.04 4.97 347.37 266.35 Aon AON 0.8 25 315.06 -2.26 49.49 29.57 13.09 APIGroup APG 94 28.12 -0.34	9 20.93 571.16 447.90 Costco	5.88 249.11 165.75 IQVIA IQV 37 216.93 1 24.76 102.95 64.51 ITT ITT 1.1 20 101.18	11.84 13.08 8.81 Orange ORAN 5.2 18 11.05 0.02 (0.64 14.65 97.17 68.78 Orix IX 2.8 11 92.32 -0.28 (13.03 91.33 62.49 OtisWorldwide OTIS 1.5 28 88.51 -1.11 0.759 -5.52 59.10 32.07 Ovintiv OVV 2.5 4 47.91 -0.40	-0.37 609.85 475.77 ThermoFisher <b>TMO</b> 0.3 38 548.64 0.26 15.17 138.85 97.59 ThomsonReuters <b>TRI</b> 1.5 29 131.37 0.29 -12.02 152.30 92.38 3M <b>MMM</b> 5.7 dd 105.51 -1.68
1 35.04 87.82 45.62 ApolloGibMgmt APO 2.0 dd 86.14 0.21 40.07 198.23 124.17 Apple APL 0.5 31 181.99 9.18 49.58 153.28 71.12 ApplMaterials AMAT 0.9 19 145.66 -2.15 197.82 40.55 9.14 Applovin APP dd 31.36 0.77	1 13.43 159.11 118.33 Credicorp BAP 4.4 10 153.88 0.50 (RWD dd 150.49 -7.06 (1.24 1.24 1.24 1.24 1.24 1.24 1.24 1.24	30.42 259.01 171.43 Icon ICLR 41 253.35 6 -3.26 246.23 195.27 IDEX IEX 1.2 29 220.89 2 11.96 264.19 180.27 IllipoisToolWks ITW 2.1 24 246.64	-1.32 06.476 143.67 74.22 OwensCorning OC 1.5 10 140.54 0.30   -1.17 7.32 106.33 38.80 PDD PDD 23 87.52 -1.29   -3.59 5.04 18.19 10.97 PG&E PCG 19 17.08 -0.23   -2.33 -16.77 176.34 110.31 PNC Finl PNC 4.7 9 131.46 -1.56	11.04 27 15.61 Toast TOST dd 20.02 -0.65 59.03 83.72 39.53 Toll Bros TOL 1.1 6 79.39 1.69 8LD 16 294.24 9.19 -10.66 117.66 80.44 Toro TTC 1.3 21 101.13 -0.27
9.69 126.99 90.23 Aptargroup 14.68 124.88 77.96 Aptiv APTV 0.0 32 106.80 -2.78 4.20 32.48 19.25 ArcelorMittal MT 1.4 6 27.32 -0.24	7	4 8.95 58.98 40.20 ImperialOil IMO 2.4 8 53.10 INCY 39 63.63 33.33 23.87 13.29 Informatica INFA dd 21.72	0.80 107.80 133.09 36.53 POSCO PKX 1.4 19 113.19 0.05 PG 1.8 25 140.57 0.29 PG 1.8 25 140.57 0.29 PG 1.8 25 140.57 0.29 PG 1.7 64 152.09 101.82 PTC PTC 55 141.22 -2.22	-0.32 70.67 55.43 TorontoDomBk TD 4.4 11 64.55 0.19 -2.32 65.05 44.61 TotalEnergies TTM 8 60.64 1.36 25.05 175.37 130.07 ToyotaMotor -1.18 251.17 181.40 TractorSupply TSC0 1.9 22 222.31 -4.83
22.20 84.83 41.05 ArchCapital -7.86 98.28 69.92 ADM ADM 2.1 11 85.55 0.58 46.46 10.341 58.60 AresMgmt ARES 3.1 62 100.24 0.44 29.03 550.76 333.07 argenx ARGX dd 488.81 -4.93	DEF	1 28.06 67.74 42.20 IngersollRand IR 0.1 39 66.91 11.85 113.46 78.81 Ingredion INGR 2.6 13 109.53	-0.21 27.16 90.05 54.64 Paccar PCAR 1.3 12 83.90 -0.99 -1.34 20.31 158.66 110.56 PackagingCpAm PKG 3.2 16 153.89 -1.33 -7.74 183.49 20.24 5.92 Palantir Tech PLTR dd 18.20 -0.51	89.25 91.85 39.43 TradeDesk <b>TTD</b> 553 84.84 0.08
48.00 190.65 98.20 AristaNetworks ANET 33 179.60 1.84 20.48 147.42 89.38 ArrowElec ARW 6 125.99 -1.73 -8.27 263.59 161.32 AspenTech AZPN dd 188.41 -8.30	4 4.02 303.82 221.22 Danaher DHR 0.4 30 254.75 -2.71 3 17.44 173.06 120.20 Darden DRI 3.0 20 162.45 -0.48 0 8.90 82.69 51.77 DarlingIngred DAR 15 68.16 -0.44 0 46.30 120.75 61.34 Datadog DDG dd 107.53 0.43	32.95 37.19 24.59 Intel INTC 1.4 dd 35.14 23.43 92.31 59.56 InteractiveBrkrs IBKR 0.4 18 89.30	-2.14         56.64         258.88         132.22         PaloAltoNtwks         PANW        343         218.82         -19.13           0.40         -7.41         27.49         13.80         ParamountB         PARA         1.3         3d         15.63         0.54           1.74         -1.22         30.83         16.06         ParamountB         PARA         1.0         dd         19.37         0.99           1.93         1         42.52         421.00         235.69         ParkerHannifin         PH         1.4         26         41.45         -4.03           0.39         6.43         13.94         10.09         PayX         2.9         12.29         9.12.89         -1.68	37.73 84.37 50.32 TransUnion -10.05 194.51 149.65 Travelers 71 42 76 05 38 68 Tray TRY 2.4 18 168.65 -0.75 TRY 2.4 18 168.65 -0.75 TRY 55 72 56 1 05
2.36 76.56 52.65 AstraZeneca <b>AZN</b> 2.0 35 69.40 -0.27 50.15 35.86 AtlantaBravesC <b>BATRK</b> 39.31 -0.32	38.41 562.97 298.61 DeckersOutdoor <b>DECK</b> 27 552.47 -2.87	2.38 153.21 115.55 IBM -23.22 129.20 75.18 IntlFlavors 4.71 45.17 29 IntlPaper 1.16 4.0 61 31 Alextery blic	-0.21 -6.41 402.78 262.12 PaycomSoftware PAYC 0.5 53 290.42 -6.53 0.34 6.17 276.88 160 Paylocity PCY 83 206.25 -6.45 0.36 -11.89 103.03 58.95 PayPal PYPL 81 62.75 -1.43 0.74 -6.57 12.03 9.05 Pearson PSO 2.6 21 10.53 0.03 0.32 -1.91 38.15 29.99 PembinaPipeline PBA 6.5 8 30.83 0.32	10.30 72.24 45.43 Trimble TRMB 40 55.77 0.26 15.55 41.21 19.25 Trip.com TCMM 32 39.75 0.01 25.47 52.22 25.56 TrustFinl 25.16 92.53 41 Twillo TWLO dd 61.28 -0.56 18.46 426.83 281.11 Yelf-reth
4.64 125.28 97.71 AtmosEnergy 7.87 235 179.61 Autodesk ADSK 52 201.57 -1.05 30.69 103.99 65.74 Autoliv ALV 2.6 22 100.08 -0.98 2.89 274 92 201.46 ADP ADP 2.0 30 245.76 -2.24	-17.41 78.82 44.03 DevonEnergy <b>DVN</b> 6.8 7 50.80 -0.03	27.69 514.14 352.63 Intuit INTU 0.6 63 496.98 16.57 358.07 180.07 IntuitiveSurgical ISRG 78 309.31 17.27 40.20 28.52 InvitatHomes INTU 0.6 63 476.02 28.23 Incompany 19.43 4.34 4.34 4.34 4.34 4.34 4.34 4.34	-9.19 38.15 29.59 PembinaPipeline <b>PBA</b> 6.5 8 30.83 0.32 -1.97 45.60 180.84 94.49 PenskeAuto <b>PAG</b> 1.5 10 167.34 -5.40 1.52.9 70.48 38.55 Pentalr <b>PNR</b> 1.3 23 69.85 0.50 1.12 13.44 348.67 139.03 Penumbra <b>PEN</b> 340 252.36 -2.92	18.46 46.83 281.11 1yler1ech 9-30 87.77 47.11 TysonFoods 17.19 22.30 13.80 UBS Group 3.36 50.65 37.18 UDR UDR 42.30 40.31 -0.22 UDR 42.30 40.31 -0.22 UDR 0.2 58.09 -0.74
45.39 182.08 94.92 AutoNation -0.62 2750 2050.21 AutoZone 14.44 220.42 153.07 Avalonbay 1-18.80 51.71 34.81 Avangrid AGR 5.0 23 34.90 -0.36	6 6.26 139.55 78.94 DexCom <b>DXCM</b> 140 120.33 -1.74 -4.57 191.93 160.09 Diageo <b>DEO</b> 2.1 22 170.05 -0.77 8.62 168.95 110.97 DiamondbkEner <b>FANG</b> 2.3 8 148.57 0.16	7 20.59 6.15 4.21 ItauUnibanco <b>ITUB</b> 2.4 9 5.68	-0.07 2.18 196.88 160.98 PepsiCo PEP 2.7 32 184.60 -2.52 2.47 63.22 42.77 PerformanceFood PFGC 29 59.83 0.20 1 27.66 12.14 5.98 PermianRscs PR 1.7 8 12 0.41 2.695 16.32 8.88 PetroleoBrasil PBR 41.9 2 13.52 -0.51	3.66 68.29 43.62 U-Haul N 23.72 44.52 25.49 U.S Foods 1103.63 6.85 2.84 UWM 82.77 49.49 22.94 Uber UBER dd 45.20 -0.71
-1.85 29.13 17.91 Avantor AVTR 33 20.70 0.10 2.22 204.37 157.28 AveryDennison AVY 1.8 27 18502 -0.14 37.40 251.26 131.83 AvisBudget CAR 4 225.24 2.57 9.00 229.95 109.31 AxonEnterprise AXON 96 180.86 3.76	4.63 122.50 87.64 DiscoverFinSvcs <b>DFS</b> 2.7 7 102.36 -0.23 -0.67 126.48 84.07 Disney <b>DIS</b> 0.0 38 86.30 0.31 -7 54 77 24 39 57 DocuSign <b>DOCU</b> dd 51 24 -1 101	16.35 159.38 101.28 JPMorganChase JPM 2.6 10 156.02 59.28 115.25 55.26 Jabil JBL 0.3 15 108.63	-0.47     32.08     14.93     7.86 PetroleoBrasilA     PBRA 46.2     2     12.27     -0.41       -0.33     1-31.65     54.93     34.66 Pfizer     PFE     4.7     9     35.02     0.02       -0.42     -4.94     105.62     82.85 PhilipMorris     PM     5.3     19     96.21     -1.21       -2.12     6.15     113.53     74.02 PhillipS66     PSX     3.8     5     5110.48     0.07	-37.12 350.63 160.49 Ubiquiti 26.51 22.19 10.40 UlPath PATH dd 16.08 -0.22 -6.56 556.60 368.80 UltaBeauty ULTA 18 438.32 2.58 3.06 55.99 42.44 Unilever UL 3.5 15 51.89 -0.36
-4.37 51.11 39.88 BCE BCE 6.9 22 42.03 0.45 -3.48 71.52 46.92 BHP Group BHP 8.8 8 59.89 0.06 5.84 179.85 68.30 BILL dl 115.32 0.01 2.81 80.41 60.33 BJ'sWholesale BJ 18 68.02 0.14	55 12.35 91.02 61.55 DolbyLab DLB 1.4 32 79.25 -8.59 6 -31.87 261.59 151.27 DollarGeneral DG 1.4 16 167.77 -1.07 1.0	9 5.96 136.27 106.78 JacobsSolns J 0.8 21 127.23 7 50.50 29.60 17.25 JamesHardie JHX 0.0 24 27 6 -18 31 163 31 120 64 JazzPharm JAZZ dd 130 14	-0.22 3.34 86.03 59.03 PinnacleWest PNW 4.4 22 78.58 -0.72 0.11 9.80 30.86 20.39 Pinterest PINS dd 26.66 -0.50 0.59 2.48 274.70 177.26 PioneerNatRscs PXD 7.0 8 234.06 4.08	10.36 242.35 183.69 UnitonPacific 38.91 58.23 31.58 UnitedAirlines 11.18 8.97 5.36 UnitedMicro UMC 6.1 7 7.26 0.09
5.35 41.38 27.20 BP BP 4.1 6 36.80 0.34 15.64 92.74 58.71 BRP DO00 0.6 11 88.29 -1.23 29.62 160.88 73.58 Baldu BIDU 25 148.26 -1.67	4 14.13 41/.23 283.84 Domino's DPZ 1.2 30 395.36 -6.00 5.16 66.96 48.17 Donaldson DCI 1.6 21 61.91 -0.35 7 71.24 92.61 41.37 DoorDash DASH dd 83.60 -1.86	0 -4.31 181.04 150.11 16.1 JNJ 2.8 34 169.04 -1.94 70.43 48.82 JohnsonControls JCI 2.4 21 62.76 5.63 189.28 123 Johnson JLL 0.0 26 168.35	-1.60 25.80 15.92 10.45 PlainsGP PAGP 6.8 17 15.65 0.26 0.72 -6.55 31.56 7.39 PlugPower PLUG dd 11.56 -0.15 PLUG dd 11.56 -0.15 PLUG dd 11.50 -0.15 PLUG dd 11.56 PLUG	4.08 209.39 154.87 UPS B UPS 3.6 15 180.94 -0.56 31.06 481.99 256.23 UnitedRentals URI 1.3 14 465.81 0.81 -8.60 49.95 27.27 US Bancorp USB 4.8 11 39.86 0.41 -15.00 283.09 201.65 UnitedTherau UTH 13 236.37 4.50 -5.18 558.10 445.68 UnitedHealth UNH 1.5 22 502.73 -2.13
20.28 36.17 20.41 BakerHughes 13.06 62.19 46 Ball 26.62 8.14 4.32 BancoBilbaoViz BBVA 4.8 7 7.61 0.06	8.18 60.88 42.91 Dow DOW 5.1 23 54.51 -0.39		-0.04   -20.15 10.12 5.14 PoleStarAuto PSN1 25 4.24 -0.21	-5.16 556.10 445.06 UnitedHealth UNH 1.5 22 502.75 -2.15
10.08 3.35 2.12 BancoBradesco BBDO 4.8 9 2.84 -0.21	1   178.67   34.49   10.69 DraftKings   DKNG   dd   31.74   1.75   22.83   28.68   18.71 Dropbox   DBX   19   27.49   1.54	6 16.44 65.87 41.96 KBR KBR 0.9 dd 61.48 KKR 1.1 dd 60.19	0.26   26.18 423.97 278.10 Pool   POOL 1.2 25 381.49   3.09   0.26   i 50.84 218.58 120.19 Primerica   PRI   1.2 19 213.92   -2.88   0.95   -6.38   96.17   65.17 PrincipalFinl   PFG   3.3 12   78.57   -0.79	40.50 58.62 21.22 UnitySoftware U dd 40.17 -0.95 -4.63 158.57 82.50 UniversalHealthB UHS 0.6 14 134.36 -0.95 12.64 51.15 35.28 UnimGroup UNM 2.9 7 50.32 -0.07
10.08         3.35         2.12 BancoBradesco         BBD0         4.8         9         2.84         -0.21           2.07         23.50         16.81 BancodeChile         BCH         7.6         21.25         0.06           5.94         6.63         4.76 BancSanBrasil         BSBR         5.7          5.71         -0.06           24.37         21.81         13.37 BcoSantChile         BSAC         4.8         12         1.70         -0.17           3.254         4.09         2.26 BancoSantander         SAN         2.2         7         3.91         -0.03	1     1/1867     34.49     10.69     DraftKings     DKN6     dd     31.72     1.75       5     22.83     28.86     18.17     Dropbox     DBX     19     27.49     1.56       6     -13.14     113.67     83.76     DukeEnergy     DW     4.6     27     89.46     -0.91       7     12.24     78.74     49.52     DuPont     DD     1.9     8     77.03     -0.10       8     23.39     55.67     31.54     Pynatrace     DT     96     47.26     -0.48	5 16.44 65.87 41.96 KBR	0.39     26.18 423.97 278.10 Pool     POOl     1.2 25 381.49     3.09       0.26     1 50.84 218.58 120.19 Primerica     PRI     1.2 19 213.92     -2.88       0.95     -6.38     96.17 65.17 PrincipalFinl     PFG     3.3 12 78.57     -0.79       5.86     39.04 76.86 41.80 ProctoreTech     PCOR     dd     65.60     -1.56       -1.41     2.45 158.11 122.18 ProctersGamble     PG     2.4 26 155.28     -1.72       -1.45     -2.44 149.87 110.04 Progressive     PGR     0.3 43 126.54     -2.31       -0.46     8.44 138.86 98.03 Prologis     PLD     2.83 31 222.4     -1.57	40.50 88.62 21.22 UnitySoftware U dd 40.17 -0.95 4.63 138.57 82.50 JunumGroup UNM 2.9 7 50.32 -0.07 -29.74 48.20 16.77 VF VFC 6.2 64 11.94 0.36 4.14 35.69 29.29 VICI Prop VICI 5.0 14 31.06 -0.02 -3.25 269.50 201.91 VallResortS MTN 3.6 32 230.60 -0.11 -18.50 19.31 11.72 Vale VALE 5.3 6 13.83 0.03
10.08   3.35   2.12   BancoBradesco   BBD0   4.8   9   2.84   -0.21	1     1178.67     34.49     10.69     DraftKings     MKNG     dd     31.74     1.75       2     22.83     28.86     18.71     Dropbox     DBX     19     27.49     1.54       6     -13.14     113.67     83.76     DukeEnergy     DW     4.6     27     89.46     -0.91       7     12.24     7.84     49.52     DuPont     DU     1.9     87.70     -0.10       8     23.23     55.67     31.54     Dynatrace     DT    96     47.26     -0.48       41     13.17     13.74     13.74     13.74     13.74     12.21     15.00     10.70     11.70     10.70	50 16.44 65.87 41.96 KBR KR KR 1.1 dd 60.19 43 31.68 517.30 250.20 KLA KLAC 1.0 21 496.47 43 16.8 517.30 250.20 KLA KLAC 1.0 21 496.47 45 16.6 278.5 213.64 KarunaTherap KRTX dd 185.38 47 17.17 63.74 Kellogg KYUE 62 63.83 48 17.18 13 04.7 KeurigpTPepper KYUE 26 23.53 49 17.18 13 04.7 KeurigpTPepper KEY 6.9 8 11.92 49 17.18	0.35 26.18 423.97 278.10 Pool Pool Pool 1.2 25 381.49 3.0   0.26 1 50.84 218.58 120.19 Primerica PRI 1.2 19 121.39 2 3.28   0.95 -6.38 96.17 65.17 PrincipalFini PFG 3.3 12 78.57 -0.79   1-8.86 39.04 76.86 41.80 ProcoreTech PCG dd 65.60 -1.56   1-4.41 2.45 158.11 122.18 Procter&Gamble PG 2.4 26 155.28 -1.72   1-4.45 2-44 149.87 110.04 Progressive PGR 0.3 43 12.654 -2.31   0.46 8.44 138.86 98.03 Prologis PLD 2.8 33 122.24 -1.73   1-2.33 2-297 110.96 75.37 PrudentialFini PRU 5.2 32 96.51 -0.28   0.12 -4.26 34.37 18.20 Prudential PRU 5.2 32 96.51 -0.28   0.14 -1.09 69.94 52.51 publicServiceEnt PEG 3.81 11 60.60 -0.59   0.14 -1.09 69.94 52.51 publicServiceEnt PEG 3.81 16 0.60 -0.59	4.65 18.62 21.22 UnitySoftware U dd 40.17 -0.95 4.63 18.55 78.250 UniversalHealthB UHS 0.6 14 134.36 -0.95 12.64 51.15 35.28 UnumGroup UMM 2.9 7 50.32 -0.07 -29.74 48.20 16.77 VF VFC 6.2 6.4 19.40 0.36 41.4 35.69 29.29 VICI Prop VICI 5.0 14 31.06 -0.02 -3.25 269.50 201.91 VallResorts MTN 3.6 32 230.60 -0.03 0.01 19.31 11.72 Vale VALE 5.3 6 13.83 0.03 0.01 19.31 11.72 Vale VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VLO 3.2 4 126.89 1.29 22.02 232.14 151.02 VeraVsytsems VEFV 62 19.69.2 2.37 0.27 53.15 35.33 Ventas VRS 30 205.51 1 3.30 1.29 0.16 29.72 169.24 VerSign VRS 30 205.51 1 3.20 1.20 1.20 1.20 1.20 1.20 1.20 1.20 1
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	1         11/8.67         34.49         10.69         DraftKings         DKN6         dd         31.73         1.75           2.283         2.886         18.71         Dropbox         DBX         19         27.49         1.54           6         -1.31.4         113.67         83.76         DukeEnergy         DW         4.6         27         89.46         -0.91           7         12.24         78.47         49.52         DuPont         DI         1.9         87.70.3         -0.10           81         23.39         55.67         31.54         Dynatrace         DT         96         47.26         -0.48           41         31.14         131.74         131.74         131.74         128.15         -3.71         21.81         -3.01           42         4.99         23.22         12.03         81.08         1.6         2.5         9         12.98         1.89           47         0.22         150.88         97.39         EOG RSCs         EOG         2.5         9         12.89         1.89           48         -7.12         80.98         33.65         ESST 15.97         28.11         EOT         1.45         5         <	Barrier   Barr	0.35   26.18 423.97 278.10 Pool   POOL 1.2 25 381.49 3.0	40.50
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	1         178.67         34.49         10.69         DraftKings         DKN6         dd         31.74         1.75           6         -13.14         113.67         83.76         DukeEnergy         DW         4.6         27         89.46         -0.91           7         12.24         78.74         49.52         DuPont         D         1,9         87.70         -0.18           8         23.39         55.87         31.54         Dynatrace         DT          96         47.26         -0.48           41         31.17         37.48         35.11         Effectury         ELF          22.12.81         -3.91           40         49         32.21         20.38         EMCOR         EMF         -0.3         22         21.88         1.64           47         0.22         150.88         97.39         EOG RScs         EOG         29         12.98         -1.89           48         2.3.16         15.77         28.11         EST         2.72         246.97         1.95           49         2.21         15.03         81.64         EGT         1.4         5         6         30.09         0.09	Section   Sect	0.35   26.18 423.97 (278.10 point)   Primerica   PRI   1.2 bz 381.49   3.09   0.96   6.38   96.17   65.17 PrincipalFini   PFG   3.3   12 78.57   -0.75   1.41   2.45   158.11   122.18   Procter&Gamble   PG   2.4   26 155.28   -1.72   1.45   -2.44   149.87   110.04   Progressive   PGR   0.3   34   126.54   -1.72   1.46   8.44   149.87   10.04   Progressive   PGR   0.3   34   126.54   -1.72   1.47   -2.46   8.44   138.85   98.03   Prologis   PLD   2.8   33   122.24   -1.72   1.46   -2.47   10.94   75.37   PrudentialFini   PRU   5.2   32   96.51   -1.72   1.47   -0.13   -2.79   10.94   75.37   PrudentialFini   PRU   5.2   32   96.51   -0.72   1.48   -1.61   357.12   270.13   PublicStorage   PSG   3.8   11   60.60   -0.59   1.49   -0.16   35.71.2   270.13   PublicStorage   PSG   4.4   12   275.69   -1.22   1.59   -8.52   51.18   40.38   Qiagen   QFG   1.2   1.2   1.59   -8.52   51.18   40.38   Qiagen   QFG   1.0   1.50   10.51   152.91   101.47   Qualcomm   QCM   2.6   16   12.15   2.8   1.50   -0.13   40.55   50.643   123.25   QuantaServices   PWR   0.2   51   200.28   -3.69   1.50   -0.13   40.55   50.643   123.25   QuantaServices   PWR   0.2   51   200.28   -3.69   1.50   -0.13   40.55   50.643   123.25   QuantaServices   PWR   0.2   51   200.28   -3.69   1.50   -0.19   -0.19   -0.19   -0.15   -0.29   -1.20   -0.29   -1.20   -1.20   -0.20   -1.20   -1.20   -0.20   -1.20   -1.20   -0.20   -1.2	4.65   18.62   21.22   Unity-Sortware   U   dd   40.17   -0.95
10.08   3.55   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	1         11/8.67         34.49         10.69         DraftKings         DKN6           40         31.72         1.75           5         22.83         28.86         18.71         Dropbox         DBX          19         27.49         1.52           6         1-31.4         113.67         83.76         DukeEnergy         DUK         4.6         27         89.46         -0.91           3         23.39         55.67         31.54         Dynatrace         DI         1.9         87.70.3         -0.08           41         131.74         137.4         131.74         187.6         0.48         1.6         0.48         1.6         0.48         0.04         0.48         1.6         0.4         0.4         0.2         128.15         -3.0         0.0         0.48         1.6         0.2         128.15         -3.0         0.0         0.0         0.4         0.2         128.15         -3.0         0.0         0.2         150.88         97.39         EOG CSC         EOG         2.5         9 129.80         1.88         1.6         2.5         9 129.80         1.89         1.8         1.4         5         4.1         0.0	Section   Sect	0.35   26.18 423.97 (278.10 Point)   Principal   Princ	4.65   18.62   21.22   UnitySoftware   U
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	1 178.67         34.49         10.69         DraftKings         DKN6         dd         3.173         1.75           2 23.8         28.86         18.71         Dropbox         DBX         19         27.49         1.52           6         -13.14         113.67         83.76         DukeEnergy         DU         4.6         27         89.46         -0.91           7         12.24         78.47         49.52         DuPont         DD         1.9         87.70.9         -0.18           81         23.39         55.87         31.54         Dynatrace         DT          96         47.26         -0.48           41         31.14         71.87         83         116         Elef          22.12         1.58         EMCOR         EME          20         4.09         3.22         1.03         8.16         1.42         4.99         3.22         1.03         8.16         1.42         4.09         3.07         3.02         1.09         1.95         1.72         2.09         1.79         9.09         PAM          27         246.97         1.99         1.22         2.03         3.03         3.03         1.02	Section   Sect	0.35   26.18 423.97 (278.10 point)   Prince   Pr	4.65 18.62 21.22 UnitySortware U dd 40.17 - 0.95 4.63 18.55 7 82.50 UniversalHealthB UHS .0.6 14 13.43 - 0.95 1 22.64 51.15 35.28 UniversalHealthB UHS .0.6 14 13.43 - 0.07 2-9.74 48.20 16.77 VF VFC 6. 26 41 19.40
108	1         1/8.67         34.49         10.69         DraftKings         DKN6         dd         3.175           5         22.83         28.86         18.71         Dopton         DBX         19         27.49         12.52         6         -13.14         113.67         83.76         DukeEnergy         DW         4.6         27         89.46         -0.91           3         23.39         55.87         31.54         Dynatrace         DT         96         47.26         -0.48           41         131.74         137.43         35.11         Effect         12.21         21.81         -0.91           41         14.643         218.03         112.25         EMCOR         EME         0.3         22.21         128.81         1.69           7         -0.22         150.88         97.39         EOG RSCs         EOG         2.5         9 12.98         1.89           6         23.56         51.97         28.11         EOT         2.6         2.5         9 12.98         1.89           6.5         71.2         80.98         33.86         Eastmorther         EGP         2.9         47 17.44         0.6           6.2         3.6	60 16.44 68.87 41.96 KBR KBR 0.9 db 61.38 29.56 62.44 41.77 KKR KR 1.1 db 60.19 44 31.84 51.30 250.20 KLA KLAC 1.0 21.496.47 5.66 272.52 5131.64 KanunaTherap KRT db 185.38 51.30 250.20 KLA KLAC 1.0 21.496.47 61.56 272.52 5131.64 KanunaTherap KRT db 185.38 51.50	0.35	4.63 18.57 82.50 UniversalHealthB UHS
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	1         118.67         34.49         10.69         DraftKings         DKN6           d.         3.1         1.75           5         22.83         28.86         18.17         Dropbox         DBX          19         27.49         1.56           6         1-3.14         113.67         83.76         DukeEnergy         DUK         4.6         27         89.46         -0.91           3         23.39         55.87         31.54         Dynatrace         DT          96         47.26         -0.48           4         131.74         137.49         85.11         HGReuty         EHF          12.81         -3.01           4         134.74         13.25         EMCOR         EME         0.3         22.218.15         -3.01           7         -0.22         150.88         97.39         EOG RSCS         EOG         2.5         9 129.80         -1.88           5         23.65         51.97         28.11         EOT         1.4         5         4.10         0.00           4         17.82         188.85         137.47         EasttWestBncg         EGP         2.9         47	Section   Sect	0.35   26.18 423.97 (278.10) Pool   Pool   1.2 25 381.49 3.09    2.08	4.63 158.57 82.50 UniversalHealthB UHS 0.6 14 134 36 - 0.95 1 22.64 51.15 53.28 UniversalHealthB UHS 0.6 14 134 36 - 0.95 1 22.64 51.15 53.28 UniversalHealthB UHS 0.6 14 134 36 - 0.95 1 22.64 51.15 53.28 UniversalHealthB UHS 0.6 14 134 36 - 0.07 42.09 1 22.02 132.14 151.02 Very 1 24.02 1 24.00
108	1         1/18/67         34/49         10.69         DraftKings         DKM6         dd         3.1.175           5         22.83         28.86         18.71         Dropbox         DBX         19         27.49         15.6           6         -13.14         113.67         83.76         DukeEnergy         DU         4.6         27         89.46         -0.91           3         23.23         55.87         31.54         Dynatrace         DT         96         47.26         -0.48           41         131.74         137.41         137.49         35.10         DYnatrace         EF         72         10.38         1.6           4         131.74         137.41         12.85         EMCOR         EME         0.3         22.2         12.88         1.6           4         1.04         24.94         42.99         197.99         PAM         27.2         26.99         12.98         1.8         1.6           5.6         23.56         51.97         28.11         EQT         1.4         5         4.0         0.0         1.8         1.0         4.0         1.4         4.4         1.6         2.2         3.6         1.1	Section   Sect	0.35	4.63 158.57 82.50 UniversalHealthB UHS 0.6 14 134 36 - 0.95 1 22.64 51.15 35.28 UnumGroup UNM 2.9 7 50.32 - 0.07 2.97.4 48.20 16.77 VF 4.14 35.69 29.29 VICI Prop VIC 6.2 64 19.40 0.36 1.36 0.30 1.32 0.00 1.
100	11         178.67         34.49         10.69         DraftKings         DKM6         dd         31.73         175           62         22.88         18.38         170 ropbox         DBX         19         27.49         15.6           64         13.14         113.67         83.76         DukeEnergy         DU         4.6         27         89.46         -0.91           73         12.24         78.47         49.52         DUPont         DI         1.9         87.70.3         -0.18           81         131.74         137.41         137.49         15.10         18.01         18.01         18.01         19.02         -0.48         40.90         47.06         -0.48         18.01         19.02         10.08         18.01         19.02         19.02         19.02         19.02         19.02         19.03         12.21         10.38         11.02         19.02         19.02         12.03         11.02         1	Section	0.35   26.18 423.97 (278.10 Pool   Pool   1.2 25 381.49   3.09   0.96   6.38 96.17 65.17 PrincipalFin  PFG   3.3 12 78.57 −0.79   6.88 39.47 65.18 PrincipalFin  PFG   3.3 12 78.57 −0.79   6.89   7.69   7.69   7.69   7.69   7.69   6.14   2.45 158.11 122.18 Procter&Gamble   PG   2.4 26 155.28 −1.72   6.44   19.87 110.04 Progressive   PGR   3.3 12 78.52 −2.39   6.46   8.44 138.86 98.03 Prologis   PLD   2.8 33 122.24 −1.52   6.46   8.44 138.86 98.03 Prologis   PLD   2.8 33 122.24 −1.52   6.46   8.44 138.86 98.03 Prologis   PLD   2.8 33 122.24 −1.52   6.46   8.44 138.86 98.03 Prologis   PLD   2.8 33 122.24 −1.52   6.46   8.44 138.87 13.20 Prudential   PRU   5.2 22 96.51 −0.28   6.46   8.47 13.25   7.59 Prudential   PRU   5.2 22 96.51 −0.28   6.47   6.47   7.47   7.48   7.49   6.48   7.49   7.49   7.49   7.49   6.49   7.40   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.41   7.49   7.49   7.49   6.42   7.49   7.49   7.49   6.43   7.49   7.49   7.49   6.44   7.49   7.49   7.49   6.45   7.49   7.49   7.49   6.47   7.49   7.49   7.49   6.48   7.49   7.49   7.49   6.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.40   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   7.49   6.40   7.49   7.49   6.40   7.49   7.49   6.40   7.49   7.49   6.40   7.49   7.49   6.4	4.63   18.57   22.50   10.00
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	11         118.867         34.49         10.69         DraftKings         DKN6         dd         31.72         12.52         22.88         81.71         Dobx         dd         31.72         12.75         66         -13.14         113.67         83.76         DukeEnergy         DW         dd         27         89.46         -0.91           6         -13.14         113.67         83.76         DukeEnergy         DU         1,4         6.2         89.46         -0.91           3         23.23         55.87         31.54         Dynatrace         DT         96         47.26         -0.48           4         131.74         137.47         83.11         Effector         12.81         -3.91           1         1,46.43         212.03         81.04         8.97         22.2         10.38         1.04           2,40         40.29         197.99         EPAM Systems         EMA         27.2         83.09         1.88           4         1,72.2         80.83         35.86         25.576         129.85         Eaton         EMB         3.74         28.41         6.07         1.44         1.44         8.06         9.07         1.25         8.9	Section	0.35   26.18 423.97 (278.10 Pool)	4.63 18.57 82.50 UniversalHealthB   HS   0.6 14 134 36   -0.95     22.64 51.15 35.28 UniversalHealthB   HS   0.6 14 134 36   -0.95     22.64 51.15 35.28 UniversalHealthB   HS   0.6 14 134 36   -0.95     22.64 51.15 35.28 UniversalHealthB   HS   0.6 14 134 36   -0.07     -2.97.4 48.20 16.77 VF   -7.07   -7.07   -7.07     -4.14 35.69 29.29 VICI Prop   VICI 5.0 14 31.06   -0.02     -3.25 26.05 00.19.19 VallResorts   VICI 5.0 14 31.06   -0.02     -3.25 26.05 00.19.19 VallResorts   VICI 5.0 14 31.06   -0.02     -3.25 26.05 00.19.19 VallResorts   VICI 5.0 14 31.06   -0.02     -3.25 26.05 00.19.19 VallResorts   VICI 5.0 14 31.06   -0.02     -3.25 26.05 00.19.19 VallResorts   VICI 5.0 14 31.06   -0.02     -4.25 21.05 17.17 Vall 2.07   VICI 5.0 14 31.06   -0.02     -4.25 21.07 17.17 Vall 2.07   VICI 5.0 14 31.06   -0.02     -2.02 232.14 15.10.2 VeevaSystems   VALE 5.3 6 13.83   -0.33     -0.15 22.13 15 35.33 Valetas   VICI 5.0 14 31.06   -0.32     -0.16 229.72 16.02 Vall 2.07   VICI 5.0 14 31.06   -0.32     -0.16 229.72 16.02 Vall 2.07   VICI 5.0 14 31.06   -0.32     -1.21 46.05 31.25 Verizon   VICI 5.0 7 32.02   -0.44     -1.7.21 46.05 31.25 Verizon   VICI 5.0 7 35.71   -1.21     -4.85 12.0 8.42 Viatris   VICI 5.0 7 35.71   -1.21     -4.85 12.0 8.42 Viatris   VICI 5.0 7 35.71   -1.21     -4.85 12.0 8.42 Viatris   VIFS 4.5 7 10.59   -0.14     -4.81 12.0 8.42 Viatris   VIFS 4.5 7 10.59   -0.14     -4.81 12.0 8.42 Viatris   VIFS 4.5 7 10.59   -0.14     -2.91 18.13 6.3 ViayaFinancial   VIMC 0.8 50 226   -0.19      VICI 5.0 8.0 8.0 8.0 EVEC Energy   WEC 3.6 20 87.27   -0.90     -4.92 10.92 18.14 WalgreensBoots   WIMC 1.3 81.31.17   -0.33     -4.93 14.93 4.0 65.78 W.P.Carey   WPC 6.4 19 66.45   -0.38     -4.93 14.93 40.6 57.8 W.P.Carey   WPC 6.4 19 66.45   -0.38     -4.93 14.93 40.6 57.8 W.P.Carey   WPC 6.3 11.14.70   -1.84     -4.95 12.0 8.0 8.0 W.S.Cares   WMC 0.3 63 11.4.70   -1.84     -4.95 12.0 8.0 8.0 W.S.Cares   WMC 0.3 63 11.4.70   -1.84     -4.95 12.0 8.0 8.0 W.S.Cares   WMC 0.3 63 11.4.70   -1.84     -4.95 12.0 8
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	1         118867         34.49         10.69         DraftKings         DKN6           d. 31.72         12.75           5         22.83         28.88         18.17         Dropbox         DBX          19.27.49         15.6           6         1-31.4         113.67         83.76         DukeEnergy         DU         4.6         27         89.46         -0.91           3         23.39         55.87         31.54         Dynatrace         DT          96         47.26         -0.48           4         131.74         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8         137.4         138.8	56	0.35   26.18 423.97 (278.10 Pool)	4.63 18.57 82.50 UniversalHealthB UHS 0.6 14 13 436 - 0.95 1 22.64 51.15 35.28 UniumGroup UNM 2.9 7 50.32 - 0.07 29.74 48.20 16.77 VF PV FC 6.2 64 19.40 0.36 1 21.44 35.69 29.29 VICI Prop VICI 5.0 14 31.06 - 0.02 1 3.25 26.50 50 20.19 Viallesorts 1.85 0 19.31 11.72 Vale VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VICI 5.0 14 31.06 - 0.02 1 20.02 123.21 41 51.02 VeevaSystems VEEV 62 196.92 2.37 - 0.16 229.72 16.92 4 VerlSign VRSN 30 205.11 - 3.02 30.23 28.82 162.94 VerlskAnalytts VEEV 62 196.92 2.37 - 0.16 229.72 16.92 4 VerlSign VRSN 30 205.11 - 3.02 30.23 28.82 162.94 VerlskAnalytts VRSN 60 29.276 - 0.44 17.90 367 272.10 Vertexpharm VRSN 60 25.04 49.9 4.91 1.10 1.10 1.10 1.10 1.10 1.10 1.10 1
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	11         118867         34.49         10.69         DraftKings         DKM           d.         3.175           56         22.83         28.86         18.71         Dropbox         DBX          19.27.49         15.6           6         1.31.4         113.67         83.76         DukeEnergy         DW         4.6         27         89.46         -0.91           3         23.39         55.87         31.54         Dynatrace         DT          96         47.26         -0.48           4         131.74         137.44         35.12         BER         12         28.0         -0.28           4         14         34.43         23.0         12.85         EMCOR         EME         0.3         22.2         12.88         1.64           7         2.23.65         51.97         28.11         EQT         4.5         4.18         0.02           4         1.74.2         88.85         13.74         Eastmortherstrust         EGP         2.9         17.4         5         4.18         0.0           4         1.72.2         1.85         5.97         28.11         EQT         1.4         5 </th <th>  Section</th> <th>  26.18   423, yr 278, 10   Pool   Pool   1.2   25   381, 49   3.0    </th> <th>4.63 1S.57 82.50 UniversalHealthB UHS 0.6 14 13-436 - 0.95 1 22.64 51.15 35.28 UniumGroup UNM 2.9 7 50.32 - 0.07 2.97.4 84.20 16.77 VF 4.14 35.69 29.29 VICI Prop VIC 6.2 64 19.40 0.36 1 2.00</th>	Section	26.18   423, yr 278, 10   Pool   Pool   1.2   25   381, 49   3.0	4.63 1S.57 82.50 UniversalHealthB UHS 0.6 14 13-436 - 0.95 1 22.64 51.15 35.28 UniumGroup UNM 2.9 7 50.32 - 0.07 2.97.4 84.20 16.77 VF 4.14 35.69 29.29 VICI Prop VIC 6.2 64 19.40 0.36 1 2.00
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	11         11/18/67         34.49         10.69         DraftKings         DKM          dd         31.72         12.59         22.88         82.81         17.70         DBX          92.74         1.75         6         -13.14         113.67         83.76         DukeEnergy         DW         4.6         27         89.46         -0.91         7.72         80.4         -0.91         7.72         80.4         -0.91         7.72         -0.08         83.31         13.74	Section	26.18   423,97   273,110   273,000	4.63 158.57 82.50 UniversalHealthB UHS
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	11         11/18/67         34.49         10.69         DraftKings         DKM           d. 31.72         1.75           56         12.31         4113.67         83.76         DukeEnergy         DUK         d. 6         27.89         46         -0.91           56         12.31         4113.67         83.76         DukeEnergy         DUK         4.6         27         89.46         -0.91           31         22.33         55.67         31.54         Dynatrace         DT          96         47.26         -0.48           41         14.43         81.21         1678         BEB         L         6.0         30.09         0.09           70         0.22         150.88         BOR 30         EOS CS         EOG         2.5         9 129.80         -1.88           50         23.56         51.97         28.11         EOT         EOG         2.7         24.69         1.72         28.09         33.81         EOG         2.9         9.17         1.45         4.18         0.00           41         17.82         18.88         13.74         Eastfourpher Pastroupher Pastroupher Service         EGP         2.9         9.47	56	26.18   423,97   278.10   point   primerica   primer	4.63 158.57 82.59 Unityosrtware U
10.08   3.35   2.12   BancoBradesco   BBDO   4.8   9   2.84   -0.21	11         11/18/67         34.49         10.69         DraftKings         DKM           d.         3.175           56         -22.83         28.86         18.71         Dropbox         DBX          92.749         1.75           66         -13.14         113.67         83.76         Dubenergy         DU         4.6         27         89.46         -0.91           73         22.33         55.87         31.54         Dynatrace         DT          96         47.26         -0.48           41         14.64.32         218.03         112.25         EMCOR         EME         0.3         22.21         128.81         1-04           41         14.64.32         218.03         212.25         EMCOR         EME         0.3         22.21         218.81         249           4.24.44         24.09         97.99         PDAM Systems         EOG         2.5         9 12.980         -1.38           4.3         7.12         28.08         33.35         27.41         EMB         0.3         22.22         1.68         23.21         0.90         1.24         4.84         0.06         20.73         1.74         2.84	56	0.35	4.63 18.57 82.59 UniversalHealthB UHS 0.6 14 13.43 00.95 1 22.64 51.15 35.28 UniumGroup UNM 2.9 7 50.32 -0.07 2.97.4 84.20 16.77 VF 4.14 35.69 29.29 VICI Prop VFC 6.2 64 19.40 0.36 1.36 1.36 0.02 150.50 201.91 VailResorts VICI 5.0 14 31.06 -0.02 VICI 5.0 14 31.06 VICI 5.0 14 31.00 0.02 VICI 5.0 14 31.00 0.02 VICI
1008   3.35   212   BancoBradesco   BDO   48   9   2.84   -0.21	1   1867 34.49   10.69   DraftKings   DKN6     dd   31.74   1.75	Section	26.18   423,97   278.10   point   primerica   primer	4.63 18.57 82.59 UniversalHealthB UHS 0.6 14 13.43 00.95 1 22.64 51.15 35.28 UniumGroup UMM 2.9 7 50.32 -0.07 4.29.44 13 56.69 29.29 VICI Prop VIC 6.2 64 19.40 0.36 1.36 1.38 1.36 0.02 150.59 020.19 VailResorts VICI 5.0 14 31.06 -0.02 VICI 5.0 14 31.06 0.02 150.39 97.73 ValeroEnergy ULS 3.2 42.30 0.0 -0.11 17.2 Vale VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VICI 5.0 14 31.06 -0.02 VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VICI 5.0 14 31.06 -0.02 VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VALE 5.3 6 13.83 0.03 0.02 150.39 97.73 ValeroEnergy VEEV 62 196.92 2.37 0.06 0.01 150.00 VALE 5.3 6 13.83 0.03 0.02 150.30 0.02 150.32 0.02 150.32 0.02 150.32 0.02 150.32 0.02 150.32 0.02 0.00 0.00 150.00 VRSM 30 205.11 3.02 0.02 250.00 0.01 150.00 VRSM 30 205.11 3.02 0.02 250.00 0.01 150.00 VRSM 30 205.11 3.02 0.02 250.00 0.00 0.00 0.00 0.00 0.00
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#### **BUSINESS NEWS**



The wireless carrier's network of towers could appeal to rival U.S. infrastructure companies as well as private-equity firms.

### U.S. Cellular Owner Weighs Sale of the Wireless Carrier

By Drew FitzGerald

The owner of U.S. Cellular, the largest regional cellphone carrier left standing in the U.S., signaled that it could sell the business, offering a new test of a slowing telecom sector's appetite for more consoli-

Telephone and Data Systems said Friday it would start a process to explore a range of strategic alternatives for U.S. Cellular. The rural-focused wireless carrier has more than four million customers across 21 states. TDS owns more than 80% of U.S. Cellular shares.

Shares of TDS jumped 88% while U.S. Cellular leapt 93% on Friday, giving it a market capitalization of nearly \$3 billion. U.S. Cellular's annual revenue has hovered around \$4 billion for the past five years.

Executives declined to answer questions about the review but detailed pressures from the company's ebbing cellphone customer base and underwhelming revenue from its portfolio of more than 4,000 owned cellphone towers. The company leases tower space for its network and those of rival wireless compa-

"We see a lot of value in that tower business," U.S. Cellular Chief Executive LT Therivel said Friday.

Chicago-based U.S. Cellular is one of several telecom pioneers that grew its cellphone service from a niche professional offering into a massmarket business in the 21st century under the control of founder LeRoy Carlson. The spread wireless business across rural pockets in the Northwest, Midwest and Northeast, but the Carlson family avoided joining the wave of consolidation that left the country with three national network operators by the end of 2020.

U.S. Cellular has since struggled to keep cellphone users who are increasingly drifting to national brands AT&T, Verizon and T-Mobile. Cable companies offering cellphone service through partnerships with Verizon have also sapped customer additions.

The company's network of towers could appeal to rival U.S. infrastructure companies as well as private-equity firms that have snapped up similar equipment around the world. Big cellphone carriers could also absorb its consumer business but would need to persuade Biden administration antitrust officials who have sought to block mergers in other sectors on competition grounds.

Verizon in 2021 acquired prepaid wireless provider T-Mobile TracFone, while struck a deal earlier this year to take over Mint Mobile, a low cost competitor. Unlike those two brands, which resell wireless services, U.S. Cellular operates its own cellular network.

Satellite company Dish Network is meanwhile building another nationwide cellphone network to serve a base of customers mostly spun off from T-Mobile's 2020 merger with Sprint. The effort has moved slowly as executives struggle with the high cost of building new infrastructure and defending that customer base against competitors.

### Maersk Is Cutting Costs as Shipping **Downturn Lingers**

By Dominic Chopping

**Moller-Maersk** is sharpening its focus on cost cutting in what the carrier says is a contracting container shipping market.

The Danish shipping giant upgraded its earnings outlook even as it lowered projections for freight demand, saying it now expects global container volumes to decline between 1% and 4% this year and that it will adjust its operations to slowing business.

"We do not see any sign of an expected volume rethe in second part of the year," Chief Executive Vincent Clerc said on an earnings call on Friday.

The company is the latest container line to report a sharp drop in second-quarter net profit after freight rates and volumes fell. But Maersk's cost cuts helped earnings beat expectations and prompted the company to raise the lower end of its full-year guidance range.

Maersk reported a quarterly net profit of \$1.45 billion, down from \$8.62 billion in the same period last year, as revenue fell 40% to \$12.99 billion. A FactSet consensus had seen net profit at \$591 million on revenue of \$13.09 billion.

Maersk said its shipping customers continued to reduce inventory in the quarter, particularly in North America and Europe, as the weaker global growth environment weighed

on consumer demand, pushing freight rates at Maersk's main shipping unit down 51% from a vear ago and volumes 6.1% lower. Revenue in the division fell 50%

Maersk said retailers are continuing to pare excess inventories in a destocking effort that the shipping line expects to continue through the end of the year. As a result, it now expects global container volumes to fall this year, compared with an earlier projection of minus 2.5% to plus 0.5% growth.

Rival container line CMA CGM recently reported that its second-quarter profit fell 82% to \$1.3 billion as container volumes fell at a double-digit pace from the first quarter.

Shipping lines have responded to the demand downturn by reducing capacity, using measures such as canceling port calls and slowing ship speeds.

"We have ployed all the tools of dycapacity namic manage ment that we have developed

in the previous cles, and we have also broug ht out our familiar cost containment playbooks,"

Industrywide reports suggest the carrier efforts have halted this year's steep decline in prices, although prices remain far below freight rates in 2022, when a retailer rush to restock inventories swamped shipping capacity and drove up



The company reported a quarterly net profit of \$1.45 billion.

### Superconductor Breakthrough Claims Take Stock Investors for a Wild Ride

The hope and hype sursuperconductors rounding took off this week, as stocks with a perceived connection to the latest research swung wildly and videos by once-obscure scientists went viral.

By **Jiyoung Sohn** in Seoul and Yang Jie in Tokvo

Late last month, a group of scientists from South Korea and Virginia's William & Mary, in two academic papers that hadn't undergone peer review. claimed a breakthrough that opened "a new era for humankind." It relates to the socalled LK-99 crystal, a superconductor that consists of a lead-based compound seasoned with copper.

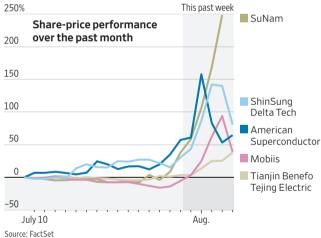
The material, the group claimed, showed the properties of a superconductor that transmits electrical currents without resistance at room temperature and at ambient pressure—a long-running scientific pursuit that, if valid, would usher in generational advances in chips, power grids and computing systems.

The word "superconductors" trended widely online this week. Share prices surged for companies in the U.S., China and South Korea whose operations overlap with superconductors—and even some that lack a direct linkbefore the gains reversed late in the week. A video uploaded by Chinese researchers, who backed some of LK-99's traits. attracted nearly 10 million

But many scientists see LK-99's claims, for now, as more viral than verifiable. The fervor speaks to the immense potential of room-temperature superconductors as well as limited public understanding of the technology and its prospects. A superconductor refers to a material that conducts electricity without energy loss and expels magnetic fields while transitioning to the superconducting state, according to the U.S. Department of En-

The buzz around supercon- Others have concluded that

Companies associated with the latest superconductor research saw their shares react dramatically this past week.



ductors has remained elevated since March. That is when Ranga Dias, a physicist at the University of Rochester, published a piece in the prestigious journal Nature, arguing the rare-earth metal lutetium combined with nitrogen and hydrogen was a superconductor at a temperature of 69 degrees Fahrenheit. It also did so at pressures less extreme than what is required for many known superconducting materials. Dias's claim and his prior work have been heavily scrutinized by his scientific peers, including accusations of fabricated data and plagia-

Like all previous reports of such "unidentified superconducting objects," the South Korea-led group's findings will be "taken seriously once other groups reproduce them and then weigh in on whether this is a true superconductor or just an unusual kind of diamagnet," said Michael Norman, a condensed matter physicist with the U.S. Department of Energy's Argonne Na-

tional Laboratory. Several efforts are under way to verify the LK-99 claims, including one led by Argonne. Some initial attempts at verification have shown promise, such as Lawrence Berkeley National Laboratory's simulations that have

supported LK-99 in theory.

the material doesn't display the appearance of bulk superconductivity at room tempera-

They are reacting to a pair of papers posted recently by scientists, most of whom work for the privately held Quantum Energy Research Center in Seoul. They uploaded their findings to arXiv, a global repository for unpublished science research. One of the scientists also provided a video showing a small sample of the material partially levitated over a magnet in an apparent demonstration of supercon-

LK-99 is named after the initials of the surnames of two of the scientists—Lee Suk-bae and Kim Ji-hoon of the Quantum Energy Research Centerand 1999, the year the matewas reportedly synthesized by them.

Quantum Energy Research Center didn't respond to a request for a comment.

Some compounds composed of metals including aluminum, zinc, and mercury are known to exhibit superconducting behaviors, though only at exwidespread use.

treme pressures and temperatures. That has made them unfeasible or impractical for The enthusiasm for LK-99 triggered wild stock swings. Given the current concentra-

tion of manufacturing exper-

tise in Asian countries like

South Korea, Japan and China, it is highly probable that companies from these countries would play a significant role in developing and implementing superconductors when they are ready for more prac tical applications.

Several little-known South Korean companies with presumed ties to superconductors received investor warnings after share prices skyrocketed. One, Sunam, which makes high-temperature wiring and electromagnets involved in superconductors, hit the daily maximum level of 30% gains for three straight days. Trading of Sunam shares were halted Friday for one day after surges that occurred after the warning. Another company, Mobiis, involved in nuclear fusion and particle-accelerator technologies, rose 19% this week through Thursday, then fell roughly by 28% by Friday's

Despite having no involvement in superconductors, a third South Korean company. Shinsung Delta Tech, hit maximum gains on Tuesday and Wednesday before selling off. The rise came from Shinsung's ownership stake in a venture-capital firm that has invested in the Quantum Research Institute.

In the U.S., shares of American Superconductor, which specializes in high-temperature superconducting wires, skyrocketed by roughly 60% on Tuesday, before the gains reversed in following days.

Several Chinese companies saw their stock prices soar and fall as the LK-99 video went viral. The investor attention prompted Shanghai-listed **Benefo**, which rose 34% in recent days, to clarify that it has no related work now to roomtemperature superconductivity. In the past, a subsidiary had engaged in some hightemperature superconducting research. Meanwhile, Shenzhen-listed TICW pointed out the same lack of a room-temperature superconducting exposure, though its stock price

roughly 70%

surged

### **American Vacationers** Shun U.S. for Europe

The pivot is

cutting into

revenue for

some U.S.-

focused airlines.

By Alison Sider

Globe-trotting Americans have packed international flights this summer, leaving behind some domestic-focused

Americans are flocking to Europe. The allure of international travel has travelers swapping out shorter trips within the U.S. or to some nearby destinations in favor of longer journeys.

The number of passengers domestic

flights slid 2% in July from the same month in 2019, while the number of passengers trans-Atlantic routes increased 14%, according to Airlines for America, a trade group that rep-

resents several major airlines. Airline ticket prices reflect the shift. Domestic fares are down 11% from last year and tracking below 2019 levels, while international fares have risen 11% from a year ago and are up 28% from 2019, according to Hopper, a booking app.

The pivot is cutting into revenue for some U.S.-focused airlines that haven't seen demand build to the heights it reached last summer, according to airline executives. To cope, carriers are rejiggering schedules and trying out new routes to better match the emerging patterns. "The current setup is simply not favorable to a domestic-focused airline." Spirit **Airlines** Chief Executive Officer than-expected earnings.

Ted Christie said Thursday as the carrier reported weaker-Dan Plotinsky and his family usually fly to New England to visit relatives over the summer. With his oldest daughter gradu-

ating from high school, they in-

stead took a family trip to Europe. Plotinsky's wife and daughters started in France, and he met them in London.

"I think we just decided, let's try something new," he said.

JetBlue Airways cautioned this week that it might see a loss in the third quarter and pared its guidance for the full year. Executives at Spirit, Frontier and Alaska Air have said in recent weeks that U.S. airfares have cooled as more of their

customers have spent their vacation budgets on trips abroad.

"When we lose 5% of our people to go to Europe, that's a lot of customers," Frontier Chief Executive Barry Biffle said Tuesday.

Hotels seeing a similar

switch. Marriott International said that per room international revenue is expected to climb as much as 30% this year, while the U.S. and Canada increase more moderately. Hyatt Hotels said 27% of second-quarter rooms revenue at its hotels in Europe was from U.S. travelers, up from 21% in the same period in 2019.

Travel has been on a twoupswing as easing Covid-19 restrictions unleashed a torrent of demand that has been stronger and more resilient than many industry observers expected. This summer's domestic slowdown is one of the first indications that the frenzied pace of the rebound could be moderating.

#### Watch a Video



Scan this code for a video on how airlines choose where

#### **BUSINESS & FINANCE**

### WPP Cuts Forecast Amid Tech Marketing Slowdown

By Megan Graham

WPP reduced its growth forecast for the year after the advertising holding company saw lower revenue in the U.S. from technology clients and delays in spending on technology projects in the second

The London-based company—which owns agencies including Ogilvy, Wunderman Thompson and VMLY&R, as well as media-buying giant GroupM—previously said it expected its like-for-like revenue less pass-through costs to grow between 3% and 5% this year. Now, it expects that figure to sit between 1.5% and 3%. Like-for-like revenue less pass-through costs strips out jor ad holding companies, currency fluctuations, acquisitions, disposals and costs such as expenses billed to cli-

The company's like-for-like revenue less pass-through costs grew 2.3% in the second quarter.

Softness in marketing from technology sector clients wasn't unique to WPP in the second quarter. Competitors Omnicom, IPG and S4 recently called out slower spending by technology marketers, while some advertising holding companies also cited less spending by telecommunications marketers. Certain large clients can account for a large portion of revenue at the mameaning when one big client pulls back on spending it can have major ripple effects on their agency partners.

WPP Chief Executive Mark Read said that with tech making up about 18% of the company's business, lower spending in that arena made an outsize impact on its re-

"In the long run, that's a source of growth," he said. "In [the second quarter], there's no doubt that it hurt us."

WPP also said it saw delays across all client types for technology projects such as app development, e-commerce projects and data integration projects.



### Israeli AI Startup Vesttoo Sparks Global Insurance Market Scandal

By Jean Eaglesham

A hot Israeli startup promised to use artificial intelligence to spread the risk of insurance policies. Now, the company, Vesttoo, is embroiled in scandal thanks to an oldfashioned problem: an alleged multibillion-dollar fraud involving faked letters of credit.

Vesttoo's platform acts as a kind of dating service connecting insurers, brokers and investors. Problems emerged when a policyholder made a substantial intellectual-property claim. The policy had supposedly been sold to investors via Vesttoo, according to people familiar with the matter. It couldn't be determined who sold the policy or who made the claim.

The insurance company called on the letter of credit backing the deal—a form of guarantee from a bank that the investor has the money. China Construction Bank, whose name was on the letter of credit, denied all knowledge of the document, the people

The Federal Bureau of Investigation, several state insurance commissioners and the Bermuda Monetary Authority are among those trying to figure out what happened, according to company statements and people familiar with the matter. More than \$2 billion of the alleged fraud occurred in the U.S., according to one of the people familiar with the matter.

The alleged fraud affects a multitude of insurance players, including global brokerages and several U.S. insurers. Investigators are following a trail that winds from insurers in North Carolina and other southern states to Vesttoo's Tel Aviv headquarters, and includes Bermuda-based bro-

kers, London insurance syndicates and the giant Chinese bank. State-owned China Construction Bank didn't respond to requests for comment. Vesttoo said Thursday that

its board is considering the removal of two of its co-founders, Chief Executive Yaniv Bertele and Chief Financial Engineer Alon Lifshitz, who have both been put on paid leave. Bertele said a continuing outside investigation has found "no suspicion against

any members of the company's management." Lifshitz didn't respond to a request for comment. "We want to emphasize that there are no plans to liq-

uidate the company," Vesttoo added. Vesttoo had

More than this

amount of the

alleged fraud

occurred in the U.S.

previously attracted top-tier backers, including Goldman Sachs, with its promise shaking up the reinsurance market. The five-year-old

firm was valued at \$1 billion in October in its last round of fundraising.

Goldman, which invested in October fundraising round, no longer owns equity in Vesttoo, a person close to

the bank said. Insurance broker **Aon** was one of a chain of firms involved in the allegedly fraudulent deal, according to people familiar with the matter. Aon said it is facing potential legal action from clients and counterparties over its role in certain Vesttoo deals. "Aon believes that it has meritorious defenses and intends to vigorously defend itself against

these claims," the company

said in a filing.

Beyond Vesttoo, the faked letter of credit caused alarm bells to ring throughout the industry. A lawyer acting for a U.S. insurer said he went to China Construction Bank's New York branch last month to verify a letter of credit for a different Vesttoo deal. The bank's security staff threw him out, according to the lawyer, who didn't want to be named.

The scandal also has roiled the \$38 billion market for insurance-linked where financial engineering converts policies into bundledup packages of risk that are sold to investors such as hedge funds and large asset managers, analysts said.

"This shaken the confidence of investors," said Marcos Alvarez, global head of insurance at credit-rating firm Morningstar. Much as the financial crisis led to tougher

rules on mortgage deals, he added, "you're going to see increased scrutiny and tightening of controls

on this section of the market." Vesttoo specializes in risks that aren't related to natural disasters, covering everything from copyright theft to bad drivers and long-haul trucking. That contrasts with the catastrophe bonds that dominate the insurance-linked securities market, where investors promise to pay out in the event of hurricanes or other natural disasters, according to the National Association of In-

surance Commissioners. Vesttoo deals include policies written by so-called fronting insurers, a fast-growing sector of the insurance industry that typically pays a group of reinsurers to back their policies. Premiums for a group of 19 fronting insurers rated by AM Best more than doubled in two years, from \$4.8 billion in 2020 to \$10.6 billion last year. Some of that reinsurance involves securitized deals arranged by Vest-

too and sold to investors. The Vesttoo blowup has prompted U.S. state insurance commissioners to scrutinize whether the fronting model of selling on risks could leave policyholders exposed, people close to the regulators said.

"We are looking closely at [Vesttoo's] relationship with our...insurers and how those entities may be impacted," a spokesman for the North Carolina Department of Insurance

North Carolina fronting insurer Clear Blue Insurance Group last year announced a '\$1 billion partnership" with Vesttoo. Rating firm AM Best last month put Clear Blue's "excellent" rating "under review with negative implications."

Clear Blue said in a statement it has already replaced half the reinsurance affected by Vesttoo. It added that it has retained premiums related to the Vesttoo deals, which are "more than sufficient to pay all claims on the affected programs."

Vesttoo CEO Bertele blamed his potential ouster on investors trying to grab his company by spreading false information. "Parties with vested interests have decided to exploit the temporary crisis the company is facing, aiming to facilitate a hostile takeover," he said.

–Rebecca Feng contributed to this article.

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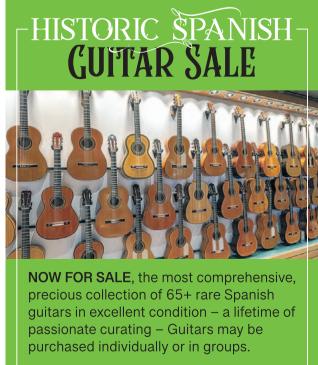
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A bond selloff pushed up yields and drew traders away from equities

By David Uberti

Investors parsing the health of the U.S. economy encountered smooth sailing in financial markets in recent months. This week may have provided a warning shot.

America's credit downgrade earlier in the week sparked a selloff in bonds

#### FRIDAY'S **MARKETS**

resting markets' summer climb and growing confidence that the country can get inflation under control while escaping a recession.

and stocks, ar-

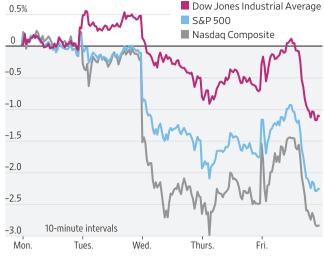
All three major indexes dropped Friday to finish the week in the red, with losses spanning big banks, big tech and major automakers. The Dow Jones Industrial Average fell by 1.1% this week, while the tech-heavy Nasdaq dropped 2.9% and the S&P 500 fell 2.3%.

The drop in bond prices after Fitch's downgrade of the U.S. credit rating left yields on longer-term government debt hovering near their highest levels since last November. That called into question the benefit of owning stocks, drawing traders away from higher-risk equities in recent days.

'This week's wobble in the fixed-income market kind of woke everyone up," said Peter van Dooijeweert, head of multiasset solutions at Man Solutions. "This isn't a free lunch."

The three major U.S. indexes are up considerably year to date. But investors are still analyzing if and how the Federal Reserve's interest-rate creases to 22-year-highs will slow down the world's largest economy in the months ahead.

Many indicators about the country's inflation outlook continue to offer mixed messages. On Friday, the Labor Department said U.S. employers added 187,000 jobs in July, indicating Index performance this past week



that hiring has slowed from last summer. But wages continued to rise at a brisk pace.

The dueling narratives from such data have left investors like van Dooijeweert veering toward bonds that offer a healthy return without the risk of equities that could dive should the central bank nudge the economy into a recession.

"If the Fed's not cutting [interest rates], bonds need to sell off," he said, noting that vields would rise in such a scenario. "As we say in my

house: party on."

Benchmark 10-year Treasury yields edged lower Friday, but were still higher at 4.060% this week, closing near their highest level in more than a decade. Those for 2-vear Treasurys. which are more responsive to investors interest-rate expectations, dipped to 4.791%.

Those rates helped pull more investors away from stocks in most sectors of the S&P 500. Stocks in utilities, usually prized for their stability and dividend payouts, were the indexes' worst performers with a 4.7% drop this week.

Energy companies were one of the markets' few bright spots, pulled higher by oil prices that have reached their highest levels since April. Benchmark U.S. crude prices have risen for six straight weeks, closing this week at \$82.82 a barrel.

On Friday, Amazon.com shares were a big winner, jumping 8.3% after the tech giant trounced expectations for quarterly profit.

Apple stock, meanwhile, fell 4.8% after the iPhone maker said revenue declined for a third straight quarter, marking the company's longest sales slump since 2016.

Friday's declines came despite corporate earnings largely beating Wall Street's expectations. Of 422 companies in the S&P 500 that have reported quarterly results, Refinitiv said 79% topped projections, up from the 66% average since 1994.

But some investors note that earnings expectations were fairly low. "It's hard to understand why the market prices [companies] at a premium in that scenario," said Jason Pride, chief of investment strategy and research at Glenmede.

Pride suspects that some investors have pointed to the stock market's performance this year as evidence that the Fed's rate increases won't eventually bite.

–Joe Wallace and Gunjan Banerji contributed to this article.

### Stock Market's Optimism Faces Test As Normally Weak September Looms

By Charley Grant

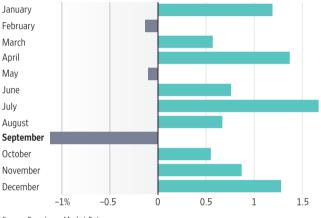
September is traditionally the weakest month for U.S. stocks. This year, investors say the turning of the calendar should be especially worrying.

Stocks have risen sharply after last year's selloff, defying any number of risks along the way. The S&P 500 is up 17% so far this year, including a 3.1% increase in July that reflected gains across all 11 sectors. Wall Street's so-called fear gauge, the Cboe Volatility Index, is sitting well below historical averages.

If history is any guide, investors' optimism will soon be put to the test. The S&P 500 has lost an average of 1.1% in September dating back to 1928, making it the worst month for stocks' performance. It isn't just a few bad vears dragging down returns: The broad index has risen less than 45% of the time over that period, also the worst month by that measure, according to Dow Jones Market Data.

There is no clear reason for what is known as the "September effect." But it is typically a month without the type of news that can push stocks higher, such as major corporate earnings, said Jay Hatfield, chief executive officer of Infrastructure Capital

Average monthly S&P 500 returns since 1928



Source: Dow Jones Market Data

comes from the companies, and the bad news comes from random events." Hatfield said. He pointed to Fitch's recent downgrade of the U.S. credit rating as an example.

So far this year, investors have brushed off fears of high inflation, a significant decline in corporate earnings, a possible recession, a standoff over the U.S. debt ceiling and the largest bank failures since the global financial crisis.

But there are warning signs that this year's rally could lose steam. Valuations are above their recent norms, with the S&P 500 trading at 19.4 times forward earnings estimates, according to FactSet. The onecan make a decline more severe.

Meanwhile, the 10-year Treasury yield is at its highest level in nearly a year, making it less attractive to hold stocks instead of bonds. On the borrowing front, some fear the repercussions of the highest interest rates in 22 years have yet to take full effect in the economy. And many investors think the Federal Reserve will need to keep rates higher for longer, particularly with rising oil prices threatening to stoke inflation again.

'If we were to put the kibosh on the idea that the Fed is done, then we might have an issue," said James Bianco,

president of Bianco Research.

the year, raising hopes that the Fed would manage to pull off a soft landing. Yet some bears think it is too soon to say the risk of a recession has faded.

"We've just been through the most aggressive hiking cycle in my career. It's a bit presumptuous to think we've felt all those effects," said Rob Williams, chief investment strategist for Sage Advisory Services. He said that the outlook is better for bonds than for stocks. Within stocks, he prefers more-defensive sectors such as consumer staples that tend to perform steadily even in a sluggish economy.

So far in August, the S&P 500 is down 2.4%, compared with its average gain of 0.67% for the month. The information technology sector, this year's best performer, is down

The artificial-intelligence enthusiasm that has powered tech stocks higher could also

Chip maker Nvidia, whose shares have tripled this year, reports quarterly results on Aug. 23. The end of earnings season soon after could create a void of good news until the fall.

"Once Nvidia goes, then what's your catalyst?" asked Hatfield of Infrastructure Capital Advisors. He said he exthe fourth quarter.

### Harris Williams Hires **Credit Suisse Executive**

By Rod James

Harris Williams has hired a longtime Credit Suisse executive to lead a team that will advise on private-market secondary deals in Europe, according to three people familiar with the matter.

Jonathan Abecassis has London office, alongside di-Suisse alum Dainora Mil-The team will focus mainly on ing investors the option to remain or cash out.

The volume of deals led by

In anticipation, growing numbers of investment banks

start new units in the past 18

secondary team will be part of

its private-capital advisory di-

joined the investment bank as a managing director in its rector and fellow Credit iauskaite, the people said. sponsor-led deals, processes instigated by fund managers to extend their hold over companies while giving exist-

fund sponsors fell 25% to \$18 billion in the first half of this year compared with the same period of last year, according to data from investment bank Jefferies. But many market participants are expecting an uptick as traditional sources of liquidity, such as the M&Aand IPO markets, remain closed. In a survey of secondary buyers conducted by The Wall Street Journal, 64% expect deal flow from European sellers to increase over the next year, the highest level since at least 2019.

liam Blair among those to Harris Williams' European

vision, the people said. The bank added the division to its core M&A advisory business in April through a merger with Sixpoint Partners, a New Yorkbased fund placement agent

added. Sixpoint Founder Eric Zoller leads the combined new advisory team at Harris.

and secondary adviser, they

Credit Suisse has had a host of senior-level departures in the past year as the bank lost the confidence of customers and investors, and had to be acquired by its compatriot, UBS, in a deal brokered by the Swiss government.

In December, The Wall Street Journal reported that Brian Williams and Jerome Wallace, the co-heads of Americas distribution Credit Suisse's private fund group, were leaving for middle-market investment bank William Blair.

The same month. Credit Suisse's global head of capital solutions Jeremy Duskin joined Baird as co-head of the bank's secondary business.

Abecassis had been with Credit Suisse since 2006, having joined out of college, ac-

Credit Suisse didn't wish to

#### vear average is 17.7 times. Inpects stocks to pull back in Advisors. U.S. economic growth accelare entering the secondary adcording to his LinkedIn profile. "The basic theory is that September, then rally again in visory space, with DC Adviflated valuations alone don't erated in the second quarter good news almost always cause stocks to drop, but they from the first three months of sory, Robert W. Baird and Wilcomment on the departure.

### Saudis Chart Solo OPEC Path

Continued from page B1 prices. The decision shows how Saudi Arabia is willing to take unilateral action that could benefit the kingdom.

Saudi Arabia announced the voluntary production cut after a fiery meeting at the OPEC headquarters in Vienna in June. Several producers, especially some from Af-

**COMMODITIES** rica, pushed back against Saudi Arabia's insistence that they slash their quotas to help support prices amid concerns over slowing global energy demand, OPEC delegates said.

Saudi Arabia, OPEC's biggest exporter, wants to keep oil prices at the levels it needs to fund Crown Prince Mohammed bin Salman's plans to reshape the kingdom's oil-dependent economy. Oil sales are the biggest revenue earner for the Saudi government.

The broader 23-member group, called OPEC+, accounts for close to half of the world's oil output. Each member of the cartel is allotted a production quota. A cut in quotas could squeeze revenues in the long run for the smaller producers who often also face challenges in raising production again, some OPEC members and ana-

The Saudi decision to volun-

tarily cut output helped keep the June meeting from completely blowing up, delegates Others in the group agreed to stick to current production targets. An oil-price rally in July has ensured that members of the cartel are playing along for now, some cartel members and analysts say.

'The June meeting was a turning point," said Homayoun Falakshahi, a senior oil analyst at commodities-data firm Kpler. "For now it's working because prices are high."

tional oil benchmark, has risen Arabia and Russia said they ments in spare capacity—the amounts of production idle and cades, the Saudis kept the

Under Saudi Energy Minister Prince Abdulaziz bin Salman, that now appears to be changing. OPEC officials from several member states say tensions remain high over Saudi Arabia's increasingly autocratic waysand not just over production



Brent crude, the interna-

firmly back above \$80 a barrel after jumping 13% in July, its biggest monthly gain in a year and a half. It was up 1.3% at \$86.24 a barrel on Friday, building on recent gains after Saudi would extend efforts to keep crude supplies tight. Saudi Arabia has long been OPEC's de facto leader thanks to investability to keep significant reopen it at short notice-initiated in the 1970s. Over the degroup together largely by ensuring that every member felt it had a voice.

The kingdom's tactics are inspiring disquiet among some members, who disapprove of its



Oil sales are the biggest revenue earner for the Saudi government.

tightfisted approach, potentially paving the way for the group to splinter or others to publicly challenge the kingdom's leadership if its gamble fails, some OPEC officials and others familiar with the cartel's internal dynamics said.

Some members said they expressed unhappiness over the cartel's unusual decision, spearheaded by Prince Abdulaziz, to decline to invite reporters from Bloomberg and Reuters to the June meeting. Both Wall Street Journal reporters who cover OPEC also were excluded, but other Journal reporters did get invitations. When invitations were denied again for an OPEC seminar for business leaders in Vienna in July, the cartel's members warned the move

could hurt the organization's image, which has already taken a hit as it defies calls from global leaders to boost production and help ease inflation.

The Saudi Energy Ministry is also pressing OPEC to hire its current spokesman as head of the cartel's media relations, say people familiar with the matter. That would give Riyadh greater ing, they added.

control on the cartel's messag-The kingdom already holds sway over OPEC's research department, led by a Saudi national, which determines its assessment of the market and how much the group should pump. Rivadh has also pres-

OPEC production and exports

to comply with its own assess-

ments, said people familiar vith the matter.

The Saudi Energy Ministry and a spokesman for OPEC didn't immediately respond to

requests for comment. Prince Abdulaziz as the Saudi energy minister is charting a course that shows the pressure he faces to keep prices above the \$80-a-barrel level, which analysts estimate the

kingdom needs to finance the economic overhaul plans of his half-brother, the crown prince. Prince Mohammed, the kingdom's day-to-day ruler, has embarked on an expansive development drive at home. launching projects so big sured trade outlets that track that the Saudis call them

gigaprojects. As oil prices hit

\$100 a barrel last year follow-

ing the Russian invasion of Ukraine, the kingdom accelerated those efforts.

Saudi economic advisers in recent months have privately warned senior policy makers that the kingdom needs elevated oil prices for the next five years to keep spending billions of dollars on projects that have so far attracted meager foreign investment.

It remains unclear how the unilateral production cuts will eventually impact Saudi revenues. While oil prices have risen to a three-month high, the cut has taken Saudi Arabia's output to nine million barrels a day, a level that is the lowest since June 2021 and rarely seen in the past 10 years. Saudi oil exports were al-

ready down by almost 40% in May from the same period a vear ago, recent data from the General Authority for Statistics shows. The value of oil exports declined to 72 billion Saudi riyals, or about \$19.2 billion, in May from 115.5 billion rivals last year, the authority said.

Any opposition against Saudi Arabia's moves has so far largely remained private as most of the nations that once competed with Rivadh in the cartel have lost clout.

Venezuela and Iran were fierce critics of the kingdom and at times blocked Saudi proposals. But their production has been hobbled by years of sanctions, making them unable to influence the cartel's decisions. Algeria and Nigeria, two other historical power brokers in the group, have also seen their production curbed by years of underinvestment.

### HEARD ON STREET

FINANCIAL ANALYSIS & COMMENTARY

### Gucci Works Its Socks Off to Be Cool Again

Gucci's style is extreme, and its sales can be too, with big ups and

As shoppers tire of its designs again, the Italian brand needs to show it can be more than a boomto-bust story.

Gucci ads will be hard to avoid next month. The label recently hired a new designer, Sabato De Sarno, who will present his first collection at Milan Fashion Week in September. Gucci's Paris-listed owner, Kering, has an advertising blitz planned across billboards, magazines and social media in the weeks after the fashion show-all to jump-start stagnating sales and, the company hopes, get Gucci back onto luxury fans' radar.

Gucci has been through volatile times before. The label came close to bankruptcy 30 years ago until American designer Tom Ford was hired as creative director in 1994 and roughly tripled sales over a decade. By 2014, Gucci had

lost its edge again to the point that major U.S. department store Bergdorf Goodman no longer wanted to work with the brand.

That changed when Gucci's outgoing CEO, Marco Bizzarri, took over in 2015 and began the gutsiest makeover so far in the luxury-goods industry. He gambled by hiring then-unknown designer Alessandro Michele, whose over-thetop collections were a hit with shoppers. Michele sent models

down the runway in fur-lined Gucci loafers and took over both London's Westminster Abbev and L.A.'s Hollywood Boulevard for fashion shows. He launched new collaborations like one with Harlem designer Dapper Dan, better known for producing knockoffs of luxury designs for hip-hop stars in the 1980s.

"We didn't look at focus groups. We didn't look at consumers. We just did exactly what we wanted to do," Bizzarri told investors at a





2018 capital-markets day. This slightly reckless approach worked

magic on the company's sales. Gucci's initial goal to reach 6 billion euros in sales, up from the €3.5 billion it made before the revamp, was smashed within two years. A subsequent target to reach the €10 billion mark was nearly achieved by 2019. In the first four years of Gucci's new look, Kering was the hottest stock to own in luxury, generating total annual shareholder

A Gucci store in Bangkok. and an iteration of its hit fur-lined mules, left.

returns above 30% on aver-

But the brand has run out of steam much faster than expected. In the second quarter of this year, Gucci's sales rose only 1% and it missed a gold rush that enriched other luxury brands during the pandemic. In 2022, sales at competitor LVMH's fashion and leather goods division, which includes brands like Louis

Vuitton and Christian Dior, were 74% above 2019 levels. Gucci's 2022 sales were only 9% higher.

In hindsight, Kering's decision to slash its ad budget early in the pandemic to protect profit margins was a mistake. Powerful rivals that took the opposite approach and spent heavily on marketing won market

Gucci's very trendy designs also turned off older shoppers, leaving the brand vulnerable when young

consumers got bored of the look. Fickle millennials made up 60% of Gucci's registered shoppers at one point, and their interest started to slip three years ago.

Can Gucci reverse its second big slowdown in a decade? Kering has a great track record at jump-starting brands. It turned sleepy Balenciaga into a modern, successful label—at least until last vear's controversial ad featuring children holding teddy bear handbags clad in what looked like bondage gear blew up the good work. A revamp of Bottega Veneta has been another success.

But Kering isn't good at generating the steady, reliable growth that luxury shareholders really value. Its brands can soar before falling back down to earth. A perception that its labels are too fashionable and vulnerable to shifting trends is the main reason Kering's stock trades at a big discount to peers LVMH and Hermès that churn out more classic designs.

In a potentially bad sign for Kering, luxury shoppers' tastes are becoming more conservative as the

outlook for the global economy weakens. According to Bank of America's Brand Leading Indicator, which tracks search-engine data, website visits and social media followers for major luxury labels, understated brands are now outperforming flamboyant labels online. Gucci is languishing toward the bottom of the bank's tracker.

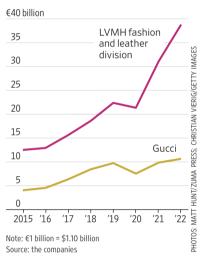
Gucci is now a €10.5 billion label and generated 51% of Kering's overall sales and 67% of operating profit in 2022. This is up from 34% of sales and 63% of operating profit the year Bizzarri took over.

Kering's billionaire owner, François-Henri Pinault, stepped in early with a management shake-up. His right-hand man Jean-Francois Palus will become interim CEO to make sure the launch of Gucci's new look goes off without a hitch. A search for a permanent boss will begin later this year. Expectations for the turnaround

are low. Kering's shares trade at a 40% discount to the European luxury average as a multiple of expected earnings over the next 12 months and it is the second-cheapest stock in the industry after Swiss watchmaker Swatch. That seems overly pessimistic. For Kering to change perceptions, though, it needs to show that Gucci can deliver steady growth. Reviving sales won't come cheap either—ad budgets are swelling across the luxury industry as brands work harder for customers' attention.

– Carol Ryan

#### Gucci vs. LVMH sales





### A Goldilocks Job Market Is in Sight

Why a still-hot labor market may get cool enough

America's job market is cooling. It isn't cool enough for the Federal Reserve just yet, but it is getting

The Labor Department on Friday reported that the economy added a seasonally adjusted 187,000 jobs in July from a month earlier—fewer than the 200,000 that economists polled by The Wall Street Journal expected. It also revised the previous two months' job Even so, the unemployment rate,

which is based on a separate survey from the job figures, slipped to 3.5% in July from 3.6% in June. The pace of job gains is probably still far too fast to prevent the unemployment rate from heading lower in the months ahead. And if the unemployment rate falls, it will reinvigorate worries over wage inflation, which could lead Federal Reserve policy makers to raise rates even more.

The right pace of job growth, however, is hard to figure out.

If you go by projections the Labor Department released last fall. it looks as if job growth needs to slow markedly. In those, the U.S. labor force gains a total of about 1.36 million workers this year and

next. For it to do that and maintain an unemployment rate of 3.5%, the economy could gain an average of only around 55,000 employees each month. Moreover, this is a somewhat more expansive measure of employment than the one used for the main monthly jobs numbers so shave even that figure a smidge.

The good news is that those projections look as if they might have been too cautious on two counts: The number of people immigrating to the U.S., and the share of the population that is in the labor force.

Immigration into the U.S. has bounced back. This is partly because President Biden's immigration policy is less restrictive than former President Trump's, but it is also because the pandemic provoked a crash in immigration. Since then, there has been a rebound.

Indeed, the Labor Department in February adjusted its population estimates higher. That also resulted in an addition of 871,000 people to its labor-force estimate that is, the number of people who are employed or actively looking for a job. It upped its population estimate when it made its popula-

tion adjustments the prior year, and, if immigration continues at its recent pace, it might be releasing upward adjustments again next February.

A larger share of the workingage population than the Labor Department projected has been working. That, too, is a plus. It projected a labor-force participa tion rate of 61.5% for this year, but Friday's report showed the participation rate stood at 62.6% last

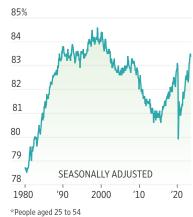
The participation rate is still below the 63.3% it held before the pandemic and well short of the peak of 67.3% it hit in early 2000. There has been a pickup in the socalled prime-age participation rate—that is, labor-force participation among people aged 25 to 54. Last month it was 83.4%, which was better than it was just before the pandemic.

In the late 1990s it averaged 84.1%. Arguably it could take out that old peak. First, among women, prime-age labor-force participation has been rising, but is still short of the level in other countries, which suggests there is scope for further increases. Second, a far greater share of the prime-age population have college degrees than in the 1990s, and higher education levels tend to coincide with higher participation.

The upshot is that while job growth might still need to slow more to persuade the Fed to ease up on rate increases, it might not need to slow that much more. The economy can probably handle more jobs than some people feared.

–Justin Lahart

#### The prime age\* labor force participation rate



### **Amazon Shines During** Apple's Off Season

One tech titan snaps its growth slump, while the other remains mired in it

Apple and Amazon might seem to have little in common.

But both need to move a lot of goods and services to make their numbers work. The two now generate combined annual revenue of more than \$920 billion, putting them among the six largest companies in the world by that measure, according to data from S&P Global Market Intelligence. Delivering significant new growth numbers is a challenge for both. Amazon has posted single-digit year-on-year revenue growth for five of the last six quarters—a major slowdown from the mid-20% range the company averaged before its pandemic sales boom. Apple's revenue has been in actual decline for the past two quarters.

June quarter reports from the two on Thursday afternoon showed some divergence. Amazon posted revenue growth of 11% from a year earlier, compared with the 9% Wall Street was anticipating, according to FactSet. Revenue beat projections across all the company's segments, including the vital cloud computing business AWS. An even bigger surprise was Amazon's operating income of \$7.7 billion, which more than doubled from the same period last year.

Apple, meanwhile, is still in a lull. Revenue fell 1.4% on-year to \$81.8 billion. That narrowly beat Wall Street's projections thanks to a pickup in growth for the company's services arm. But iPhone sales fell short of projections, even in what is typically the weakest seasonal period for the iconic smartphone. Apple also projected a similar overall revenue decline for the September quarter, missing projections calling for a slight

Amazon, meanwhile, gave a surprisingly sunny outlook for the same period. The company projected another quarter of 11% revenue growth and operating income of \$7 billion at the midpoint, both of which exceeded analysts foreShare-price and index performance, year to date



casts. The latter is what typically trips up Amazon on its quarterly

Amazon's shares jumped 8.3% on Friday, while Apple's fell 4.8%. Both stocks had been on a strong run this year, with Amazon shares up 53% and Apple's up 47% prior to Friday. Apple's run had put that stock into new record-high territory, while Amazon's was still down 31% from its own high in mid-2021.

Going forward, Apple's nearterm prospects rest primarily on the new iPhone models expected to hit the market late next month, which Wall Street expects to do mildly better than the current

Amazon, meanwhile, appears to be on a stronger roll. The company has caught up with the earlier overbuild of its fulfillment network. It also said Thursday that growth in its AWS business has stabilized. There is still the risk that Amazon could get caught up in the spending war over generative artificial intelligence that is consuming cloud rivals Microsoft and Google. But that, at least, seems to be one market that investors are still happy to write blank checks in.

-Dan Gallagher



CULTURE | SCIENCE | POLITICS | HUMOR

Hip-Hop's Start
Was a party in the
Bronx 50 years ago the
birth of the genre? C3

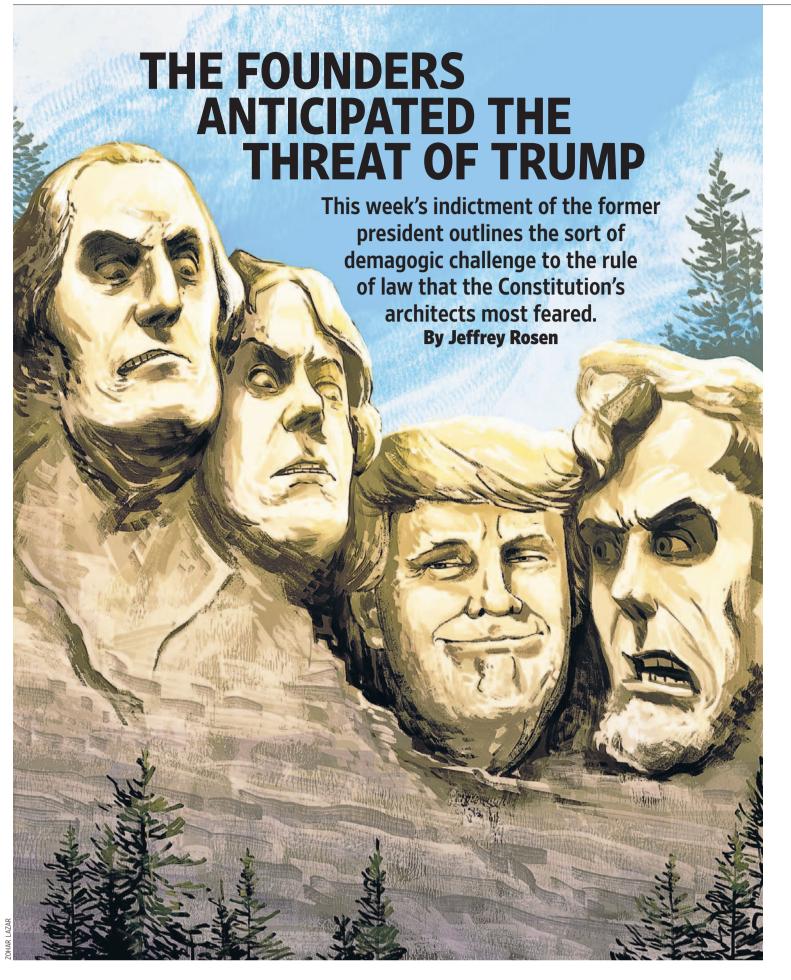
REVIEW

The virtues and uses of phage, a 'bacteria-eating' virus **Books C7** 

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HE WALL STREET JOURNAL.



he allegations in the indictment of Donald Trump for conspiring to overturn the election of 2020 represent the American Founders' nightmare. A key concern of James Madison and Alexander Hamilton was that demagogues would incite mobs and factions to defy the rule of law. overturn free and fair elections and undermine American democracy. "The only path to a subversion of the republican system of the Country is, by flattering the prejudices of the people, and exciting their jealousies and apprehensions, to throw affairs into confusion, and bring on civil commotion," Alexander Hamilton wrote in 1790. "When a man unprincipled in private life desperate in his fortune, bold in his temper...is seen to mount the hobby horse of popularity," Hamilton warned, "he may 'ride the storm and direct the whirlwind."

The Founders designed a constitutional system to prevent demagogues from sowing confusion and mob violence in precisely this way. The vast extent of the country, Madison said, would make it hard for local factions to coordinate any kind of mass mobilization. The horizontal separation of powers among the three branches of government would ensure that the House impeached and the Senate convicted corrupt presidents. The vertical division of powers between the states and the federal government would ensure that local officials ensured election integrity.

And norms about the peaceful transfer of power, strengthened by George Washington's towering example of voluntarily stepping down from office after two terms, would ensure that no elected president could convert himself, like Caesar, into an unelected dictator. "The idea of introducing a monarchy or aristocracy into this Country," Hamilton wrote, "is one of those visionary things, that none but madmen could meditate," as long as the American people resisted "convulsions and disorders in consequence of the acts of popular demagogues."

According to the federal indictment Please turn to the next page

Jeffrey Rosen is president and CEO of the National Constitution Center. His new book, "The Pursuit of Happiness: How Classical Writers on Virtue Inspired the Lives of the Founders and Defined America," will be published by Simon & Schuster in February.

# What UFOs Say About Our Populist Moment

Americans are increasingly willing to believe reports of alien visitors, raising some familiar questions about science, authority and public trust.

By Adam Kirsch

ot long before his death in 1996, Carl Sagan said that he had been "captured by the notion of extraterrestrial life" since childhood and that discovering it would be an "absolutely transforming event in human history." Exactly because the prospect was so alluring, however, Sagan warned that we should be skeptical about believing reports of UFOs or alien encounters. As he put it in the documentary "Cosmos," "extraordinary claims require extraordinary evidence"—an idea now known as "the Sagan standard."

On July 26, the House Oversight Committee heard what might be the most extraordinary claims ever made before Congress. Three witnesses, all veteran military officers testifying under oath, declared that they had encountered Unidentified Anomalous Phenomena (UAPs)—what used to be called UFOs—or knew others who had.

If you've followed the subject in recent years, these stories didn't come as a surprise. David Fravor and Ryan Graves, former Navy pilots, have spoken publicly about their encounters with unusual craft shaped like a Tic Tac or a black cube, which moved in seemingly impossible ways. The third witness, former intelligence official David Grusch, repeated the claim he made to reporters in June: that the U.S. government is in possession of alien spacecraft and "nonhuman biologic material"—though Grusch acknowledges he hasn't seen them himself.

The attention paid to UFO stories by the government and the media in recent years has had a significant effect on public attitudes. In 2019, when a Gallup poll asked whether UFO sightings were really extraterrestrial visitors to Earth, 33% of those surveyed said yes. Two years later that figure had jumped to 41%, while the share of people who believed the sightings were of human origin fell from 60% to 50%.

Please turn to page C4



#### **Inside**

#### WEEKEND CONFIDENTIAL

Pixar co-founder Ed Catmull says the key to long-term success in business is never to think you've got it all figured out. **C14** 



#### VIP Time

If musical festivals can have special passes, Joe Queenan asks, why not the barber or DMV? **C6** 

#### WORLD WAR II

Would Japan have surrendered in 1945 if the U.S. had staged a demonstration of the bomb? **C5** 



#### EVERYDAY MATH

The shifting shadows cast by beach umbrellas fall under a special field of geometry. **C4** 



### REVIEW

### Trump and The Founders' Nightmare Scenario

Continued from the prior page issued this week, President Trump attempted to overturn the results of the 2020 election by conspiring to spread such "convulsions and disorders" through a series of knowing lies. The indictment alleges that soon after election day, Trump "pursued unlawful means of discounting legitimate votes and subverting the election results," perpetuating three separate criminal conspiracies: to impede the collection and counting of the ballots, Congress's certification of the results on Jan. 6, 2021, and the right to vote itself.

The indictment alleges that all three conspiracies involved a concerted effort by Trump and his coconspirators to subvert the election results using "knowingly false claims of election fraud." In particular, Trump allegedly "organized fraudulent slates of electors in seven targeted states"; tried to use "the power and authority of the Justice Department to conduct sham election crime investigations"; tried to enlist Vice President Mike Pence "to fraudulently alter the election results": and, as violence broke out on Jan. 6, redoubled his efforts to "convince Members of Congress to further delay the certification."

In all of these instances, the indictment alleges, Trump's conspiracy to overturn the election was resisted by principled state and federal officials—including the Republican speaker of the Arizona House, Republican members of his own cabinet and the many state and federal judges who uniformly rejected the false election charges.

Defenders of the indictment argue that special counsel Jack Smith was compelled to seek it in the face of



Above, protesters storm the U.S. Capitol to try to overturn the presidential election, Jan. 6, 2021. Below, Trump arrives at Ronald Reagan National Airport on Thursday to face a judge in his Washington, D.C., arraignment on charges that he fostered the efforts.

An instructive historical analogy to the Trump case is the controversy involving free speech and election integrity surrounding the election of 1800, which culminated in the treason trial of Aaron Burr. Two years before the election, Federalists in Congress passed the Sedition Act, making it illegal to "write, print, utter or publish...any false, scandalous, and malicious writing or writings against the government of the United States." In practice, this muzzled the Republican opposition by making it a crime to criticize the Federalist president, John Adams.

ports that Burr was conspiring to incite the western states to secede from the Union and to conquer new territory. Jefferson alerted Congress and ordered Burr's arrest.

Burr's treason trial the following year was presided over by Chief Justice Marshall, who was dubious about the indictment. He issued a subpoena to Jefferson to deliver documents that Burr said he needed for his defense. Jefferson initially claimed executive privilege but ultimately turned over the letters. Marshall then told the jury that, according to the Constitution, a treason conviction required evidence of overt acts of war committed against the U.S. proved by two witnesses, and that no such evidence existed. The jury swiftly found Burr not guilty. Jefferson reportedly wanted

Partisan passions ran high in 1800, as they do today, but American institutions and norms survived, thanks to the selfrestraint of the leading institutional players and their commitment to preserving the Union. Adams and Burr accepted the election results, Jefferson accepted the Burr verdict, and the Republican Congress declined to impeach Marshall.

That institutional selfrestraint was shattered in the decades leading up to the Civil War. Abraham Lincoln ran in 1860

as a defender of the Union and the rule of law against the threat of mob violence. Southern states responded to his election by seceding, invoking the same states' rights arguments that Jefferson had introduced in opposition to the Sedition Acts. The shared norms and constitutional commitments that had prevailed a generation earlier were not strong enough to avert the disaster of war.

of these historical precedents our leaders and the public will follow. Donald Trump faces a range of legal troubles, but the indictment announced this week, even as he dominates the Republican race for the 2024 nomination, is the most farreaching yet, accusing him of actively undermining foundational ele-

The great question today is which

ments of our constitutional order.

on persuasive reason. Democratic transparency and participation have grown in ways that the Founders couldn't have imagined, extending long-overdue rights and liberties but also levelling the speed bumps they put in place to promote thoughtful deliberation by elites.

The Founders feared direct democracy and devised a Constitution to tame it, to the frustration of reformers today. They would be astonished by our current political system, with its presidential primary system, nationwide campaigning and ever-more sophisticated media targeting, all of which has given new





Aaron Burr (left), vice president to Thomas Jefferson (right) in his first term, broke with Jefferson, then was tried for treason and acquitted.

'I do not believe

there is anything

that approaches

this in American

Former U.S. Court of Appeals judge

history.'

J. MICHAEL LUTTIG

such a grave threat to our democratic institutions. "I do not believe there is anything that approaches this in American history," former U.S. Court of Appeals judge J. Michael Luttig told me. A respected conservative jurist, Luttig helped to persuade Vice President Pence that he had no power to overturn the election results. "These are the gravest offenses against the United States that an incumbent president could commit," he said, "save possibly treason."

By contrast, critics of the indictment argue that, even if Trump did

attempt to overturn the election results, his efforts were not illegal as long as he legitimately believed that the election had been stolen. "In order to establish the underlying charges, the government would have to prove be-

cal speech."

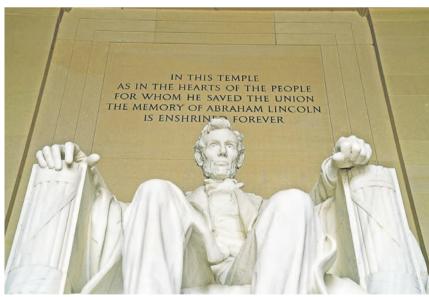
yond a reasonable doubt that Trump himself actually knew and believed that he had lost the election fair and square," Harvard law professor Alan Dershowitz, who defended Trump in his first impeachment trial, wrote in the Daily Mail. "I doubt they can prove that." National Review editorialized that even false political speech is protected by the First Amendment: "Assuming a prosecutor could prove beyond a reasonable doubt that Trump hadn't actually convinced himself that the election was stolen from him (good luck with that), hyperbole and even worse are protected politiThomas Jefferson, responded by arguing that states had the power to nullify federal laws with which they disagreed. In the election that followed. Adams came in third, and Jefferson and his vice president, Aaron Burr, tied with an equal number of electoral votes. Alexander Hamilton, who believed that Jefferson posed less of a threat to the republic than Burr, helped persuade Federalists in Congress, who had to break the tie, to elect Jefferson. Both Adams and Burr accepted the election results

and supported the peaceful transfer of power.

Once in office, however, Jefferson retaliated against his political enemies. He encouraged state prosecutions of his Federalist critics and lashed out against his archri-

val, Chief Justice John Marshall. He also supported the impeachment of Justice Samuel Chase, a partisan Federalist who had presided over one of the sedition trials, but the Senate acquitted Chase, establishing a precedent that Congress shouldn't remove judges from office because of disagreement with their rulings.

Jefferson then indicted Burr, his former vice president, for treason. After killing Hamilton in the famous duel in 1804, Burr had fled west to improve his fortunes and raised an expedition of men to seize lands in Texas and Louisiana belonging to Spain. In 1806, Jefferson received re-



Abraham Lincoln worried aloud about how long the institutional bonds built by the founders would hold. With his election and the start of the Civil War, they broke.

republic, and Jefferson feared that factional clashes over slavery would destroy the Union.

Among the Founding generation, only James Madison was moderately optimistic that American institutions would survive. He hoped that public opinion could be educated to overcome the most destructive partisan passions. He had faith that, among other things, a class of enlightened "literati" would use the new technologies of the print media to diffuse the cool voice of reason throughout the land.

In our own polarized age, Madison's optimism now looks quaint. On social media, with a business model of "enrage to engage," posts meant to spark our partisan passions travel further and faster than those based

opportunities to partisan extremists and demagogues. The Founders' concerns about how democracies fall were articulated by a young Abraham Lincoln in one of his earliest political speeches. Then serving as a member of the Illinois legislature, he worried about the fate of the republic if a leader of demagogic ambition arose who was not committed to the institutions built by the founding gener-  $\frac{\partial}{\partial t}$ ation. "Distinction," Lincoln said, "will be his paramount object, and although he would as willingly, perhaps more so, acquire it by doing good as harm; yet, that opportunity being past, and nothing left to be done in the way of building up, he would set boldly to the task of pulling down."

to bring impeachment charges The challenge for Republicans and against Marshall for his conduct in Democrats alike will be to join in defending the rule of law and to allow the Burr trial but was dissuaded the judicial process to take its from doing so by the precedent established by the acquittal of Justice course, as happened in the Burr trial. Otherwise, the election of 2024 may Unlike Aaron Burr, Donald Trump turn into a tragic rupture of our institutions, more like 1860 than 1800. has not been indicted for treason. But the trial of Burr, and the legal At the end of their lives, Thomas Jefferson and John Adams, who had controversies surrounding the election of 1800, provide lessons about reconciled in the decade after the explosive election of 1800, were pesthe challenges that will face American institutions before and after the simistic about the future of the American experiment. Adams worelection of 2024. Then, as now, there were grave warning signs of ried that American citizens lacked democratic decay, with allegations sufficient civic virtue to sustain the that both parties were criminalizing their opposition through partisan The Republican vice president, prosecutions and attacks on free speech, judicial independence and the rule of law.

he music world has been gearing up for Aug. 11, which will be widely celebrated as the 50th anniversary of the birth of hip-hop. The story goes like this: On that date in 1973, in the rec room of an apartment building on Sedgwick Avenue in the Bronx, a teenager named Cindy Campbell threw a party, charging admission to raise money so that she could buy clothes for the coming school year. This gathering, one of many that her brother Clive would DJ as "Kool Herc," is counted by many as the birth of the yet-nameless genre, in part because Herc is said to have honed its foundational musical impulse there.

But this story is not the whole truth. Like many historical events, that party in the Bronx has engendered embellishments, emphasizing one figure as it erases those who came before and after. As an avalanche of coverage fixates on the date, a proportional crescendo of chatter has risen in the hiphop community about the realities and myths of that creation story. They ask: What was actually born on August 11?

If the essence of hip-hop music (as opposed to hip-hop culture, which includes elements of dance and visual art) is "rapping over beats," then August 1973 is certainly not its genesis. Five years before that party, in 1968, Anthony "DJ Hollywood" Holloway grabbed a microphone in a Harlem bar called Lou's Place and began talking in rhyme over the instrumental intro of a record in the manner of legendary New York radio DJ Frankie Crocker. In the following years, Hollywood began DJing in this style, amassing a following in discos and clubs. By 1972, Hollywood was becoming a local celebrity. He even hired a DJ to spin records behind him so he could perform freely, dancing and rhyming to the beat.

Still, there is a reason why Hollywood and his contemporary Eddie Cheeba, the rapping DJs of the Harlem discothèques, have been de-emphasized in the telling of hip-hop's story. Herc's parties in the Bronx weren't primarily about the rapping, but about the records, and what Herc did with them.

Herc did not possess great technical skill as a DJ. What he had was the loudest sound system that many had ever

It is a very

hip-hop

thing: a

history

written by

the loudest.

heard and an ear for records—and what specific parts of records—made dancers go crazy: songs with "breakdowns" or "break" sections, where the vocals dropped out and the instrumentation stripped down to just the drums or drums and bass. These were re-

cords like James Brown's "Give It Up Or Turn It A Loose" and the Incredible Bongo Band's version of "Apache."

At that Aug. 11 party—or perhaps after, depending on when he acquired a second turntable—Herc decided to play those specific records in quick succession. He called it the "Merry-Go-Round." Herc also called out over the microphone to partygoers, and here, too, the labor was eventually divided between the DJ and his master of ceremonies, Coke La Rock. Herc's parties attracted a cult following, younger than Hollywood's, inspiring one techWas Hip-Hop Really Invented 50 Years Ago?

A legendary party in the Bronx in the summer of 1973 helped usher in a new musical era, but it's too much to call it the birth of the genre.



nically minded DJ, Joseph Saddler, better known as Grandmaster Flash, to take Herc's DJing ideas further.

By the mid-1970s, the concept of DJing the breaks as a gift for dancers and a music bed for MCs had gripped the Bronx and spread across New York. It is inarguably the core innova-

> tion of hip-hop. It made the DJ a musician, and the idea that evolved from it—making new records from bits and pieces of old ones—has now influenced every genre of modern music.

> But here's where the fetishizing of Herc and August 11 provokes skepticism, especially

among people who attended some of his early parties. In YouTube videos and online forums, they say that the telling of hip-hop's genesis has conflated Herc's early style with the latter improvements of Flash, who many argue was responsible for the idea of isolating the break-playing only that part of the record—and then extending it using two copies of the same record on two different turntables. Several of the early partygoers insist that they saw Herc using one turntable, not two; that he played songs with breaks, yes, but all

the way through; or that when he repeated the break he did so by simply picking up the needle on one record and dropping it back down where he guessed the break began; and that Herc only began DJing with "doubles" after Flash perfected the technique. This chorus of voices emphasizes Flash's role—as well as the contributions of other contemporaries like Disco King Mario.

There's scant documentation of Cindy and Herc's parties to help discern the truth. Index cards promoting a few of them survive, but the widely replicated one purporting to plug the Aug. 11 event is now understood to be a reconstruction, not the genuine article. Rob Swift, a renowned DJ who has taught hip-hop at The New School in New York, has been collecting audio and video artifacts of early parties since he was a child. "I have never seen a video or heard a recording of Herc employing this Merry Go Round technique," he told me. "There's no visual proof. There's no audio proof. It's just narratives. It's dogma." Meanwhile, there's abundant evidence of Flash's work. Says Swift: "Looping a break...the whole idea of using the turntable like a drummer uses the drum kit, that comes from Flash." Not to mention that Flash's crew of MCs were among the first to create the more elaborate, tag-team rhyme routines that, along with Flash's turntablism, define the genre.

Thus it had to be galling for Flash to see, say, Google's "Doodle" on Aug. 11, 2017 marking hip-hop's 44th birthday, in which Herc was depicted at that first party executing Flash's "quick mix" looping techniques: segueing seamlessly between two copies of the same record to extend the break, putting his fingertips on the vinyl to spin the record back, holding it there to release it on beat.

Flash himself has been measured in his response to these distortions. which he feels have not been clarified or corrected by Kool Herc. He took pains to speak respectfully in a You-Tube "letter" to the elder DJ a few years ago, demonstrating the differences between their techniques. Flash isn't in a mood to say more: "I've already made plenty of videos to demonstrate what I've done," he says now. "This is a 'show me' year." For his part, Herc has not answered Flash's letter and in interviews insists that hip-hop is his invention. And it is, in part.

Marketing needs myths and simple stories, and this quiet reconsideration of Aug. 11 can't compete. In a genre that has always valued volume as much as it loves liberation, the elders

Grandmaster Flash poses under the Manhattan Bridge, Brooklyn, N.Y., 1981.

still compete over the story's beats, much as they once battled over musical ones. It is a very hip-hop thing: a history written by the loudest. And loudness is one Herc contribution that no one disputes.

Still, there should be enough flowers in this year's harvest to go around for all the pioneers (even for DJ Flowers, Brooklyn's stake in these sweepstakes). And also save some for all the children of 1970s New York. When the city was crumbling and nearly bankrupt, they braved countless obstacles to dance to DJs with radical techniques and collectively invented new styles-not just in music but in fashion, language, art, marketing and entrepreneurship—creating the culture we now inhabit. Even for those of us who weren't there. our ears are ringing because of Herc, the community he created, and the playlist he curated.

Dan Charnas, an associate professor at the Tisch School of the Arts at New York University, is the author of "The Big Payback: The History of the 💆 Business of Hip-Hop."



THE STREET **BEN** ZIMMER

### From Romantic Nickname to Corruption Claim

LAST WEEK, a federal judge rejected a plea deal negotiated between Hunter Biden and the Justice Department that would have allowed the president's son to plead guilty on misdemeanor tax charges while likely avoiding prison time and sidestepping a gun charge.

Critics of President Biden

the younger Biden preferential treatment.

Calling something a "sweetheart deal" implies a suspiciously advantageous settlement, typically worked out behind the scenes to benefit someone with special connections or influence. But

Kenelm: When the boy wakes up from a dream that predicts his own demise, his nanny addresses him as "mi child, mi swete heorte" ("my child, my sweetheart"). A few centuries later, William Shakespeare used the word for characters expressing affection to each other, as when Malvolio tells

ironic connotations, sometimes as a sarcastic term of address. but has usually attached itself to someone considered likable, if not lovable. The silent-film actress Mary Pickford, despite hailing from Canada, was dubbed "America's Sweetheart"—a nickname later applied to Shirley Temple, Debbie Reynolds and Sandra Bullock, among others.

In American usage, "sweetheart" also came to be employed for anything particularly good, like

a favorable arrangement. A 1933 classified ad in the Los Angeles Times described a "sweetheart" as "a deal properly set up with real leads and real money spent to help you get business."

"Sweetheart" then got a more specific meaning for backdoor agreements between employers and labor union officials that favored the officials at the expense of the workers they represented. A 1942 article in the Detroit Times described a "sweetheart contract" between the leader of a local construction union and a lumber company. Two years later. the Chicago Tribune reported on "secret 'sweetheart' deals" that union officials representing movie projectionists struck with theater owners.

Later, in the 1970s, "sweetheart" got extended to the courtroom, for plea deals seen as overly lenient for well-connected defendants. An editorial preme Court judge for rejecting

More recent plea deals that than tender companionship.

### Sweetheart Deal

lauded the development, calling the quashed plea agreement a "sweetheart deal." IRS whistleblower Joseph Ziegler wrote in a Wall Street Journal opinion piece, "Sweetheart deals shouldn't be handed out like candy to the rich, powerful and politically connected." Democrats countered that the Justice Department didn't give

how did this expression, which represents an odd mix of romance and corruption, come to

"Sweetheart" is a very old term of endearment, going back to Middle English as a name for a loved one, equivalent to "dear one" or "darling." It shows up in the 13th-century account of the life of the Anglo-Saxon boy

king later canonized as St. Olivia in "Twelfth Night," "To bed! ay, sweet-heart, and I'll

come to thee." "Sweetheart" also developed in the New York Daily News in 1974 praised a New York Su-"the sweetheart plea-bargaining deal that local and federal authorities worked out in a \$1 million shakedown racket.' (The racket involved a meatpacker from the Midwest bribing New York supermarket owners to sell his products.)

have attracted the "sweetheart" label include the noprosecution agreement arranged by financier Jeffrey Epstein in 2008 with federal prosecutors in Florida to settle numerous charges of sex crimes. And when former CIA Director David Petraeus received no iail time in 2015 for leaking highly classified information to his girlfriend and biographer Paula Broadwell, that too was criticized as a "sweetheart deal." At this point, when the word "sweetheart" is invoked, it's more likely to call to mind backroom handshakes

#### **EVERYDAY MATH**

**EUGENIA CHENG** 

#### Calculating the Shadow of a Beach Umbrella



I LOVE SITTING outside in the summer, whether at a cafe, the beach or a friend's backyard. Still, when the blazing sun is

too much, I like to have a large umbrella for protection. The problem is, as the sun advances, the size and shape of the shadow shift as well.

Mathematically, this is a problem in the field of projective geometry, which studies what shapes look like when projected onto various surfaces at different angles. A cube could make a square shadow on a flat surface, but it could also make a rectangle or even a hexagon if projected diagonally so that just six of its eight corners are visible. A perfect sphere will always make a round shadow, but it could be either a circle or an elongated ellipse.

The shadow projected from a dome-shaped umbrella acts like a portion of a sphere. The three-dimensional tube of shadow it casts changes size and shape so that when the sun is lower in the sky, you can get a nice long shadow, but when the sun is directly above, the shadow is barely bigger than the umbrella itself. However well you calculate the projection at first, you may have to do lots of adjusting.

Projective geometry has its roots in the study of perspective drawing. Artists developed some understanding of perspective intuitively, but a formal treatment was introduced by the Renaissance architects Filippo Brunelleschi and Leon Battista Alberti in the 15th century. Mathematicians started developing the field a couple of hundred years later, asking questions about what properties of an object are preserved under projection.

One key insight was that parallel lines are not preserved; instead, lines that are parallel in three dimensions will meet at a "vanishing point" somewhere on the horizon when projected onto a two-dimensional surface. Angles and lengths aren't fixed either, as understood by painters such as Johannes Vermeer, whose Baroque-era paintings have been studied for their meticulous projections of square-tiled floors.

Projective geometry is very different from the geometry of the ordinary physical space we live in, where a plane is just a flat surface that extends in all directions. Mathematicians can modify such a flat surface to mimic strange projective behavior. The result is even more mind-boggling than the familiar Möbius strip, which is made by taking a long, thin



rectangular piece of paper and gluing the two ends together with a twist to create a seemingly paradoxical surface with only one side. To get a projective plane, in theory you would then also glue the left and right edges together with a twist—impossible to do in three-dimensional space and difficult to even imagine, which is why mathematicians use formulas and equations to help them explore it.

At some level this is just a fun game of mental contortion, but working out the ways to engage with these structures has also enabled us to program computers to do it for us.

In a simple situation we might be able to understand the geometry intuitively: If we set up an old-fashioned projector directly facing a screen, the rectangle of light will turn into a trapezoid if we raise or lower the angle of projection. But for videogames or virtual-reality programs, the virtual 3-D space has to be rendered by tremendous numbers of calculations so that a viewer can move and look around within it from different angles.

That's projective geometry happening right in front of you—just as you are doing projective geometry when you adjust your sunshade to keep yourself cool.

### Why We Want to Believe in UFOs

Continued from page C1

It's no coincidence that this embrace of a once-fringe idea took place at exactly the same moment that many Americans were rejecting official guidance on Covid vaccines and masking, or the official results of the 2020 presidential election. UFOs raise the same questions underlying many challenges of our populist moment. Who has the power to define reality? Why should we trust the judgment of experts, especially when they tell us that the things we want to believe aren't true?

Ufology has long been fueled by a populist distrust of elite institutions, claiming that the government, the military, the defense industry and academia are engaged in a conspiracy to suppress the truth about alien visitors. True believers have insisted for decades that an extraterrestrial craft crashed in Roswell, N.M., in 1947, no matter how many times the military says it was just a balloon.

So it's no wonder that today's UFO claims are beginning to cross-pollinate with other kinds of conspiratorial thinking. When Grusch first came forward, Democratic presidential candidate Robert F. Kennedy, Jr., a prominent vaccine skeptic, tweeted: "Another conspiracy theory that turned out to be true. I guess Men in Black got it right."

In fact, we have not yet seen anything like the extraordinary evidence that Sagan called for. There is a low-quality, monochrome video of Fravor's 2004 encounter, showing a small black spot. But in an era where billions of people carry smartphone cameras, and telescopes and satellites scan the skies 24 hours a day, no one has managed to produce a single clear image of a nonhuman craft in the sky or a nonhuman being on the ground.

Sean Kirkpatrick, director of the Pentagon's All-domain Anomaly Resolution Office (AARO)—the task force established in 2022 to investigate UAP reports—said in April that "The majority of unidentified objects reported to AARO demonstrate mundane characteristics of balloons, unmanned aerial systems, clutter, natural phenomena, or other readily explainable sources."

In terms of hard evidence, there is no better reason to believe in UFOs today than there was five years ago, or 50. Until there is, the best way to think about them is not as a scientific phenomenon but a human one—a story that we use to explain the universe to ourselves.

Our need to populate the world with what Grusch called "nonhuman intelligence"—types of minds different from our own—is far older and more primal than modern science. It is only in the last few centuries that we began to think of ourselves as the only intelligent species even on this planet, not to mention the rest of the cosmos. Ancient myths took for granted that we share the Earth with gods and demigods, nymphs and sprites.

When paganism gave way to monotheism in the West. nonhuman intelligences didn't disappear; they were simply redescribed. In the 5th century, St. Augustine wrote in "The City of God" that the pagans were right about the existence of nonhuman intelligences with "aerial bodies." The mistake was to think that these spirits were gods, when in fact they are demons who "contrive to turn us aside and hinder our

spiritual progress."

The idea that we inhabit a crowded cosmos was so deeply ingrained that when modern astronomy began to see the universe as mostly empty space, it came as a terrible shock. In the 17th century, the French mathematician Blaise Pascal wrote that when he thought about "the little space I fill en-

gulfed in the infinite immen-



From left: Ryan Graves, David Grusch and David Fravor testify at a House Oversight Committee hearing on UAPs, July 26.

sity of spaces whereof I know nothing, and which know nothing of me, I am terrified. The eternal silence of these infinite spaces frightens me."

REVIEW

Hundreds of years later, we may have gotten used to the idea that Earth is a blue speck in a measureless void, but that doesn't mean our longing for companionship in the universe has gone away. And with advances in astronomy revealing how abundant planets are in our galaxy and beyond, many scientists now believe we are unlikely to be the only intelligent species in existence.

Exactly how many planets might be home to living beings, and what percentage of those develop the technol-

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ogy to venture into outer space, is largely a matter of informed guesswork, and answers vary widely. A 2020 paper in The Astrophysical Journal calculated that there could be 36 civilizations in our galaxy capable of communicating with us. A statistical analysis published the same

year in the Proceedings of the National Academy of Sciences was far more conservative, concluding only that "if conditions sufficiently similar to the early conditions [on Earth] exist and sustain on other worlds for one billion years or more, then our analysis would then favor the hypothesis that life is common"

is common." Even if the most generous estimates are correct, however, we shouldn't expect aliens to show up on our doorstep. The universe is simply too vast. Current theories hold that the Big Bang took place about 13 billion years ago, and the part of the universe we can observe is a sphere with a diameter of 93 billion light-years. Even if intelligent life evolved regularly, the odds of it happening twice in the same neighborhood at the same time would be slim. This is the most likely solution to the Fermi paradox, named for the question about extraterrestrial life posed by physicist Enrico Fermi in 1950: "Where is everybody?"

Religious believers, of course, don't depend on aliens to find companionship in the universe. They find it in God, whose existence doesn't need to be proved with a blurry video. As St. Paul told the Hebrews, faith is the evidence of things not seen.

Aliens, too, are things not seen.

Aliens, too, are things not seen, at least so far—though there are plenty of famous "sightings" that any ufologist worth their salt could tell you about. There is the Varginha incident of 1996, in which several residents of the Brazilian city claimed to have encountered an extraterrestrial. Military and police forces supposedly descended on the area, while animals in the local zoo died myste-

riously. Then there is the Ariel School incident of 1994, when some 60 students in Ruwa, Zimbabwe, said they had communicated telepathically with an extraterrestrial who landed a silver spaceship in a nearby field.

It's impossible to miss the similarity between these accounts and

stories of religious miracles, which also frequently involve prodigies of nature and the testimony of children. The alien craft that David Grusch testified about can be compared to Jacob's ladder, where the biblical patriarch saw angels climbing up and down from heaven. In both cases we are told that someone saw something extraordinary, and we can choose to believe it, but we can't expect to see it ourselves. In fact, the Bible is more forthcoming. We know Jacob's name and where he saw the ladder, while Grusch declined to publicly state the names of witnesses or the locations of recovered alien craft, saying the information is classified.

Without evidence, UFO stories have to be evaluated in the same way as reports of miracles. The 18th-century Scottish philosopher David Hume argued that it is never reasonable to accept such reports because "no testimony is sufficient to establish a miracle, unless the testimony be

of such a kind, that its falsehood would be more miraculous than the fact which it endeavors to establish."

For a report of a miracle to be false, all we have to accept is that human beings were wrong, which happens all the time. For it to be true, we would have to accept that the laws of nature were violated, which is infinitely less likely.

This objection doesn't discourage religious belief, since faith transcends reason. UFOs, however, are not supposed to be supernatural phenomena—a spaceship from Alpha Centauri would be no different in principle from a SpaceX rocket, just a lot more advanced and Hume's argument applies perfectly to the kind of claims made at the House hearing. The philosopher would not have been surprised at the eagerness of many people, seemingly including some members of Congress, to believe in aliens. "With what greediness are the miraculous accounts of travelers received, their descriptions of sea and land monsters, their relations of wonderful adventures, strange men, and uncouth manners?" he observed.

But Hume would also have asked what is more likely: that an alien civilization sent a ship trillions of miles through space to hover over an American naval base, or that a pilot misinterpreted what he saw on a screen, or a sensor malfunctioned, or some government or corporation has advanced flight technology that it wants to keep secret? The former would overthrow much of what we know about physics and astronomy: the latter only means that human beings convinced themselves of a mistake. This balance of probabilities is why Carl Sagan refused to believe in UFOs without extraordinary evidence to tip the scale.

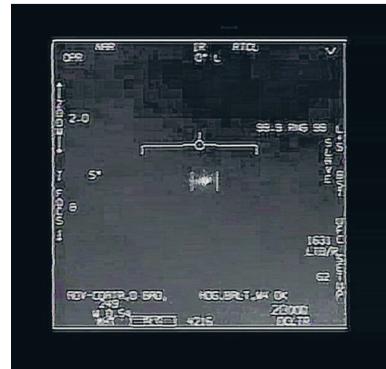
Hume's skepticism is rational, but it is also unsatisfying. Thinking scientifically means that even if something sounds convincing to me, and even if I want to believe it, I have to reject it if it is not supported by good evidence, whether the issue is Covid, election results or climate change.

What's worse, in many cases I can't even judge what makes the evidence good or bad. I have to leave it up to people who under-

stand it better than I do, trusting that an informed consensus will eventually arrive at the truth—even though scientists and experts themselves are only human and sometimes make mistakes or submit to political pressure.

In a democratic society, convincing people to defer to reason and science is a tricky proposition. It requires cultivating public trust and scientific literacy, which runs against the populist currents of our day. A good place to start, since the fantasies surrounding them exert such a powerful hold on our imaginations, might be with a rational public discussion about UFOs.

Adam Kirsch is an editor for the Review section and the author of "The Revolt Against Humanity: Imagining a Future Without Us," published by Columbia Global Reports.



An image from a 2004 video of a Navy pilot's encounter with a 'Tic Tac' shaped UAP off the coast of San Diego, Calif.

#### **HISTORICALLY SPEAKING**

AMANDA FOREMAN

#### The Enduring Technology of The Book



A FRAGMENT OF the world's oldest book was discovered earlier this year. Dated to about 260 B.C., the 6-by-10-inch

piece of papyrus survived thanks to ancient Egyptian embalmers who recycled it for cartonnage, a papier-mache-like material used in mummy caskets. The Graz Mummy Book, socalled because it resides in the library of Austria's Graz University, is 400 years older than the previous record holder, a fragment of a Latin book from the 2nd century A.D.

Stitching on the papyrus shows that it was part of a book with pages rather than a scroll. Scrolls served well enough in the ancient world, when only priests and scribes used them, but as the literacy rate in the Roman Empire increased, so did the demand for a more convenient format. A durable, stackable, skimmable, stitched-leaf book made sense. Its resemblance to a block of wood inspired the Latin name caudex, "bark stem," which evolved into codex, the word for an ancient manuscript. The 1st-century A.D. Roman poet and satirist Martial was an early adopter: A codex contained more pages than the average scroll, he told his readers, and could even be held in one hand!

The book developed in different forms around the world. In India and parts of southeast Asia, dried palmleaves were sewn together like venetian blinds. The Chinese employed a similar technique using bamboo or silk until the third century A.D., when hemp paper became a reliable alternative. In South America, the Mayans made their books from fig-tree bark, which was pliable enough to be folded into leaves. Only four codices escaped the mass destruction of Mayan culture by Franciscan missionaries in the 16th century.

Gutenberg's printing press, perfected in 1454, made that kind of annihilation impossible in Europe. By the 16th century, more than nine mil-



lion books had been printed. Authorities still tried their best to exert control, however. In 1538, England's King Henry VIII prohibited the selling of "naughty printed books" by unli-

censed booksellers. Licensed or not, the profit margins for publishers were irresistible, especially after Jean Grolier, a 16th-century Treasurer-General of France, started the fashion for expensively decorated book covers made of leather. Bookselling became a cutthroat business. Shakespeare was an early victim of book-piracy: Shorthand stenographers would hide among the audience and surreptitiously record his plays so they could be printed and sold.

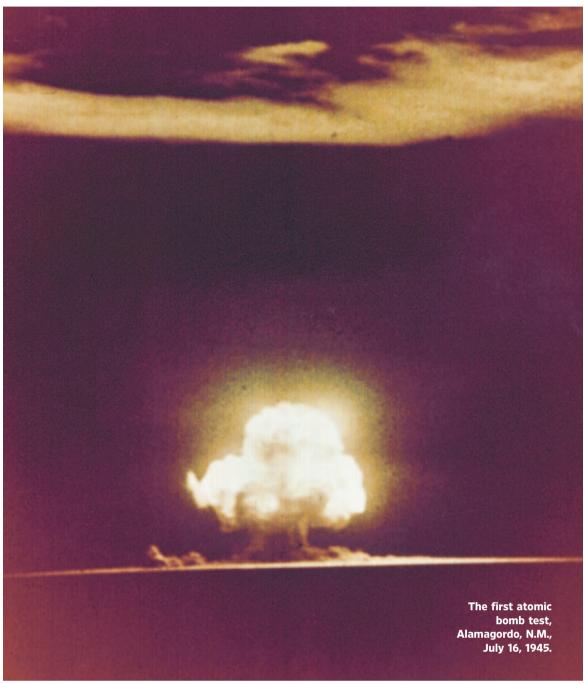
Beautiful leather-bound books never went out of fashion, but by the end of the 18th century, there was a new emphasis on cutting costs and shortening production time. Germany experimented with paperbacks in the 1840s, but these were downmarket prototypes that failed to catch on.

The paperback revolution was started in 1935 by the English publisher Allen Lane, who one day found himself stuck at a train station with nothing to read. Books were too rarefied and expensive, he decided. Facing down skeptics, Lane created Penguin and proceeded to publish 10 literary novels as paperbacks, including Ernest Hemingway's "A Farewell to Arms." A Penguin book had a distinctive look that signaled quality, yet it cost the same as a packet of cigarettes. The company sold a million paperbacks in its first year.

Radio was predicted to mean the downfall of books; so were television, the Internet and ebooks. For the record, Americans bought over 788.7 million physical books last year. Not bad for an invention well into its third millennium.

### Could the U.S. Have Ended World War II With a 'Demonstration' Bomb?

In 1945, American leaders debated whether to drop an atomic bomb in an unpopulated area to intimidate Japan into surrendering.



By Evan Thomas

o end World War II, was it necessary to drop atomic bombs on two Japanese cities, killing roughly 200,000 people? Instead, couldn't the U.S. have vividly shown the power of its new weapon by blowing up a deserted Japanese island—or maybe the top of Mount Fuji-to shock Japan into surrendering? In the movie "Oppenheimer," the suggestion of staging a demonstration comes up only briefly, almost in passing. The full story is more complicated and surprising, and it has meaningful implications for the alarming spread of nuclear weapons today.

The men in charge of building the atomic bomb could be coldblooded. "Some tender souls are appalled at the idea of the horrible destruction which this bomb might wreak," Navy Capt. William "Deak" Parsons, the chief of ordinance for the Manhattan Project, wrote to his boss, Gen. Leslie Groves, in September 1944. These "tender souls," scoffed Parsons, were pushing for a "demonstration"—setting off a bomb in a desert or on an island in the Pacific, and inviting the enemy to watch. Such a demonstration would be a "fizzle," Par-

would make a big flash, but "even the crater would be disappointing."

sons wrote Groves. It

In late May 1945, Secretary of War Henry Stimson and a group of top officials and scientists advising President Harry Truman briefly ନ୍ତ୍ର discussed staging a demonstration of the bomb. But they summarily dismissed the idea. What, someone asked, if the Japanese attacked the plane carrying the bomb? What if the bomb was a dud? What if the Japanese brought American POWs into the drop area? What if the Japanese were simply not impressed? J. Robert Oppenheimer, director of ≝ the Manhattan Project's Los Alamos Laboratory, himself seemed to reinforce this last point, saying that witnesses would see "an enormous nuclear firecracker detonated at great height doing little damage."

The president's advisers felt a sense of urgency because the alternatives to dropping the bomb seemed grim. In June, Truman signed off on preparations for a massive invasion of Kyushu, Japan's southernmost island, scheduled for Nov. 1. Army Chief of Staff George C. Marshall estimated over 30,000 American casualties in the first month, but he was lowballing the true figure. After the U.S. learned, from intercepted cables, that Japan was waiting for the American invasion with a million defenders and 7.000 kamikaze suicide planes, more realistic estimates ranged from 200,000 to one million Americans killed.

Fearing such enormous casualties, U.S. Navy and Army Air Force officials wanted to blockade and bomb Japan into submission, which would have resulted in millions of Japanese deaths from starvation and disease. To hasten Japan's surrender, Stimson proposed letting the Japanese keep their emperor as a figurehead if they capitulated first, but his suggestion was rejected by Truman and his Secretary of

State, Jimmy Byrnes. Some scholars have seen a tragic lost opportunity in Truman's refusal to make a peace offer before dropping the atomic bomb. Truman's (and especially Byrnes's) motivation, they say, was to intimidate the Russians. But the diaries and records of Japanese officials strongly suggest that the

Oppenheimer warned that witnesses to a test bomb would only see 'an enormous nuclear firecracker.'

trolled the government, would have regarded a peace offering as a sign of weakness and a further incentive to fight to the death. These men were fanatical but not utterly irrational. By massively bleeding the Americans, the military leaders of Japan hoped they could avoid an American (and possibly Russian) occupation of their nation-not to mention trials for their own war crimes.

President Harry Truman (left) receives a report on the bombing of Japan from

Secretary of War Henry Stimson, Aug. 8, 1945.

Japanese military, which con-

delivery by Aug. 20.

military leaders wanted to fight on even after the second bomb fell on Nagasaki, and some officers began fomenting a coup to take over the Imperial Palace. The American Army Air Force commander in charge of bombing

In fact, even after the

U.S. dropped two atomic bombs—on Hiroshima

on Aug. 6 and Nagasaki

on Aug. 9—the Japanese

weren't prepared to sur-

render unconditionally.

They still demanded

that the U.S. allow Em-

peror Hirohito, whom

the Japanese regarded

as a deity, to remain

Japanese

sovereign.

Japan, Gen. Carl "Tooey" Spaatz, suggested dropping a third atomic bomb, this time in the vast area of Tokyo-some 20 square miles—already burned out by American fire-bombing raids in March and May. Spaatz was in effect proposing a demonstration. wanted Japanese leaders to be in the "scare radius" of the bomb—close enough to see the flash but not so close as to be killed. "It is believed," he cabled his boss in Washington, Gen. Hap Arnold, "that the psychological effect on the government officials still remaining in Tokio [as he spelled it] is more important at this time than destruction." In fact, even if dropped on a burned-out area, an

atomic bomb would have spread deadly radioactive fallout, a phenomenon not well-understood

at the time. In Washington Spaatz's idea was initially rejected, but it apparently caught President Truman's attention. According to a report from the British embassy in Washington, at about noon on Aug. 14, as the Japanese appeared to be dithering over whether to surrender, Truman "remarked sadly" to British officials "that he now had no alternative but to order the atomic bomb dropped on Tokyo." A third bomb would be ready for

Fortunately, a few hours later Truman learned that the Japanese had accepted America's surrender terms. A small peace faction, led by Japanese Foreign Minister Shigenori Togo, had finally persuaded the emperor to defy the militarists. Hirohito would remain on the throne, but he would be subject to the Supreme Allied Commander, Gen. Douglas Mac-

Arthur, not the other way around. Oppenheimer hoped that the horror of the atomic bomb would make the world renounce nuclear war, and he has been proved right-so far. But with Russia and China building up their nuclear forces, the threat is once again growing.

In 1945, only the U.S. had the bomb. Now nine nations have nuclear weapons far more powerful than the bomb dropped on Hiroshima. Even in a "limited" nuclear war between the U.S. and China, or Israel and Iran, or India and Pakistan, studies and wargames predict that millions of people would die. We can only hope that it doesn't take the use of nuclear weapons to demonstrate their horror to a new generation.

Evan Thomas is the author of "Road to Surrender: Three Men and the Countdown to the End of World War II," published by Random House earlier this year.

By Naomi Schaefer Riley

his year, the William E. Simon Foundation is closing its doors, or "sunsetting," in the parlance of modern philanthropy. Since it was founded in 1967 by former Treasury Secretary William E. Simon and his wife Carol, the foundation has given away almost \$300 million to the causes that mattered to them—faith, family and education. It has made some 13,000 grants to support inner-city Catholic schools, charter schools and schoolchoice litigation, as well as mentorship, literacy and after-school programs, foster care and domestic violence services, and counseling for women with unplanned pregnancies. (Full disclosure: I have received grants from the Simon Foundation for my own work.)

Plans to sunset foundations within a generation of the founder's death have a long history. Julius Rosenwald, an early investor in Sears Roebuck, helped to create a network of almost 5,000 schools for Black children across the South during the early 20th century. He was the first major philanthropist to place a formal ending date on his foundation: 25 years after his death, which was in 1932.

But the strategy has become much more popular in recent years. According to a study by the Bridgespan Group, in the 1960s foundations with an end date represented just 5% of the total assets of America's largest foundations; by 2010, that figure had risen to 24%. Melissa Stevens, executive director of the Milken Institute Center for Strategic Philanthropy, says she is seeing more donors who want to disburse funds quickly to address issues such as climate change, racial injustice and pandemic preparation. She notes that "younger donors want to put philanthropic capital to work more

# Philanthropists Discover the Value of 'Sunsetting'

Donors are increasingly drawn to creating foundations that must spend their whole endowment and go out of business in a limited time.

expediently to tackle those issues."

Traditionally, sunsetting a foundation has appealed to more conservative donors. Bill Simon, Jr., who manages the Simon Foundation along with his six siblings, says that his late father set a closing date because he had seen "foundations that seemed to veer off of their donor's intent." Simon recalls: "Dad trusted his own seven children to know where he would have put his money...But as much as he loved his grandchildren, he did not know them."

Indeed, Henry Ford II resigned from the Ford Foundation's board in 1977, writing that its hostility to capitalism had thrown it off course: "Perhaps it is time for the trustees and staff to examine the question of our obligations to our economic system and to consider how the foundation, as one of the system's most prominent offspring, might act most wisely to strengthen and improve its progenitor."

Darren Walker, the current president of the Ford Foundation, says that foundations that exist for longer periods "are designed to respond to a changing world." If the Ford Foundation had closed decades ago, he wonders, "What would we not have done? And I think about all

of the institutions the Ford Foundation helped to create over its many decades of existence," like the Corporation for Public Broadcasting. Walker believes its current focus on income inequality can be seen as a

way of honoring its founder's legacy: Henry Ford thought "inequality was a threat to democracy," Walker says, which is why he "raised wages of front-line workers."

But Rob Reich, a professor of political science at Stanford and the author of "Just Giving: Why Philanthropy Is Failing Democracy and How It Can Do Better," argues that perpetual foundations undermine democracy by prioritizing the desires of the dead over

those of the living. "With little or no formal accountability, practically no transparency obligations, a legal framework designed to honor donor intent in perpetuity, and generous tax breaks, what gives foundations their legitimacy in a democratic society?" Reich asks.

The idea of sunsetting a foundation doesn't have to mean rushing to give away money. Rather, it gives

staff and board members a clear time frame for thinking about larger gifts. Walker himself serves on the board of a new climate-change-focused foundation called Waverly Street, created by Laurene Powell





Left: Darren Walker, president of the Ford Foundation. Right: the late William Simon, founder of the William E. Simon Foundation.

Jobs, that has a 10-year time frame for sunsetting. "It is an urgent issue around which we want to contribute moonshots and accelerating solutions," he says.

The idea that philanthropists need to spend money faster is seeping into many aspects of the national conversation about charity. Take donor-advised funds (DAFs), in which wealthy individuals give their money

get the Lexington

all to themselves.

Avenue subway

Starbucks

VIPs. There's

Venti Chai, and

now there'd be

while drivers

to nonprofit organizations but retain a role in advising on how it is invested and disbursed. The IRS warns that these arrangements are sometimes abused "for the purpose of generating questionable charitable deductions, and providing impermissible economic benefits to donors and their families," while enjoying a tax benefit.

A coalition called the Initiative to Accelerate Charitable Giving, led by

A sunset clause 'helps the foundations concentrate their minds,' says one adviser.

philanthropist John Arnold, is pushing for legislation to eliminate the tax deduction for contributions to DAFs unless the money is disbursed in under 15 years. "The money was just sitting there growing," Arnold complains, though many donors to such funds say they are simply putting the money away until they can devote the attention they want to a cause, or until an urgent need arises.

But establishing a time-limited foundation can also appeal to donors, by allowing them to have a larger impact in a shorter time. Adam Meyerson, who was head of the Philanthropy Roundtable for almost 20 years, notes that a sunset clause "helps the foundations concentrate their minds." Partly, he says, "that involves maintaining an entrepreneurial spirit consistent with the founder." But it also means "you can spend a lot more resources to achieve your charitable objectives."

Meyerson gives the example of the Donald W. Reynolds Foundation, which ended its grantmaking in 2017. That gave it the freedom to "make some special very large gifts, including \$100 million to further the appreciation of George Washington," Meyerson said. The money went in part to create an education center at Mount Vernon.

It is easier to encourage philanthropists to adopt a sunset clause

rather than trying to change the law to mandate faster giving. Bill Simon says that the process of planning for the end required some forethought but wasn't very complicated. For most of the Simon Foundation's life, he says, its endowment was invested in a traditional mix of approximately 60% stocks and 40% bonds. A couple of years ago, the board started to be more careful "in terms of commitment and liquidity.'

They had to make good on grants they had promised and kept a higher percentage in cash or fixed-income assets. The foundation also needed staff until the end to ensure the work was finished. But "it was kind of remarkable how it all worked out," Simon says.

Naomi Schaefer Riley is a senior fellow at the American Enterprise Institute.

### MOVING TARGETS

JOE QUEENAN

If music festivals now offer special treatment, could coffee shops be next—or the DMV?

# How About More VIP Treatment in Unusual Places?

**LAST WEEK** The Wall Street Journal ran a story about how VIP passes are radically remaking the music festival business. Fed up with getting banged around and having beer spilled all over them by the Great Unwashed, concertgoers are willing to pay \$400 for one-day festival passes so that they can be close to the stage, have access to bathrooms with no lines, enter and exit the venue effortlessly and just generally avoid rubbing shoulders with the down-market hoi polloi.

VIP passes of one sort or another exist in all sorts of areas: first-class sections in planes and trains, express lines to the top of the Empire State Building, priority check-in lines in hotels. But the fact that VIP passes are now becoming so popular in these festival settings—once the very definition

of the everyone-is-equal mind-

set—suggests that VIP passes

could be introduced in a number of other unexpected areas. Here are a few

possibilities:

• Kindergarten VIPs. It's all well and good to designate parents or grandparents as VIPs during "Parent of the Day" events. But why should preschoolers have to wait their turn for show-and-tell if their parents can effortlessly bankroll priority seating? Why shouldn't well-heeled tykes be able to zip to the front of the line and be the first ones to share their thoughts about their favorite stuffed animal or snow globe with their peers?

VIP Kindergarten passes
would also provide children
with their own bathrooms, a
much higher grade of apple
juice, their own personal corner
of the sandbox and one-on-one

access to the ebullient teacher herself, while other kids get stuck with the teacher's dour assistant. And at recess, Kindergarten VIPS get first crack at the monkey bars.

• Commuter VIPs. In Washington, D.C., Constitution Avenue will be roped off at rush hour for VIPs. In Los Angeles, it will be Santa Monica Boulevard. In Denver, VIPs will have nonstop rush-hour access to Interstate 25; everyone else has to use local roads. One other benefit: VIPs can park in front of loading docks and fire hydrants without fear of being ticketed. And in New York City, between 3 p.m. and 7 p.m. urban VIPs

VIP Venti Chai.
Walk-up VIP customers lope right into their own special cordoned-off queue,

pull into a super-private Latte Lane. VIP beverages also come supersize with complementary madeleine cookies. And Venti VIPs get their own bathrooms.

• VIP Barbershop Passes. Not only do you get to nip right past the shaggy slob whose hair will take 45 minutes to cut, but the barber is not allowed to give you his special take on the designated-hitter rule, those bums down in Washington or how the deep state is ruining the tonsorial trade. You're in and you're out.

• VIP Lifeguard Passes. Fell out of the jet ski? Tumbled out of the kayak? Got caught in a

riptide? While other beachgoers flounder, frantically treading water, waiting to be rescued, the lifeguards pile into the rescue boat, rocket right past them and come directly to your aid. VIP Lifeguard Passes will come in really handy when voracious great white sharks

have been sighted in the area.

• VIP Jury Duty. Yes, yes, we all have to do our civic duty from time, but why should we all have to sit there for hours waiting to be called, knowing that we're almost certainly not going to be selected anyway? VIP Jury Duty passes mean that you show up at the courthouse and immediately get introduced to the judge and rival attorneys, who can size you up—too old, too young, bad attitude, journalist—and disqualify you on the spot. This wouldn't just save hours. It could save days. Conversely, for the morbidly curious, an extra-special, extraexpensive VIP Jury pass will virtually guarantee that you get selected for hair-raising murder

• **VIP DMV.** No need to explain. No need whatsoever.

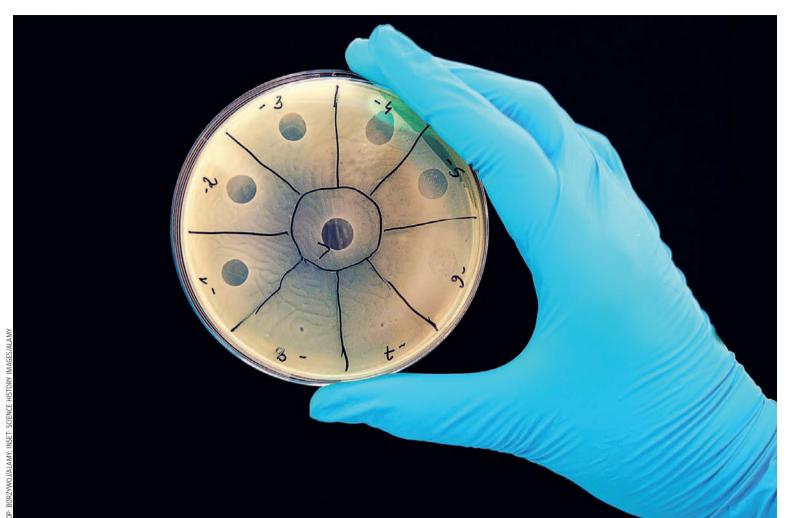
MARK MATCHO

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THE WALL STREET JOURNAL.



GONE VIRAL In this petri dish, the clear spots indicate areas where bacteriophage have killed bacteria.

## The Enemy of My Enemy

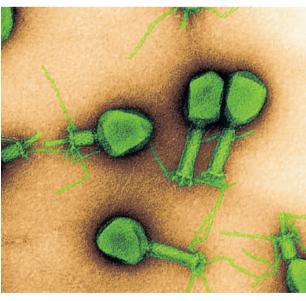
Certain viruses, far from causing misery, can be used to fight disease. Scientists are at last pursuing a form of treatment that has been viewed with suspicion for far too long.

The Good Virus

By Tom Ireland Norton, 389 pages, \$30

By David A. Shaywitz

N 2015, Tom Patterson, a psychiatry professor at the University of California, San Diego, fell ill while on holiday, soon after crawling through a tiny tomb in Egypt's Red Pyramid. His condition deteriorated quickly, and he was transferred first to an intensive-care unit in Frankfurt, Germany, and then to his home hospital in La Jolla, Calif. The underlying cause of his condition: infection with Acinetobacter baumannii-"the worst bacteria on the planet," according to his doctors. Worse still, the strain was resistant to antibiotics. Mr. Patterson's wife, an accomplished global-health epidemiologist, frantically searched the world for anything that might help. The treatment she landed on was "bacteriophage"—viruses that attack bacteria. The therapy, amazingly, worked. Mr. Patterson returned from the brink of death and eventually made a full recovery.



**ULTRA MICROBE** The genetic material in phage is coiled within the head of the virus. The tail latches onto a bacterium, enabling the virus

to inject

payload.

its deadly

In the wake of the Covid pandemic, the idea of a virus being beneficial may seem strange, even implausible. But science journalist Tom Ireland is admirably determined to show us just how potent this disease-fighting approach can be and to persuade us of its importance. As engaging as it is expansive, "The Good Virus" describes the distinctive biology and murky history of bacteriophage (generally shortened to "phage"), a form of life that is remarkably abundant yet obscure enough to have been termed the "dark matter of biology."

Phage viruses are everywhere, from frigid mountain elevations and seawater to plant leaves and, not least, the human body. The body's 30 trillion cells are outnumbered by nearly 40 trillion colonizing bacteria and 10 times as many phage, predominantly in our guts. It is estimated that trillions of types of phage—most yet undiscovered—exist in the world, representing the "greatest source of genetic diversity on the planet,"

Mr. Ireland writes.

Phage are typically less than a 10th the size of a bacterial cell. They come in a range of shapes, but in general they look and act like tiny bulb syringes, with the genetic material (usually DNA, occasionally RNA) coiled tightly within a protein capsule—the "head" of the virus. The tail, meanwhile, latches onto the target bacterium, enabling the virus to inject its deadly payload. Once inside, the phage DNA hijacks the bacterial machinery to replicate itself and flood the cell with virus particles until the bacterium bursts open, freeing the phage to infect new hosts. Sometimes the infecting DNA opts to lie low, waiting until conditions are right to initiate its lethal attack.

While examples of phage activity have been present throughout history— phage may account for fabled healing properties of India's Ganges River, for example—their discovery awaited the turn of the 20th century. This was an era in which, Mr. Ireland writes, "microbe hunting" had become "a glamorous profession that had captured the world's attention." In a South London research institute in the early 1910s, the meticulous English bacteriologist Frederick Twort set out

to grow the smallpox virus in petri dishes, hoping it could be "observed and studied like bacteria." He succeeded in growing only contaminating bacteria, but within these colonies he noticed the occasional small clearing, as if something invisible was killing the bacteria. With the outbreak of World War I, Twort lost funding, closed his lab and published his results in 1915, cautiously suggesting that a virus could be the cause of the observed phenomenon. Few took notice.

Twort's unlikely competitor would be Felix d'Herelle, a freespirited Frenchman who left school at age 16 to travel the world, "spending his well-connected family's money," as Mr. Ireland puts it. At 24, d'Herelle

moved to Canada, "where there were so few microbiologists that he simply declared himself one" and set up shop. But soon the urge to travel struck, and he found himself in Mexico, helping the government manage a locust infestation by cultivating bacteria that infected the insects. Later in his career, while studying dysentery, he returned to this playbook, searching for an "ultramicrobe" that might attack the disease-causing bacteria. He found the same glassy spots that Twort had observed and (with noticeably less restraint) announced in 1917 that he had discovered a new form of life, which he called "bacteriophage." D'Herelle went on to use phage to treat five sick boys successfully. But his "wild and abrasive style" (in Mr. Ireland's words) antagonized his peers, who conspired to undermine him.

D'Herelle's discoveries inspired many, including George Eliava, a microbiologist from the Soviet Union's republic of Georgia. In 1936, he would establish the first institute (and still one of the few) devoted to bacteriophage research.

Unfortunately for Eliava, he soon ran afoul of the Soviet secret police, who disappeared him in 1937. The institute continued to pursue the development of phage therapy and scored many victories-phage helped treat soldiers suffering from gangrene, for example. But there were also frustrating failures, in part because the phage weren't adequately purified and often because they weren't appropriately matched to the specific strain of infecting bacteria. While the world (including the U.S.) initially "went mad" for phage therapy," Mr. Ireland reports, the results were "inconsistent and unpredictable." Indeed, the "dubious and unreliable nature of commercial American phage products" in the 1930s, we learn, meant that "whether they worked for a particular patient was a complete lottery."

During World War II, the West turned decisively to newly discovered penicillin, sharing the formula for it with the Soviets but not the methods of mass production. Thus the Soviets continued to rely on phage as the therapy of choice for bacterial infections. When a Soviet researcher tried to obtain production rights to penicillin in 1949, he was arrested by government authorities and died under interrogation, all for the crime of *nizkopoklonstvo*—adulation of the West.

Western physicians, for their part, embraced clean and well-tested antibiotics and regarded phage, according to Mr. Ireland, as "a relic from medicine's dark and archaic past." But researchers were keen to use phage as a laboratory tool, and it ultimately unlocked a range of important principles of molecular biology-including the identification of DNA as the underlying genetic material. The study of bacterial resistance to phage would later reveal the presence of distinct DNA sequences, known as Crispr, that help bacteria defend themselves by snipping the DNA of infecting phage. Later research has shown that this molecular editing can be repurposed by scientists for precise genetic engineering.

Once "derided as an idea for cranks and commies," Mr. Ireland writes, phage therapy seems to be enjoying a renaissance. Having been sustained for years by an idiosyncratic global community of true believers, phage-based medicines have now attracted the attention of highpowered biotechnologists and investors. Several teams are trying to synthesize pharmaceutical-grade phage from scratch; others are working to systematize and standardize the process for isolating phage from bacteria and seeking regulatory approval for the entire process. There is certainly a pressing need: The last new class of antibiotics, Mr. Ireland reminds us, was developed decades ago, and the problem of drugresistant bacteria continues to grow. After years of scientific exile, it may finally be time for therapeutic phage to come in from the cold.

Dr. Shaywitz is a physician-scientist at Takeda Pharmaceuticals, a lecturer at Harvard and an adjunct fellow at the American Enterprise Institute.

### The Lonely American Shooter

By Barton Swaim

**HERE IS NO** political solution to the problem of guns in America. Gun-control advocates believe the proper response to mass shootings is to make firearms harder to get. Opponents cite the fact that hundreds of millions of guns are already in circulation, and the concomitant reality that no regulation will ever alter the fact that if you want a gun you can get one; and so they resist even the mildest restrictions. The whole debate, if that's the right word for it, has been stale and repetitive since the mid-1990s.

in "Bloodbath Nation" (Grove, **136 pages, \$24)**, seems momentarily aware that to say something original or useful about the nightmarish succession of mass murders by armed lunatics in this country over the last 30 or 40 years requires a writer to look beyond a governmental solution. "The immense problem we are facing as a country is not likely to be solved by enacting new laws or rescinding old laws or pushing innovative safety measures through Congress," he writes. "Piecemeal legislation might help mitigate some of the damage, but it will never go to the heart of the problem."

The novelist Paul Auster,

And what is the heart of the problem? The answer, never as explicit as I would have preferred, seems to require that we—"we" meaning Americans—think long and hard about the many acts of mass murder perpetrated by people empowered by firearms. Toward that end, Mr. Auster describes some of

Is there

these acts in gruesome detail—and intersperses the text with photographs of the sites. (The images are grainy, black-and-white and unimpressively

anything new to say about the gun debate? Not if you start with the same old premises.

produced.)
Having immersed our minds in the horror of it all, we will, the author seems to say, come up with a

solution.

Mr. Auster—much like the horror writer Stephen King in his Kindle single, "Guns," published in 2013—writes as though a novelist's display of moral revulsion and outrage can somehow bring everybody to their senses. Of course, very few readers of a book on guns by the notably left-wing Mr. Auster need to be persuaded of his views on the subject, and accordingly the book often feels like an exercise in fruitless exhibitionism.

It is, for one thing, full of specious arguments the author thinks to be profound. For example: Since cars were made safer over time, guns could be too. "And make no mistake about it." he writes, "cars are not terribly different from guns. A highpowered automatic rifle and a fourthousand-pound Chevy barreling down a highway . . . are both lethal weapons." The comparison, he contends, "begs the question: If we could face up to the dangers represented by cars and use our brains and sense of common purpose to combat those dangers, why haven't we been able to do the same with guns?"

There's a lot wrong with that comparison—cars are not designed

Please turn to page C8



CAT & MOUSE Ghost guns seized by the D.C. Metropolitan Police.

'Google can bring you back 100,000 answers. A librarian can bring you back the right one.' -NEIL GAIMAN



**FIVE BEST ON LIBRARIES** 

### Julie Schumacher

The author of the novel 'The English Experience'

#### **Cloud Cuckoo Land**

By Anthony Doerr (2021)

Novels are written by people who value books above most things, so it's no surprise that libraries should be the sites of heroic deeds. Anthony Doerr's exquisite homage to the written word traces the travails and survival of an ancient text, from one set of characters to another, over time. What does biblio-heroism look like? In "Cloud Cuckoo Land," it's the recognition of the sacredness of stories and texts, and the willingness, even at substantial cost, to keep them alive. In 15th-century Constantinople, 8-year-old Anna scales the wall of a priory to steal ancient codices and scrolls; on a 22nd-century spaceship, 10-year-old Konstance gains access to an AI archive of near-infinite knowledge. Mr. Doerr's characters experience libraries as places of solace as well as education, where history and culture—and the imagination—are prized. Knowing that "books, like people, die too," they fight to preserve them. Toward the end of his life, one character travels on foot for days to deliver a codex to an Italian palazzo where it will be cared for. "I have heard," he says, "that this is a place that protects books."

#### The Giant's House

By Elizabeth McCracken (1996)

In a small Cape Cod library in the 1950s, a 25-year-old librarian meets—and, over the next decade, falls in love with—a very tall 11-year-old boy. This isn't a "Lolita" scenario: The librarian, Peggy Cort, is a misanthrope whose affection for the young James Sweatt is based on the premise that "knowledge is love." Peggy's fantasies aren't about sex; they're about information. In a daydream, she embraces a visitor who asks her a question: "You reach across the desk and pull him toward you, bear hug him a second and then take him into your lap, stroke his forehead, whisper facts in his ear." But back to James Sweatt. James is not simply tall: He suffers from gigantism and will



eventually become the tallest person in the world, reaching 8-foot-7 by the age of 18. He relies on Peggy to supply him with useful and consoling volumes from the stacks, as well as with shoes that fit his enormous feet and, eventually, with furniture and a house appropriate to his size. Elizabeth McCracken, a former librarian, notes that the profession "(like Stewardess, Certified Public Accountant, Used Car Salesman) is one of those occupations that people assume attract a certain deformed personality." But where would literary fiction be without those personalities?

#### **Our Missing Hearts**

By Celeste Ng (2022)

Books that feature libraries seem naturally to fall into the category of quests. In "Our Missing Hearts," 12-year-old Bird Gardner searches through libraries for clues of his mother, who has disappeared. His father urges the boy to forget her: She is a poet who has been deemed seditious, and a new law intended

to safeguard "American culture" has removed "dangerous" books, such as hers, from the shelves. The law also allows for the removal of children from dissident (and particularly Asian-American) parents. In this context, libraries become safe houses of sorts, with librarians managing underground railroads of people and information. One librarian explains this hidden network to Bird: "All over the country. We share notes.... It's part of our job, you know: information. Gather it. Keep it. Help people find what they need." The librarians are the heroic figures here—guardians and guides who aid the young protagonist on his quest.

#### The Library Book

By Susan Orlean (2018)

Susan Orlean has the enviable ability to make mundane topics gripping. A staff writer for the New Yorker, she has published essays and books on impressively improbable subjects such as orchids and Rin Tin Tin. "The Library Book"

begins when Ms. Orlean's young son, to fulfill an elementary-school assignment, interviews a librarian. Most parents would have left it at that, but Ms. Orlean's voracious sense of inquiry leads her to spend three years immersed in the Los Angeles Central Library, investigating the 1986 fire there that destroyed nearly half a million books. When not tracking down a potential arsonist or interviewing firefighters about the 2,000-degree blaze, she studies the wonder and function of this temple of books, including the "churn of activity" on the sidewalk before the building opens in the morning, akin to what a person might experience "at a theater in the instant before the curtain rises." In her sentences and paragraphs, the Los Angeles library becomes more than a building. It is a breathing, living thing, its central branch a heart, its shipping department moving "thirty-two thousand books-the equivalent of an entire branch library—around the city of Los Angeles five days a week. It is as if the city has a bloodstream flowing through it, oxygenated by books."

#### Reading Lolita in Tehran By Azar Nafisi (2003)

For nearly two years begin-

ning in 1995, Azar Nafisi hosted a covert reading group in her home in Tehran. Every Thursday morning seven veiled women would arrive to discuss works of literature forbidden by the Islamic regime. The room where they met was "a place of transgression": Universities had been sanctioned or closed, and the women traded photocopies of Western novels because "first the censors banned most of them, then the government stopped them from being sold." Keeping the banned books alive and in circulation, Ms. Nafisi and her students functioned as libraries. They engaged so deeply with these "harmless works of fiction" because the books were their only intellectual and creative outlet. The author, who lacked ready access to a library when she was a child, describes free access to art and literature as "not a luxury but a necessity" and public libraries as "the most democratic spaces you can go into."

### To Keep And Bear Arms

Continued from page C7

as weapons, and no safety function on a car is going to stop you from using it to kill people if you want to. But the relevant point is that guns have been regulated and made safer over the decades. Also-and do forgive the impertinence—but what novelist writes "make no mistake" and uses "begs the question" when he means "raises the question"? At points Mr. Auster seems to

follow what I take to be his instinctive view that the horrors he describes arise from more than the availability of guns. "The single word that runs through all [the perpetrators'] stories is loneliness," he writes, "unbearable, mind-crushing loneliness." That's true. But it makes me wonder why Mr. Auster didn't write a book about loneliness, a subject that hasn't been written and blabbered about endlessly, instead of guns, which has. By the end of the book, though, it's all the guns' fault again: "People shoot other people with guns because they have guns."

To register skepticism of the viewpoint expressed in that last statement is not to deny that the firearms industry has lately cultivated some baleful conventions. It's not unreasonable-I say this as a gun-owner who grew up in a home full of high-quality revolvers and shotguns-to look at a black semiautomatic rifle with pistol grips and a large protruding magazine and ask if it has any purpose other than to kill people. The popularity of these ferocious weapons is, in part, an expression of a political outlookan outlook that, let's say, has its cvnical and nihilistic side.

Jennifer Carlson, an associate professor of sociology and public policy at the University of Arizona, attempts to describe that political outlook in "Merchants of the Right: Gun Sellers and the Crisis of American Democracy" (Princeton, 272 pages, \$29.95). You can guess the book's tenor by its catastrophizing title, but Ms. Carlson's premise—that mom-and-pop gun stores have become little arenas of political debate—has some appeal. "Gun stores are not entirely unlike nineteenth-century coffeehouses and salons that, as Habermas saw it, provided the infrastructure for the public sphere," she writes. (A quibble: The coffeehouse and salon culture described in the book to which she refers, Jürgen Habermas's 1962 "Structural Transformation of the Public Sphere," was a phenomenon of the 17th and 18th centuries, not the 19th.)

#### Some critics of the Second Amendment seek to convince fellow citizens that it doesn't guarantee one's right to own guns.

But Ms. Carlson, we learn, didn't actually go to the gun stores she writes about. She wanted to "comply with pandemic restrictions on research, travel, and social distancing" and so only talked to her interviewees on the phone. Her attempt to turn this vice into a virtue is unconvincing ("remote interviews... helped advance my own thinking on qualitative research methods"). My guess is that the book would have benefited from face-to-face interviews: Her accounts of gun-store

owners are so packed with unchari-

table assumptions about them that you wonder if she expected to learn anything at all.

In a chapter on partisanship, to take one of many examples, she quotes remarks by Jake, "a white gun seller from Florida." Jake laments the fact that politics has divided members of his family. "Unfortunately," he tells Ms. Carlson, "the die-hard liberals will not communicate with the conservativeseven though we don't ever talk politics!... Their opinions are up to them, we still love them for it—but they don't feel the same way. And I feel that's indicative of how the country is today."

Thus does this gun-store owner come about as close to an expression of cross-party affection as one is likely to find in 21st-century America: "we still love them." For Ms. Carlson, though, Jake is the partisan one here because-now get this-he blames only liberals for partisanship. "The presumption that liberals, leftists, and Democrats are closedminded elitists," she writes of Jake's views, "not only legitimates antipathy toward them but also voices the underlying political, cultural, and economic anxieties that fester below the surface of contemporary Ameri-

can politics." The possibility that

Jake's representation of his extended family is accurate, or that highly educated liberals might think more poorly of the typical "white gun seller from Florida" than he thinks of them, doesn't occur to Ms. Carl-

Behind these and every other argument over guns in America is, of course, the Second Amendment to the U.S. Constitution: "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed." Carl T. Bogus, a law professor at Roger Williams University, argues in "Madison's Militia: The Hidden History of the Second Amendment" (Oxford, 327 pages, \$29.95) that James Madison wrote the amendment to satisfy the demands of Southern slave owners who feared that the federal government would outlaw state militias-their best defense against slave revolts.

The book, an expansion of a 1998 article in the U.C. Davis Law Review, advances an argument that one side of the gun debate will happily accept. But my suspicions were raised on page 8, where the author concedes that his argument relies on circumstantial evidence, explains what circumstantial evidence is and isn't, and claims the book is "more interesting" for relying on it.

Mr. Bogus writes clearly and engagingly, although a quick reading of the original hundred-page article suggests that the book doesn't add much to his argument's substance. A full-length academic monograph is a lot to read for such a narrow payoff, even if you agree with it.

Which I do not. The book's contention relies on the belief that very few people in America's Revolutionary-era political class still believed that standing armies threatened liberty and that militias were therefore needed to safeguard it. If they really no longer believed that, as Mr. Bogus says, Madison's words about a well-regulated militia being necessary to freedom was cant, a sop to slave-owners. But many statesmen at the time praised militias as a bulwark against tyranny, and Mr. Bogus's insistence that their words were insincere does not convince. Nor does his thesis explain why, if militias were so outmoded, two states that had no interest in protecting slavery. Massachusetts and Pennsylvania, adopted constitutional provisions safeguarding militias.

The point of the book, it's not hard to work out, is to denigrate the Second Amendment by associating it with slavery and thus discredit the contention that it guarantees an individual's right to own guns. Mr. Bogus avoids the thorny matter of the Second Amendment's legal interpretations, but on the book's final page he suggests that Madison and his colleagues would have been "astounded" that the Amendment is now thought to permit individual gun ownership. I can think of many strange and now prevalent interpretations of the U.S. Constitution that would astound the Founders. That's not one of them.

Mr. Swaim is an editorial-page writer for the Journal.



#### **BOOKS**

'My dear child, how did you come to this land of darkness? It is hard for the living to get here.' -ANTICLEA TO ODYSSEUS, IN THE ODYSSEY OF HOMER

### The Aliens Among Us

The Underworld

By Susan Casey Doubleday, 330 pages, \$32

By David P. Barash

**T IS SAID** that we know more about the surface of the moon than about the depths of the ocean. That might not be the case for Susan Casey. Across an eventful career Ms. Caseya former editor in chief of O, the Oprah Magazine—has researched and written books about big waves, great white sharks, dolphins and, in "The Underworld," the oceanic depths. She dedicates her latest book to "those who love the ocean," which she clearly does, writing about it with passion, knowledge and insights from personal experience. To read "The Underworld" is to travel in and about manned submersibles capable of going where no one has gone before —down to the hadal zone, which bottoms out at 36,000 feet, where pressures are so great it feels like being stomped on by the equivalent of 292 fully loaded 747s stacked on top of you.

Darwin, suffering five years of seasickness while voyaging on the Beagle, concluded that the ocean was "a tedious waste." Unusually for him, in this case he was wrong. After an engaging introduction to the history of sea-monster lore and 19th-century efforts at deep-sea dredging, Ms. Casey gets down to business. Deep down. And with abundant obeisance to "the deep's imprimatur of weirdness," she seconds Captain Nemo, from Jules Verne's "Twenty Thousand Leagues Under the Sea," who proclaimed that "the sea is the medium which supports the most fantastic, prodigious forms of existence."

We encounter the appropriately named "weirdfish"-"a shockingly ugly fish with a bulbous head, spiky teeth, a Quasimodo hump on its back, and a diaphanous, eel-shaped body." There are tubeworms, denizens of deep-sea vents, that have "no eyes, no mouth, no gut, no anus-which would seem like a raw deal for any animal." But they thrive, absorbing bacteria through their skin. Moreover, in addition to giant squid, there's strong evidence for a "colossal squid" and maybe even a supercolossal species. Here's hoping.

Ms. Casey's writing takes us to pulsating undersea vents, notably in the Pacific, including black smokers, which are superhot (around 700 de-



VISITORS A gaggle of rattails and two assfish investigate bait in an image captured by the Caladan Oceanic Five Deeps Expedition.

grees Fahrenheit) and constantly belch metal sulfides, creating chimneys that can be nearly 200 feet tall. These vents create unique and bizarre ecosystems, a "creeping crawling carnival," that includes "microbes that can reside way down in the pores and fissures of the ocean crust-in extreme temperatures, under annihilat-

The deep sea hosts a 'creeping crawling carnival, including the shockingly ugly (and aptly named) 'weirdfish.'

ing pressures, and subsisting on toxic chemicals." Deep-sea vents possibly resemble the crucibles where life originated, she writes: "a Star Wars bar-scene ecosystem."

Not just a knowledgeable guide, Ms. Casey is also a memorable wordsmith: "Mantle rock is solid, but it behaves like angry Silly Putty," she writes. "When dragged from its deep womb . . . it throws off heat, hydrogen, and methane in a kind of planetary hissy fit. You can't accuse it of being dull." Ms. Casey revels in the deep ocean's "pulsing lights and phantasmagoric shapes and jewel colors." So does the reader. Deep off the Hawaiian Islands, "sometimes a false cat shark would swish by like a runway model," she writes, "sporting the elongated eyes of a gray alien and a wide jack-o'-lantern grin."

On occasion, her reveries are memorable prose-poems. "In the abyss," she writes, "you don't glimpse the mystery—you enter it, and your consciousness is the only fixed point. Subtract time and you're left with presence. In the deep, you lose your bearings and you find yourself." Given the intense first-person component of this book, a reader might wonder if Ms. Casey got to make any deep dives herself, in addition to reporting on them. She did.

In its second half, however, "The Underworld" takes on water, losing some of its Technicolor mojo as Ms. Casey recounts the biographies and adventures of her current deep-sea aquanaut heroes, some of whom seem, to this reader, engaged pri-

marily in showboating ego trips. It's hard to read "The Underworld" and not think about the recent media frenzy that attended the death of five persons aboard a deep-sea submersible aiming to visit the remains of the Titanic. That tragedy involving undersea tourists, however, should not overshadow the intrinsic importance and fascination of research and exploration in the deep-ocean environment.

Ms. Casey's book has more than enough deep-sea biology and geology to dazzle. Did you know that bristlemouths (a fish) are the most abundant vertebrates on earth? For every living human, there are a hundred thousand bristlemouths. And many, perhaps most, deep-sea fish "appear frightful, even terrifying-straight from nightmare central casting. Some look like disembodied heads; others are all teeth. The viperfish's fangs are so long they burst out of its mouth and start to wrap around its face." There's also the stoplight loosejaw dragonfish—whose name provides all the description needed.

Ms. Casey does not hide her heartsick feeling that this extraordinary

(and still largely unknown) deep ocean is at risk from plastics and other pollutants, as well as from planned ocean-floor strip mining, an environmentally destructive blunder that the author passionately argues we should avoid.

There may or may not be extraterrestrial aliens "out there" in space, which we may or may not encounter. But there are definitely lots of aliens on earth, inhabiting the depths of our mostly watery world—which are also, Ms. Casey emphasizes, key to human flourishing and survival: "The deep," she writes, "buffers our excess carbon (at least so far), drives the ocean's circulation (and thus, climate), regulates the earth's geochemistry (important, to put it mildly), and absorbs surplus heat (ditto)—to cite just a few of its services. Humming away in obscurity, it's the foundation of the planet."

Mr. Barash is professor emeritus of psychology at the University of Washington and the author, most recently, of "Oops! The Worst Blunders of All Time, From Pandora's Box to Putin's War."

### What's Eating Our Planet?

Life Sculpted

By Anthony J. Martin Chicago, 369 pages, \$27.50

By Eugenia Bone

**INOSAUR BONES** have never turned me on the way fossilized footprints, nests, burrows and poop do. Skeletons are static. But dinosaur tracks jumpstart my imagination and suddenly I'm visualizing the creatures meandering, running, stalking prey, herding offspring. Tracks are the traces of living.

It is often said that life changes the environment. But after reading Anthony Martin's "Life Sculpted: Tales of the Animals, Plants, and Fungi That Drill, Break, and Scrape to Shape the Earth," it seems more accurate to say that living changes the environment. It was true of the dinosaur era, and it remains true today.

Ichnology is the study of animal activity in sediments and rock-specifically, the identification of fossilized tracks, burrows and excavations—and how those actions disturbed landscapes. Ichnologists hypothesize about the behavior of ancient organisms by examining the fossilized remains of their actions and comparing them to the remains of modern descendants. An ichnologist like Mr. Martin can look at a slab of Cretaceous rock and, where I see shallow indentations, he sees a fish feeding pit—because he's seen similar feeding pits made by contemporary stingrays. A fossilized coral riddled with holes? Mr. Martin sees evidence of burrowing clams because, well, burrowing clams are still at it. "Life Sculpted" is a feast of such examples; maybe more than the average reader needs to get the point: that species come and go, but ways of surviving endure.

Mr. Martin, a professor at Emory University, is the author of numerous books and the co-discoverer of the first-known burrowing dinosaur, a fact both obvious (why wouldn't a dinosaur

burrow for the same reasons of temperature regulation and protection that other animals do?) and amazing (dinosaurs burrowed like other animals do?!). "Life Sculpted" is the sequel to "The Evolution Underground," Mr. Martin's 2017 book on how burrows and burrowing animals changed landscapes and helped some lineages of animals survive extinction and general environmental mayhem. I loved the tales of nasty alligator burrows, fiddler-crab copulation chambers and giant-sloth dens.

"Life Sculpted" deals with bioerosion. When I think about erosion I usually think about weather: the persistent pressure of wind, water and temperature on rock, bone and shell. But biology plays a role, too. Earth is populated by bioeroders, critters who nibble away at the hard parts of our world and release essential nutrients, like phosphorous, back into the system. These nibblers aren't the most charismatic of organ-

isms—they are mainly humble things like bivalves—but given enough time, a barnacle can be the tool of an island's demise.

Mr. Martin introduces us to these creatures, both ancient and contemporary, starting with tiny cyanobacteria that degrade limestone and clamshells. Larger borers include lichens-symbiotic organisms composed of mutually dependent parts: a fungus and photosynthetic bacteria or algae-which over their thousand-year lifetimes slowly crumble fresh rock into rubble, the fungal partner mining for essential minerals, causing a kind of osteoporosis of stone.

For readers who are fascinated by living fossils such as bryozoans and horseshoe crabs, there is much to love between this book's covers. I am now captivated by the enigmatic chiton an ancient model of life with no discernible front or back—that sticks to marine rocks and scrapes them away. bit by bit, in search of algae.



PLANT OR ANIMAL A crinoid fossil.

Bioerosion is particularly evident in the tropics. Thanks to chewing invertebrates, the rocky coast of the Bahamas is diminishing by about a nickel's thickness every year. And those beautiful Bahaman white-sand beaches? They are the result of bioerosion, too. Parrotfish consume coral in search of the photosynthetic partners that live there, and poop out that marvelous fine sand. Which means the beaches that have launched a thousand honeymoon videos have passed through a parrotfish's digestive system at least once.

Much of the book deals with creatures that break down bones, wood or shells, including the moon snail, the "lion of the tidal flats." I know this animal intimately. When I was a child vacationing with my family in Cape Cod, I would follow the snail trails in the sand; as I dug them up with my foot, the huge snail would slowly wrap its slimy self, disgusting and meltingly yummy, around my small toes. Turns

> out they prowl the sand for unsuspecting clams, into whose shells they drill a hole and suck the insides outa most disturbing way to go.

> "Life Sculpted" ranges widely, from eroders of different sediments to eroders of whale bones and ship hulls; it even digresses into the forces of shark, alligator and T. rex bites, all of which shatter bones. The book explores the tools animals use to erode hard materials: Seagulls drop clams onto stones to bust them open; sea otters slam clams with rocks while floating on water; capuchin monkeys use rocks to crack nuts, eroding both the shells and the rock tools. And, of course, early humans used rocks to break bones for the nutrientrich marrow inside. Finding the right rock to do a particular bioerosion job led to mining, the way we erode

landscapes now. Style-wise, Mr. Martin's writing contains many of the same tropes as other scientists-turnedwriters, like jocular chapter headings that imply more lightness than is to be found therein, and punning. ("Life is hard, but when it comes to evolution, life overcame by being boring.") Also, the queasy cultural reference: "Putting mushrooms between bell peppers and broccoli and calling them 'vegetables' is as inappropriate as seating Banksy between Frida Kahlo and Diego Rivera at a dinner party and introducing all three as artists." I think the Riveras would have loved Banksy, at least for his politics.

Less avoidable, perhaps, is the use of scientific jargon. Witty asides don't make new concepts easier to retain. Many science writers (myself included) often don't realize they can safely trim and simplify their material and popular audiences will still walk away with about as much. But even though I sometimes felt bogged down by dense scientific description, there are many eureka moments in "Life Sculpted"and some truly beautiful ones.

Mr. Martin describes prehistoric (and contemporary) crinoids, also known as sea lilies. They resemble plants with roots, stems and flowers, but upon closer inspection are made of

The Earth is full of bioeroders. Most are humble things like bivalves—but given enough time, even the barnacle can be the tool of an island's demise.

calcite plates. "Crinoids are not iust animals," the author tells us, "but exquisite creatures that implore you to weep with joy that such complexity and splendor has existed for so long on this earth." An animal that looks like a plant? I am now a little obsessed with crinoids, too.

The key takeaway of "Life Sculpted," and ichnology generally, is that geology is indistinguishable from biology. A prevailing theme in popular culture these days is that all life is connected. But what Mr. Martin implies is that it is not only biotic organisms that are interdependent, but the geological and chemical systems of the planet, too. And while the gap between the biotic and abiotic worlds may seem huge, it's the science that's complicated. So, while "Life Sculpted" is not everybody's idea of beach reading, think of it this way: It's the beach.

Ms. Bone is a writer on science and food. Her next book, on psychoactive mushrooms, will be published next year.

### Preserved in Paint



GONE IN A FLASH Two by Carel Fabritius (1622-1654): A detail of 'A View of Delft, With a Musical Instrument Seller's Stall' (1652) and, below, 'The Goldfinch' (1654).

#### **Thunderclap**

By Laura Cumming Scribner, 263 pages, \$32.50

By DIANE COLE

HE FRENCH PHRASE coup de foudre captures, with exquisite economy, the explosive shock with which an unexpected clap of thunder can change a life, most commonly through the sudden lightning strike of love. But as the art critic Laura Cumming reminds us in "Thunderclap: A Memoir of Art and Life & Sudden Death," a fiery blast can also prove lethal, as was the case of the Delft Thunderclap of Oct. 12, 1654. On that morning, a stray spark detonated 90,000 pounds of gunpowder stored in a basement vault, sending forth sound waves that could be heard 70 miles away. The repeated explosions killed at least a hundred people, injured thousands, uprooted trees, collapsed buildings and left a dark crater where the ammunition had been kept.

Delft's most famous artist, Johannes Vermeer, lived a few streets away from the explosion, but survived unscathed. Meanwhile his colleague, the celebrated painter Carel Fabritius, resided several blocks closer and was buried beneath the fallen roof beams of his home studio. He died within hours. He was 32.

Fabritius left behind only 13 paintings that can be attributed to him, each a cherished gem. They are held especially dear by Ms. Cumming, who learned to love Fabritius's art—and mourn the lost canvases and unknown treasures he never lived to paint—from her beloved father, the Scottish artist James Cumming. The elder Cumming died in 1991; his legacy of art and love imbues his daughter's book, as does her longing to have him still at his easel and by her side.

Ms. Cumming's Proust-like meditations on time never to be recovered and art never to be produced, either by Fabritius or her father, lead her to her own thunderclap of insight: that art has the power to console and bring memory back to life precisely because of its ability to immortalize and make time stand still.

In one brief essay-like chapter after another, the author recounts her own adventures in art, weaving together vignettes and memories of her father, anecdotes about her career as an art critic, and observations and analyses of the lives and works of 17th-century

Vermeer and his contemporaries were masters of perspective, able to capture their subjects with meticulous, seemingly miraculous exactitude. The effect is stunning, Ms. Cumming agrees, perhaps especially in Vermeer's panoramic "View of Delft" (1661), which she describes as "a sparkling expanse of clouds and canal banks, diamond-pane windows and slate-blue tiles, of steeples, courtyards and alleys . . . the whole surface...jeweled with pinpricks of luminous paint that crackle and glow."

But, she continues, Vermeer's genius cannot be "so glibly explained away, as if he worked it all up by tracing the outlines of reality." Praising Vermeer and his colleagues only for their wondrous skill in documenting the world devalues their imaginative vision and individual sensibility. As her father once told her, "a likeness is never the only reason an artist paints a picture." Great artists don't simply duplicate reality, Ms. Cumming explains, they transcend it with their "wildness and strangeness and utter originality."

In fact, if you look closely, you can often catch them embroidering a trueseeming scene with details that are less than true. Even Vermeer, renowned for his verisimilitude, shifted the placement of some buildings in his "View of Delft." The prolific landscape painter Jacob van Ruisdael, Ms. Cumming writes, "is not known to have travelled beyond the German border, yet there are Swedish waterfalls and Italian ruins in his art." In "The Jewish Cemetery" (ca. 1655), he "collages a real graveyard with a fiction of rainbows, ravening clouds, black water and stricken oaks." Ms. Cumming similarly directs our attention to a woodland scene by the still-life painter Rachel Ruysch, which at once depicts "spring tulips, summer lilies, overblown peony roses," a beautiful grouping of blooms-but from different seasons, which means they could not all have reached full flower at the same moment. Such fictions are glorious, perhaps even more so because they look so real.

As for Rembrandt, in his selfportraits "he scarcely looks the same from one painting to the next. His hair is tawny, brown or auburn, his nose waxes and wanes, from bulbous potato to sharp nib; he is head in air, and suave, he is down and out, and flaccid." Never static, he is seen as "ever changing and never fixed: the qualities that make Rembrandt so human, so proverbially Shakespearean." A canvas that can capture the world's mutability may constitute the fairest reflection of what we call reality.



Then there is Fabritius, often described as the missing link in the chain of art history between Rembrandt, with whom he studied, and Vermeer, his Delft neighbor. Ms. Cumming differs -strongly. She tells us "there is no evidence that Fabritius taught Vermeer," while it appears that "Fabritius shucks off the influence of Rembrandt very early in his career." He is clearly his own master, eschewing Rembrandt's darkened backgrounds for lighter and more neutral tones in his portraits, and experimenting in his own "A View of Delft, With a Musical Instrument Seller's Stall" (1652) finished nine years before Vermeer's cityscape—with a wide-angled, foreshortened perspective that cannot be confused with Vermeer's depiction of the home they shared.

At first glance, "The Goldfinch" (1654), Fabritius's most famous painting, seems to portray nothing more than a charming bird with downy brown feathers highlighted by a stark yellow streak. It's easy to miss the slim gold chain that wraps around his leg and ties him to the feedbox on which he's perched. Once you do, however, it seems impossible to add still more poignance to the painting. But the work turns out to carry an astonishing legacy of the same thunderclap that took the artist's life.

A CT scan of the painting, conducted in 2003 by the Danish conservator Jørgen Wadum, shows "traces of a blast, the minuscule indentations of hurtling matter, broken shards, hard pellets blown scattershot through the air, across the room, pocking its surface in an instant," Ms. Cumming writes. The further revelation of these scans is that the explosion registered in a surface that did not split or shatter because it was not dry. 'The Goldfinch' was still wet, still drying, a work in progress like its maker, a living thing in the studio when Fabritius was dying."

In the days and weeks after the Delft Thunderclap, many artists hurried to the scene to sketch the ruins left in its wake. Only "The Goldfinch" captured the actual moment. It stopped time in perhaps the most profound way possible, yet the painting continues to exist in our time, and in this way has kept the artist alive. That is the conundrum Ms. Cumming presents in all its complexity in her wondrous book. Its thunderclap still echoes in my ears.

Ms. Cole is the author of the memoir "After Great Pain: A New Life Emerges."

### Who Killed Fyodor Pavlovich?



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1912 version of Fyodor Dostoits variations ("ecstatic," "ecstatically") appear 34 times. her prose, and she was prone able portions. Mr. Katz has lation sharpens the sensation and shouting something into though the better word surely is "ecstatic."

that can 'ecstatic.'

may be useful in the tricky task of choosing between excellent translations of a Russian classic: In Constance Garnett's canonical vevsky's "The Brothers Karamazov," the word "ecstasy" and In Michael R. Katz's new translation, published by **Liveright** (900 pages, \$40) in a solid brick of a hardcover, the words show up 78 times, more than double the frequency. There's a lesson in the numbers. Garnett's brilliance was bound up in the fluency of to taking Dostovevsky in hand when he became too crazed or inscrutable, fixing repetitions. cutting apparent non sequiturs and breaking up massive paragraphs into shorter, more readaccepted ungainliness in return for greater intensity. His transunique to Dostoyevsky, that of a man clutching your forearm your face. It feels truly manic—

**HERE'S A DATA POINT** that

Dostoyevsky, we now know, was afflicted with a rare form of epilepsy in which he experienced "ecstatic auras"-joyous, mystical presentiments—in the moments before falling into a seizure. "For a few brief instants I feel a happiness unthinkable in

the normal state and unimaginable for anyone who hasn't experienced it," he said of his condition. The diagnostic mixture of bliss and terror may well be unimaginable, yet it was precisely what his writing evoked, and to no small extent the symptomatology of his illness reads like a summation of his greatest books: the nervous agitation; the sense of overload that brings about vertiginous levels of awareness; the strange dilation of time; the brief apprehension of some engulfing, epiphanic truth, followed by a shattering collapse into disorder.

Mr. Katz has already produced spiky, vibrant translations of "Notes From Underground," "Devils" and "Crime and Punishment," and with "The Brothers Karamazov" he takes on Dostoyevsky's uncontested magnum opus, completed in 1880 just a few months before the author's death at 59. (Dostoyevsky, a chain smoker, died from emphysema, but if any book was going to kill him it's this one.) As was often the case in his novels, a wire-thin plot holds everything together. Here it's the murder of the wicked old landowner Fvodor Pavlovich Karamazov and the subsequent trial of the alleged killer, his eldest son, Dmitry. But behind the "external side" of the book are secondary stories of love and death, sermons, theological debates, anguished mono-

logues, fever dreams and philo-

sophical parables, including "The Grand Inquisitor," among the most renowned chapters in Western literature.

The brothers' contradictory personalities allow for such scope. Central to everything is the novel's hero, the saintly Alyosha, who has been living in a monastery under the guidance of Father Zosima and who acts as a kind of confessor to the many people doing their utmost to destroy one another and themselves. Dmitry, a drunken, debt-ridden carouser, is the most openly sinful of the brothers, but

#### **THIS WEEK**

The Brothers Karamazov By Fyodor Dostoyevsky Translated by Michael R. Katz

his candor makes him curiously endearing. ("Though I'm a man of vile desires, I'm honest," he swears, and it seems to be true.) One suspects Dostoyevsky is harsher with Ivan Karamazov, the tormented intellectual who wields reason against faith and morality, because he's the most autobiographical. Then there's the enigmatic Smerdyakov, Fvodor Pavlovich's illegitimate son and servant, who rarely speaks but is always hanging around and observing.

With these and other figures

Dostoyevsky spins a dense web

of feuds, which are triggered by

various pretexts-usually women or money—but are really propelled by psychological oneupmanship, the deep-seated desire to hold power in every relationship. Only Alyosha is exempt from the fighting because he freely begs for and dispenses forgiveness whenever conflict arises. His enthusiastic submission to Christ is both a beautiful and a disturbing example, and it causes those near him to turn their antagonisms inward, so that they're ultimately warring against their own nature. There are occasional tone shifts in this long book—Dostoyevsky can be quite funny, especially when depicting daily Russian life—but the dominant mood is apocalyptic spiritual crisis. The novel works itself into an emotional frenzy and somehow sustains that heightened condition for hundreds of pages, impossibly poised on the threshold of either salvation or damnation.

Dostoyevsky's willingness to convincingly portray the allure of both fates is what makes "The Brothers Karamazov" a work of art rather than a singular religious tract. Father Zosima requires Alyosha to leave the monastery and "sojourn in the world," living among people for whom depravity can access a feeling closely akin to religious exaltation. In the novel's most moving scene, Alyosha is over-

come by a vision of God's in-

finite mercy and he drops to

the ground, "weeping, sobbing, watering the earth with his tears, vowing ecstatically to love it, love it forever and ever." Yet the scene is followed by a virtuoso section depicting the deranged, blood-spattered bacchanal Dmitry throws the night his father is killed, and it too lifts him into an "ecstatic state" of perception, though its consummations are outrageous vices.

Where does the reader fit in all this? Discussing Dmitry's trial, which becomes notorious throughout Russia, a troubled acquaintance of Alyosha says, "Everyone loves the fact that he killed his father... Everyone says it's dreadful, but on their own, they love it terribly. I'm the first one who does." The novel might condemn this hypocrisy if not for the fact that it depends upon it for its narrative to be effective. Dostoyevsky makes us voyeurs to a ghastly murder mystery, arousing us to the same "feverish, irritating interest" by the question of who killed Fyodor Pavlovich as the gossipy court spectators.

Because what matters is, whether by means noble or base, that we, too, are made to feel the terrible internal pressure that throttles the characters. Like no other book, "The Brothers Karamazov" describes and drags its readers to a state of unbearable tension. It is only there, at the breaking point, that moments of clarity become possible, and those moments are what can save us.

# Supermodels and Mother Elephants

By Dominic Green

supermodels and African animals and took elephantine quantities of cocaine in nightclubs. He said his life was his art. Beard was casual with his camera, but he took his drug use very seriously. A child of family money who never worked too hard, he died in 2020 at 82, after wandering into the woods near his Montauk, N.Y., home. He had suffered three strokes and had developed dementia, cancer and heart trouble. He left his heart pills on the bedside table. Beard, who had been gored by an elephant in 1996, died like an old tusker going to the elephants' graveyard.

Charming, glamorous and as coldly manipulative as Patricia Highsmith's talented Mr. Ripley, Beard makes a great subject for a biography—or two. Christopher Wallace's "Twentieth-Century Man" (Ecco, 272 pages, \$32.99) usually chooses the legend over the life and the life over the art. Graham Boynton's "Wild" (St. Martin's, 344 pages, \$35), published late last year, is a thoughtful and well-researched exploration of how the art emerged from the life, and makes the uphill case that Beard was a significant artist.

Born in 1938, Beard was the great-grandson of the railroad tycoon James J. Hill. Beard's paternal grandmother, Ruth, married the lawyer Anson McCook Beard II. When he died, she married the tobacco heir Pierre Lorillard V, and later, moving "from cigarettes to champagne," as family lore had it, she wed Emile Heidsieck. Anson III, Ruth's son from her first marriage, married Peter's mother, Roseanne.

Peter's elder brother, Anson IV, called their father "the ultimate WASC—White Anglo-Saxon Catholic." Anson III was a member of "the lucky sperm club" who "enjoyed a life of total entitlement," managed the family money and drank a lot. Anson IV became, in the words of the New York Times, a "titan of Wall Street." Peter became a titanic irritant to his mother and took it out on all the women he seduced.

"Mummy's greatest disappointment was her love-hate relationship with Peter," Anson IV recorded for posterity. Anson IV, who might have been a novelist in the line of Louis Auchincloss, recalls that his mother beat him "so hard one time that she broke my father's DKE fraternity paddle on my backside." The parents objected when Granny Virginia, Roseanne's mother, gave Peter a camera: They thought he would break it or lose it. Instead, he found a way of life, and an agreeable way of seeing the world: one-eyed and controlling.

Miseducated at boarding schools in New England and old, Beard fantasized about the colonial world of Karen Blixen's 1937 memoir "Out of Africa" even before he met Quentin Keynes. A great-grandson of Charles Darwin and the nephew of the economist John Maynard Keynes, Quentin was in the habit of touring schools, showing films of his African safaris to the students and recruiting promising boys as camera bearers. In 1955, the 17-year-old Beard joined the 34-year-old Keynes on a trip through southern Africa and then north to Kenya.

Five years later, while enrolled at Yale, Beard returned to Kenya, which was still a



CREATIVE CLUTTER Peter Beard's studio at Hog Ranch, in Kenya.

British colony. Beard apprenticed himself to its old white hunters and modeled himself on Blixen's English lover, Denys Finch Hatton. Colonial-era hunters had massacred Kenya's big game, and the British authorities had jammed the survivors into reserves bordered by a growing African population. In 1965 the 27-year-old Beard published "The End of the Game." He predicted that a further rise in Africa's population would seal the fate of its wildlife. Beard was on the side of the

Peter Beard—photographer, conservationist and Studio 54 stalwart—was both the 'last great romantic adventurer' and a 'truly sadistic' sociopath.

fauna, not the people. He was prone to musings on how Hitler had discredited eugenics and saw epidemics as nature's answer to overpopulation.

"The End of the Game," Mr. Boynton writes, elevated Beard from "trust fund roustabout to prophetic, if doom-laden, conservationist." He bought a spread outside Kenya's capital, Nairobi, and married Mary "Minnie" Cushing, whose family had a mansion in Newport, R.I. Cushing turned out to be an even freer spirit than Beard and left him for the producer of the musical "Hair." Beard attempted suicide, and then, as Mr. Wallace puts it, "swore never again to spend a single solitary second in his

subconscious." This did not stop him from exposing others to its contents.

In 1969 Beard was sentenced to a Kenyan jail after allegedly tying an African trespasser to a tree; he was freed after Jackie Onassis pulled strings via the American ambassador. In 1971 he published his most powerful images: The elephant population of Kenya's Tsavo National Park had stripped the reserve's vegetation and was now undergoing a Malthusian collapse. Beard's aerial photographs of the die-off evoke images of warfare and ecological collapse. Mass extinction, Mr. Wallace writes, was "the obsession of his life." Beard said that the future was "black, dark, horrifying black totalitarianism."

Though we have not followed the elephants into the graveyard, the class into which Beard was born was losing its power. Surviving like the fittest, Beard climbed up the new celebrity class and embraced what Mr. Wallace terms a demanding routine of "fashion shoots and safaris and debauchery." He might have become a major environmentalist. Instead, he unfulfilled his potential as a jester for the talentless rich, a trophy hunter who provocatively posed gaunt models with giant elephant tusks.

Beard partied with the Rolling Stones and Truman Capote. He slept with Princess Lee Radziwill and models much younger than himself. He recorded monologues with Andy Warhol and got drunk with Francis Bacon. He was handsome and funny, but repartee ages about as well as oysters. Beard held his 40th birthday at Studio 54. He gave away his photographs to pay dental bills and drug dealers.

Mr. Wallace calls Beard "a man of action, maybe the last great romantic adventurer." Mr. Boynton calls him "clearly sociopathic." He once took a rock and bludgeoned to death a cat belonging to his neighbor, Richard Avedon, because the creature annoyed him. "He liked the beauty of women and he liked to spin the web, and then he would walk away once he had ensnared you," his second wife, the model Cheryl Tiegs, reflects. When Ms. Tiegs was pregnant, Beard hit her in the stomach, likely causing her miscarriage. Mr. Wallace omits to mention the young woman who told Mr. Boynton that Beard was "sexually violent" and "truly sadistic," and that she needed antibiotics after he bit her all over her body.

Beard's first two wives and mothers-inlaw might have dreamed of doing what the matriarch of an elephant herd did to him in 1996. She charged, headbutted Beard as he ran away, then smashed his pelvis, gored his thigh and repeatedly tried to crush him. Anson IV paid for Peter's repatriation and treatment. A show was arranged for him in Paris not long after the mauling. Though still addicted to publicity, he was never the same again.

As Anson IV said, Peter "never really managed to be interested that much in the well-being of others." That is a rare understatement about a man who lived in overstatement. As each of these biographies shows in its way, Beard's photographs were eclipsed by his image, and his art by his life.

Mr. Green is a Journal contributor and a fellow of the Royal Historical Society.

# The Back Story on Middle-Earth



SCIENCE FICTION & FANTASY LIZ BRASWELL

Three new windows on the life, work and world-building of the polyglot scholar who changed the

fantasy

genre

forever.

NO ONE HAS HAD a greater impact on the genre of fantasy than J.R.R. Tolkien. And it so happens that 2023, the 50th anniversary of his death, has become an unofficial "year of Tolkien," commemorated with three important books on the man, the myth and his legends.

My introduction to "The Hobbit" was in the late 1970s or early '80s, visiting my (much) older brother at orchestra camp. All of his fellow campers, longhaired and serene (elves, if you will), were reading the book. By the end of 2003, most of America—not just the odd young-adult musician—was familiar with the world of "The Lord of the Rings" thanks to Peter Jackson and his enormously popular films.

For the few who remain unfamiliar with the original R.R. of fantasy, John Ronald Reuel Tolkien (1892-1973) was an academic first and a novelist second. He held the Rawlinson and Bosworth Professorship of Anglo-Saxon at Oxford, where he was a philologist and literary expert on texts written in a surprising number of European languages. (He also worked on the Oxford English Dictionary, contributing mostly to words starting with "wa," like "waggle," "waistcoat" and

"wake-wort.")

The first book in the 2023 lineup will give you a taste of the man's diverse career and lexical proficiency: "The Battle of Maldon, together with The Homecoming of Beorhtnoth"

(Morrow, 188 pages, \$30),

edited by Peter Grybauskas.

"The Battle" is a fragment of poetry from the end of the first millennium that Tolkien translated from Old English. It tells the story of an aging and possibly foolish Anglo-Saxon chief—Byrhtnoth—who politely but unwisely lets Viking invaders cross the river so that the two armies could battle on dry ground, which dooms the Anglo-Saxons.

Not to be outdone by his centuries-old peers, Tolkien wrote his own ancient-style poetry. "The Homecoming of Beorhtnoth Beorhthelm's Son" is about two people looking for the slain Anglo-Saxon leader's body after the battle, a sort of "Rosencrantz and Guildenstern Are Dead" for the Sutton-Hoo set. If you were to choose only one of these new books to gain some insight into the prolific smorgasbord of his multifaceted writing, this is peak Tolkien.

"The History of the Hobbit" (Morrow, 912 pages, \$55), by John D. Rateliff, is three inches thick and weighs two and a half pounds. (Full disclosure: I did not read every page for this review. I did, however, use it to prop up my laptop while writing it.) All joking aside, this is an intriguing and very punctilious look at the process of writing. One quality that characterizes Tolkien's fiction is the "inevitability" of the story. Both "The Hobbit" (1937) and "The Lord of the Rings" (1954-55) flow seamlessly

from beginning to end, filled with subplots and mythology that make sense and details that track. But it wasn't originally put together so precisely: "The most famous scene Tolkien ever wrote"—the riddle game between Bilbo and Gollum—"was drafted in 1944, sent to [publishers] Allen & Unwin in 1947, and published in the 'second edition' of *The Hobbit* in 1951." What was in Bilbo's "pocketses" wasn't even in the original book!

#### THIS WEEK

By Nick Groom

**The Battle of Maldon**By J.R.R. Tolkien

**The History of the Hobbit**By John D. Rateliff

Tolkien in the Twenty-First Century

(Also, Gandalf's original name was "Bladorthin." Yikes.)

While not even diving into the "Quenta Silmarillion," the history of Middle-Earth that Tolkien was working on at the same time, "The History of the Hobbit" includes five different "phases" of the book's creation, many, many plot notes, and a scheme that shows original word choices along with Tolkien's final text—which was sometimes penned

in on top of rubbed-out pencil.

This book belongs on the shelf of every serious Tolkien fan

or anyone interested in the

hard task of creating novels, fitting comfortably alongside Stephen King's "On Writing."

And finally comes "Tolkien in the Twenty-First Century: The Meaning of Middle-Earth Today" (Pegasus, 454 pages, \$29.95) by Nick Groom.
This fascinating book explores "The Hobbit" and "The Lord of the Rings" from their genesis through all the different major adaptations of the Tolkien "legendarium."

It starts off neatly summarizing Tolkien's life and influences-such as his friendship with W.H. Auden and C.S. Lewis—and explains his guiding belief that languages and words "are custodians of ancient cultures and thus infuse the present with the past." Yet although Tolkien was a devout Catholic, there is no specific mention of religion, churches or God in his books. Perhaps, Mr. Groom hazards, because "in Middle-Earth . . . the divine is not separated from the commonplace."

The reader will learn a great deal about the licensing of Middle-Earth, a realm I thought I already knew fairly well. There were plans for a "Lord of the Rings" film starring the Beatles, for instance, directed by Stanley Kubrick. Another fever dream of a movie would have had Galadriel seduce Frodo, and a 12-minute animated monstrosity released in 1966 has a princess named Mika and a dragon named Slag.

Along with these tidbits of non-Silmarillion history are interpretations and conclusions about the original literature itself. As we learned from "The Battle of Maldon," Tolkien's fiction was informed by his scholarship; in "The Return of the King," Aragorn rallies the troops for a hopeless attack on Mordor, which fits in very nicely with the ideals of Northern courage and the Anglo-Saxon sense of futilely fighting the inevitable. At the same time, one of the strongest themes in "The Lord of the Rings" is the importance of collaboration and friendship. Fellowship, if you will. Saving the world is too great a task for a single hero and must be shared.

Mr. Groom goes on to suggest that Tolkien's fiction could be considered postmodern, as it deals with the "re-enchantment" of a world relentlessly disenchanted by modernism. And while he also rightly points out that "the mediaeval period in the popular imagination had been deeply coloured by Tolkien's Middle-Earth and its reworkings," I would like to have seen Mr. Groom poke into how Tolkien not only defined how fantasy literature is written but crystallized it—possibly to the detriment of other visions.

Each of these very different books offers a brilliant peek or deep dive into very different aspects of the man who changed speculative fiction forever. Choose your own adventure into the world of J.R.R. Tolkien. 'To wrestle with your demons will cause your angels to sing.' -August wilson

# Staging the Blues

August Wilson: A Life

By Patti Hartigan Simon & Schuster, 544 pages, \$32.50

By ISAAC BUTLER

T'S IMPOSSIBLE to imagine American literature, dramatic or otherwise, without August Wilson. The playwright, who died in 2005 of liver cancer, transformed the American theater and created a new lyricism out of the black vernacular with a body of work whose ambintion and expansiveness rival Walt Whitman's. Wilson's 20th Century Cycle—one play for each decade of the century, with all but one taking place in his native Hill District of Pittsburgh—drew its power from the details of African-American life.

In an August Wilson play—as in the Romare Bearden collages from which he drew inspiration—little stories, songs, recipes, cries for love, for justice and for understanding, flashes of violence or flirtation, all add up to something monumental. To see a great production of Wilson's work is to witness the Great Migration, and the black American experience it birthed, play out in the lives of his characters in all their triumph and heartbreak.

Yet his greatest invention may have been himself. Self-educated, self-named—he was born Frederick Kittel, named after a white father he barely knew and rarely acknowledged—Wilson was a legendary raconteur and a notorious fabulist. Both his greatness and his self-creation pose immense challenges to the would-be biographer. How do you see through the twin fogs of Wilson's posthumous canonization and his habit of being untruthful about his life, in order to find the real man undergeath?

It is fortunate for us all, then, that we have Patti Hartigan's masterful "August Wilson: A Life." With painstaking research, stylistic verve, and an eye both admiring and exacting, Ms. Hartigan has pieced together the man behind the 20th Century Cycle, bringing Wilson to furious, complicated life.

Wilson mined family lore for his plays, writing from what he called "the blood's memory," so it is perhaps no surprise that the early chapters of Ms. Hartigan's account read like the kind of story a Wilson character would recount. She begins with Wilson's grandmother, and a forbidden relationship with a local white farmer in rural North Carolina, a story that ends in violence and eventually sends her daughter Daisy north to Pittsburgh. There, Daisy met a German baker named Frederick Kittel. By 1941, they would be lovers, and on April 27, 1945, Daisy gave birth to their son, Frederick August Kittel Jr.

As a young boy, "Freddy" was an avid reader and brilliant student, only to drop out of school in 1960 after being wrongly accused of plagiarism, turning to the local library to find what he needed to understand the world. He decided to become a poet, much to his mother's chagrin, and as a young man worked a series of odd jobs. In the meantime, Ms. Hartigan reports, he wrote whenever he could, jotting down thoughts on "napkins, receipts, and random scraps of paper." He spent three days in jail due to a dispute with a landlord and was there exposed to the blues as an inmate sang in his cell alone at night. "He came to believe that the blues expressed Black life in its fullest," Ms. Hartigan writes, "and the music had an indelible influence on his later plays."



NATIVE GROUND 'I write about the black experience of America. Contained in that experience, because it is a human experience, are all the universalities.'

Blues would form the first of Wilson's "Four B's," the formative influences that shaped his life and work. The others are Romare Bearden, whose artworks set a standard for how art could render everyday black life; Amiri Baraka, whose insistence on black artistic selfdetermination undergirded Wilson's ethics; and Jorge Luis Borges, whose formal experimentation proved to Wilson that writers could blaze their own aesthetic trail. Without formal training he began directing in 1968 as one of the founders of Pittsburgh's Black Horizons Theater. He soon began to write plays as well, and in 1982 his "Ma Rainey's Black Bottom" was accepted at the Eugene O'Neill Playwrights Conference, whose artistic director, Lloyd Richards, became Wilson's champion and director.

From there, as Ms. Hartigan documents with a great sense of the dramatic, Wilson battled mightily, first for his dignity, then to gain control over his work, and finally to finish his cycle. This battle would eventually consume the Wilson-Richards partnership, which birthed six of his 10 plays, won Wilson two Pulitzer Prizes, and made him a household name. It would also sorely test many of his personal relationships. All great artists struggle to become worthy of the art they want to create, and the mission Wilson set for himself was rendered even more difficult by his process, which was equal parts elliptical, messy and demanding. He wrote by listening to his characters, by asking them questions about their lives and how they came to be where they were, and then writing down the results. His early drafts were often a series of barely strung together monologues, with major plot incidents missing or underexplained. He required multiple fully staged productions to understand his plays and shape them into their final form.

But oh, what final forms he conjured! The 20th Century Cycle circles a series of interlocking themes and motifs—the quotidian details of black working-class life, the blues, the specter of violence, the off-stage pressures of white supremacy, the importance of rooting one's life in history—that move through many genres. "Fences," which won him his first Pulitzer, is a work of kitchen-sink realism. "The Piano Lesson," which won him his second, is a ghost story. "Seven Guitars" is a murder mystery, while "Joe Turner's Come and Gone," his mysterious, endlessly re-readable masterpiece, is an epic work of magic realism.

Wilson mined family lore for his 10-play 20th Century Cycle, which included 'Fences,' 'The Piano Lesson' and 'Ma Rainey's Black Bottom.'

Wilson often lived out of hotels and was married three times. He procrastinated, chainsmoked, womanized and missed much of the upbringing of his children. His success alienated him from his original community in Pittsburgh to such a great degree that he was specifically asked not to speak at the funeral of Rob Penny, one of his childhood best friends. Wilson also had to contend with being The One: the black American playwright who was designated by a largely white establishment to speak for and represent the entirety of his race. The role may have been good for his pocketbook, but it also placed him in an impossible position and made him a target for his peers, who became increasingly suspicious of his success within the

white establishment. He eventually chose to speak frankly to that establishment, in a provocative speech titled "The Ground on Which I Stand." (Full disclosure: Some of my reporting on that controversy is cited in Ms. Hartigan's book.)

All of this and more is narrated brilliantly in "August Wilson: A Life"—a feat all the more impressive for having been produced without the cooperation of Wilson's estate. Ms. Hartigan has an eye for the perfect, telling detail. Thus Wilson's one significant memory of his father is of a trip to a shoe store where "Kittel handed Freddy a handful of coins and told him to jingle them in his pocket, to make it look as if he had money to spare," while his amanuensis Todd Kreidler is shaped by "a chilly relationship with his father, a used-car salesman who did not seem to know the phone number to his emotions." She isn't afraid to take Wilson's work to task, particularly in its portrayals of women, while also recognizing the unique power of his gifts. Ms. Hartigan also unearths plenty of juicy backstage gossip. Her chapters on the Sturm und Drang surrounding "Fences," and star James Earl Jones's attempts to use producer Carole Shorenstein Hays to get Wilson to rewrite the play to be more traditional and amenable to white audi-

ences, are equally shocking and thrilling.

Reacting to Wilson's death, the playwright
Tony Kushner told the New York Times:
"Heroic is not a word one uses often without
embarrassment to describe a writer or playwright, but the diligence and ferocity of effort
behind the creation of his body of work is really
an epic story." Finally, with "August Wilson:
A Life." we have an epic account to match.

Mr. Butler is the author of "The Method: How the Twentieth Century Learned to Act."

#### Bestselling Books | Week Ended July 29

New

The Creative Act

Rick Rubin/Penguin Press

With data from Circana BookScan

**Hardcover Nonfiction** 

AUTHOR / PUBLISHER

Baking Yesteryear	1	New
B. Dylan Hollis/DK		
Atomic Habits	2	1
James Clear/Avery		
The King of Late Night	3	New
Greg Gutfeld/Threshold		
The Wager	4	-
David Grann/Doubleday		
Outlive	5	4
Peter Attia & Bill Gifford/Harmony		
Nonfiction Ebooks		
TITLE NUTHOR / PUBLISHER	THIS WEEK	LAST WEEK
American Prometheus	1	1
Kai Bird & Martin J. Sherwin/Vinta	ge	
The Wager	2	5
David Grann/Doubleday		
Killers of the Flower Moon	3	_
David Grann/Vintage		
The Diary of a Young Girl	4	_
Anne Frank/Anchor		
Baking Yesteryear	5	New
B. Dylan Hollis/DK		
Outlive	6	9
Peter Attia & Bill Gifford/Harmony	'	
A Mind for Numbers	7	_
Barbara Oakley/TarcherPerigee		
Atomic Habits James Clear/Avery	8	-
James Clear/Avery		

The King of Late Night

Greg Gutfeld/Threshold

A Fever in the Heartland

Timothy Egan/Viking

TTLE UTHOR / PUBLISHER	THIS WEEK	LAST WEEK
The Creative Act Rick Rubin/Penguin Press	6	8
<b>Taylor Swift</b> Wendy Loggia/Golden Books	7	7
pider-Man: Across the Spider-Verse Ramin Zahed/Abrams	8	10
Who Knew? Big Book of Science Sophie Collins/Portable	9	New
<b>'m Glad My Mom Died</b> lennette McCurdy/Simon & Schus	<b>10</b> ter	-

TITLE AUTHOR / PUBLISHER	THIS WEEK	LAST WEEK
<b>Baking Yesteryear</b> B. Dylan Hollis/DK	1	New
American Prometheus Kai Bird & Martin J. Sherwin/Vinta	<b>2</b> ge	1
<b>The Wager</b> David Grann/Doubleday	3	9
<b>Atomic Habits</b> James Clear/Avery	4	2
<b>Killers of the Flower Moon</b> David Grann/Vintage	5	4
<b>The King of Late Night</b> Greg Gutfeld/Threshold	6	New
<b>Outlive</b> Peter Attia & Bill Gifford/Harmony	7	6
<b>The 48 Laws of Power</b> Robert Greene/Penguin	8	5
<b>The Body Keeps the Score</b> Bessel van der Kolk/Penguin	9	10

TITLE Author / Publisher	THIS WEEK	LAST WEEK
<b>Fourth Wing</b> Rebecca Yarros/Entangled: Red T	<b>1</b> ower	1
<b>Light Bringer</b> Pierce Brown/Del Rey	2	New
<b>Dead Fall</b> Brad Thor/Atria	3	New
<b>Lessons in Chemistry</b> Bonnie Garmus/Doubleday	4	3
<b>Dog Man: Twenty Thousand</b> Dav Pilkey/Graphix	5	8

TITLE Author / Publisher	THIS Week	LAST WEEK
<b>Dead Fall</b> Brad Thor/Atria	1	New
<b>Light Bringer</b> Pierce Brown/Del Rey	2	New
Fourth Wing Rebecca Yarros/Entangled: Red T	<b>3</b> ower	3
<b>The Covenant of Water</b> Abraham Verghese/Grove	4	5
<b>The Collector</b> Daniel Silva/Harper	5	1
<b>Not That Duke</b> Eloisa James/Avon	6	New
<b>It Starts With Us</b> Colleen Hoover/Atria	7	9
<b>Lessons in Chemistry</b> Bonnie Garmus/Doubleday	8	10
<b>Pink Lemonade Cake Murder</b> Joanne Fluke/Kensington	9	New
Wild Scottish Love Tricia O'Malley/Lovewrite	10	New

TITLE Author/Publisher	THIS WEEK	LAST WEEK
<b>Happy Place</b> Emily Henry/Berkley	6	5
One of Us Is Back Karen M. McManus/Delacorte	7	New
<b>The Collector</b> Daniel Silva/Harper	8	2
<b>The Covenant of Water</b> Abraham Verghese/Grove	9	XX
<b>Demon Copperhead</b> Barbara Kingsolver/Harper	10	10

Fiction Combined		
TITLE AUTHOR / PUBLISHER	THIS WEEK	LAST WEEK
Fourth Wing Rebecca Yarros/Entangled: Red T	<b>1</b> ower	3
<b>Dead Fall</b> Brad Thor/Atria	2	New
<b>Light Bringer</b> Pierce Brown/Del Rey	3	New
<b>Too Late: Definitive Edition</b> Colleen Hoover/Grand Central	4	4
<b>It Starts With Us</b> Colleen Hoover/Atria	5	5
<b>Lessons in Chemistry</b> Bonnie Garmus/Doubleday	6	6
A Court of Thorns and Roses Sarah J. Maas/Bloomsbury	7	7
<b>The Covenant of Water</b> Abraham Verghese/Grove	8	8
The Collector Daniel Silva/Harper	9	1

Colleen Hoover/Grand Central

10

10

#### Methodology

Circana BookScan gathers point-of-sale book data from more than 16,000 locations across the U.S., representing about 85% of the nation's book sales. Print-book data providers

include all major booksellers, web retailers and food stores. Ebook data providers include all major ebook retailers. Free ebooks and those selling for less than 99 cents are excluded. The fiction and nonfiction combined lists include aggregated sales for all book formats (except audio books, bundles, boxed sets and foreign language editions) and feature a combination of adult, young adult and juvenile titles. The hardcover fiction and nonfiction lists also encompass a mix of adult, young adult and juvenile titles while the business list features only adult hardcover titles. Refer questions to Teresa. Vozzo@wsj.com.

TITLE AUTHOR / PUBLISHER	THIS Week	LAST WEEK
<b>Atomic Habits</b> James Clear/Avery	1	1
StrengthsFinder 2.0 Tom Rath/Gallup	2	2
<b>Leading Through Disruption</b> Andrew Liveris/Harper Leadership	3	4
<b>Ultimate Guide to Power &amp; Influence</b> Robert L. Dilenschneider/Matt Holt	4	New
<b>Unreasonable Hospitality</b> Will Guidara/Optimism	5	6
Extreme Ownership Jocko Willink & Leif Babin/St. Marti	<b>6</b> in's	5
The Manager's Handbook David Dodson/Wiley	7	-
<b>Dare to Lead</b> Brené Brown/Random House	8	7
Emotional Intelligence 2.0 Travis Bradberry/TalentSmart	9	8
<b>The Five Dysfunctions of a Team</b> Patrick M. Lencioni/Jossey-Bass	10	-

#### **PLAY**

NUMBER PUZZLES

#### NEWS QUIZ DANIEL AKST

1. Xóchitl Gálvez has emerged as the frontrunner to take on the incumbent in the 2024 presidential campaign-of which country?

A. Mexico

OB. Guatemala

C. Honduras O D. Ecuador

2. Donald Trump was indicted for allegedly trying to subvert

the will of the voters after the 2020 election. Who was identifiable among his unnamed co-conspirators?

A. Rudy Giuliani

OB. John Eastman

C. Sidney Powell D. All of the above

3. Trucking giant Yellow shut

down after 99 years. Who owns 30%?

○ A. Warren Buffett

B. Blackstone

Oc. The U.S. Treasury D. Norway's sovereign wealth fund

4. Which world leader's marriage just collapsed?

 A. French President **Emmanuel Macron** 

B. Canadian Prime Minister Justin Trudeau

🔾 C. British Prime Minister Rishi Sunak

 D. Estonian Prime Minister Kaja Kallas

5. A gathering of women named Linda, bursting with baby boomers, attested to the name's former popularity. What was the top name for girls in 2022?

Answers are listed below the crossword solutions at right.

#### From this week's Wall Street Journal

O A. Emily

A. Moody

C. Fitch

B. Standard & Poor's

7. Name the California animal-

welfare law helping to drive up

8. Which classic off-road vehicle

A. The Toyota Land Cruiser

OD. The Land Rover Defender

9. A "blue supermoon"-a sec-

how far away is the moon?

A. 22,600 miles

**B.** 226,000 miles

Oc. 2.26 million miles

OD. 22.6 million miles

ond full moon in a single month, and a bright one at that-is expected Aug. 30. At its closest,

OD. All of the above

pork belly prices.

Shelter Act

○ A. The Humane Hog

C. Assembly Bill 136

OD. Proposition 12

OB. The Pig Pen Statute

is coming back next year?

B. The Ford Bronco

Oc. The GMC Hummer

OB. Olivia

C. Maria

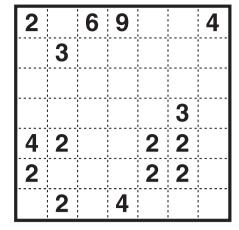
O D. Chadwick

6. Which credit

rating agency just

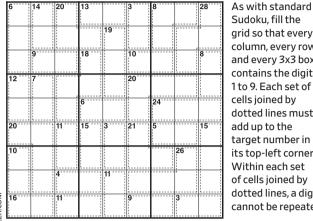
downgraded Uncle Sam?

#### **Cell Blocks**



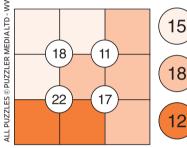
Divide the grid into square or rectangular blocks, each containing one digit only. Every block must contain the number of cells indicated by the digit inside it.

#### Killer Sudoku Level 1



grid so that every column, every row and every 3x3 box contains the digits 1 to 9. Each set of cells joined by dotted lines must add up to the target number in its top-left corner. Within each set of cells joined by dotted lines, a digit cannot be repeated.

## Suko



Place the numbers 1 to 9 in the spaces so that the number in each circle is equal to the sum of the four surrounding spaces, and each color total is correct.

ACROSS 1. CO(RR)AL 6. S + TOP 10. PRO + VIN + G 11. I + RON + ED 12. TROVE (even letters) 13. BITMAPS (anag.) 14. S + HUTU + P 16. ULSTER (anag.) 17. P(A + GE)R 19. C(O)RNMEAL ("Mr. Clean" anag.) 21. RE + LATI(O)N 24. B + ORES 26. CH + OLER ("role" anag.) 29. SAT + YRS 30. RECITAL (anag.) 31. T(HR)OE 32. TO + PIC 33. AIR GUN (anag.) **34.** CAST + R + O **35.** TR(AGED)Y

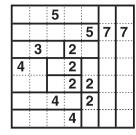
DOWN 1. SUCCOR ("sucker" hom.) 2. SHOVE + L 3. O + VERSE + E 4. ANTHEM (anag.) 5. S'EDIT + I + ON (rev.) 6. SI + TUP (rev.) 7. READy 8. ORPHAN (anag.) 9. P + ROSE 14. ST(ATE)S 15. PA(NE)LS 18. BOW(L)ERS 19. CONTRACT ("Khan tracked" hom.) 20. ENLARGE (anag.) 22. POR(SCH)E 23. BRA + W + NY 24. SERTA (hid.) 25. oRATION 27. ALL + OWED 28. SO + T

В

C

#### SOLUTIONS TO *LAST* WEEK'S PUZZLES

#### **Cell Blocks**



For previous weeks' puzzles, and to discuss strategies with other solvers, go to WSJ.com/ puzzles.

#### Killer Sudoku Level 4

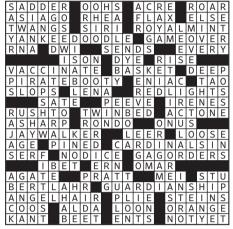
#### 8 4 1 3 9 7 5 6 2 5 6 7 4 1 2 8 9 3 3 2 9 6 5 8 4 7 1 4 5 3 2 7 1 6 8 9 2 7 8 9 6 3 1 5 4 9 1 6 5 8 4 2 3 7 7 9 4 8 2 5 3 1 6 1 8 2 7 3 6 9 4 5

6 3 5 1 4 9 7 2 8

#### Suko



#### In the Ballpark

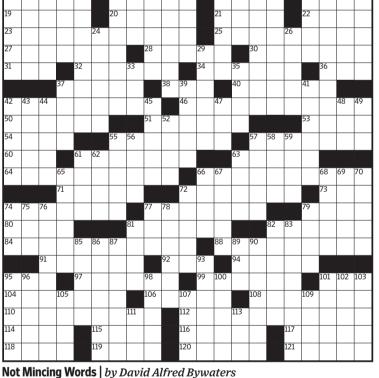


#### **Magic Rings**



Answers to News Quiz: 1.A, 2.D, 3.C, 4.B, 5.B, 6.C, 7.D, 8.A, 9.B

#### THE JOURNAL WEEKEND PUZZLES edited by MIKE SHENK



## 91 Accustomed

1 Tricky business? 6 Norse pantheon

11 Neighbor 15 Between jobs

19 Former senator Tom who's now ambassador to New Zealand and Samoa

20 Prepare for sprinkling 21 Phnom\_

(Cambodia's capital)

22 "Phooev! 23 Not me

25 Popular tanning spot at the start of the season? [SEE PREVIOUS CLUE1

27 Bun ingredients? 28 Very bad indeed

30 Sahara feature 31 Agreeable word 32 Kenya neighbor

34 Called for 36 Nonexistent 37 Mountaineers

challenges 38 Syndicate snitch 40 Counters

42 Not in 46 Family

PREVIOUS CLUE<sup>1</sup> 50 Without a

51 Stir up

memento? [SEE chance, informally

of Fame 84 Not so 88 Pirate's motto? **[SEE PREVIOUS** CLUE]

53 Was sorry about

54 Ireland, literarily 55 Mountaineers' challenges 57 Supposed

60 Like certain stocks and medications: Abbr.

guile

unpleasant

66 Fear of burglary?

[SEE PREVIOUS

63 Grows

64 Not OK

71 Hawaiian

73 Put the

74 Basic

greeting

72 Most with it

kibosh on

recuperation

77 Self-denigrating

"Strait Is the

80 Poems of praise

81 Baseball official

the press box

82 Pete in the

who works from

Songwriters Hall

Gate" novelist

treatment

admission

André

99 Requiring less 61 With a lack of 101 Reno and Garland, for two:

Abbr. 104 Eagerly embraces

106 Sam of "Jurassic World Dominion'

92 The Sun Devils'

94 Imbibes greedily

95 Dough dispenser.

in brief

97 Second-hand

producer?

108 Israel's parliament

110 Not up

112 "Nutcracker" nastiness? [SEE

PREVIOUS CLUE] 114 Like many dorms 115 Autumn

birthstone 116 Less cordial

117 Common marsh plant 118 Extremities

119 Baby, in Bolivia 120 Watermelon

121 Theater in ancient Greece Down

1 Lacking originality

2 Find charming 3 Series

components

might make

leaf blowers 58 Avenue liners

62 Years, in Brasilia 63 Drs. who do

65 "Captain Marvel"

72 Long-eared

for a reptile

76 Significantly

79 Stylists' supplies 81 "The Sweetest

82 Like the start of "Psycho"?

Television Hall of 86 "High" crime 13 Free of burdens 87 Progress

14 As a result of that 15 Scrutinized at the club entrance

16 Empties, as a bathtub 17 Milk: Prefix

18 Alcohol variety 24 Nullify 26 Make costlier. at an auction

4 Makeup of

Polynésie

française

5 Zippers, e.g.

past

6 In the distant

7 Before, in the

distant past

construction

11 Cook's domain

12 Arthur in the

Fame

8 Leafy lunch

9 Battle cry

10 Coral

29 Baseless 33 Sydney's state: Abbr. 35 Sea eagle

37 Goatee spot 39 Cause of writhing, perhaps

41 Military attack 42 Just those things 43 América del (Mexico's

continent)

think

45 Abdominal indentation

55 What might

67 Covent Garden offering 68 Covent Garden

69 Webcam product

74 Neckwear named

finish

weakened

83 Strong brew

participants 93 Loosen, as a

95 Rabbit chaser of story

98 Low joint Greenwich

102 Beginning, informally

107 Harvard Lampoon's

44 Careful way to

47 Braying beast 48 Simple shirt

52 Small stream

57 Alternatives to

checkups

star Brie

77 Proust's here 78 Coach's concern

Taboo" singer

85 Hospital ward cry

89 NYC airport code 90 Ambush

100 Songwriter 101 Out of the way

103 Dutch painter Jan 105 Impressive degs.

mascot 109 Went fast

49 Peculiar

56 Running shoe

59 Novelist's start 61 Sudan divider

many routine

66 Tart fruit

square architect Jones

70 Put forth

75 Prof's address

hinderer, at times

96 Mortise insert

111 Store, in a way 113 Was in front

## D 10 G 12 18 19 22 23

**Trail Mix** | by Patrick Berry

Answers fit into this grid in two ways: Rows and Trails. Each Row contains two answers placed side by side, clued in order. Each Trail answer begins in the corresponding numbered square and ends in one of the dotted squares, making one or more turns along the way. Trails will never overlap each other, nor will they make hairpin turns (that is, no two-by-two block of grid squares can be filled by a single Trail answer). Lengths of the Trail answers are given in parentheses. In the completed grid, each letter will be used once in a Row answer

and once in a Trail answer. Trails must make at least one turn: WRONGIRIGH T Trails can't occupy a 2×2 block of ¹R T WNG R O I G H

A Like actors who get laughs

Game in which jokers are wild cards B Big concert venues

Naval missile named for a

Make a clone of

destiny

D Wander hither and yon

Resigned to one's inevitable

hand-held weapon C Bill worth ten sawbucks (Hyph.)

E Boost, as spirits trading (white-collar crime)

F Spa treatment that uses chemicals Saying "yes" to a permanent relationship

G Short trailers Offensive to the devout H Joins in a reel? "The Morning Show" star

Jennifer

I Soft white stone used for medieval church carvings Quite enough

J Long line at the circus? Extremely cold K Revolted

Policy statement L Concealed "magically," as a coin Like checks you can cash

Faithful followers N What farmland in the Dust Bowl wasn't Reduced to rubble (2 wds.)

M Widely recognized

**Trails** 

2 Claim to have brought about (4,6,3)

1 Smoothie's line (4-2)

(3,9)4 "I never meant for that to happen!" (2,3,2,8)

3 Hobbyists with call signs

13 Hollow spot in a glacier (3,4) 14 Put away (6) 15 A 1913 ad campaign for them featured the

(5,1,4)

12 Predicaments (7)

headline "Hello Boys! Make Lots of Toys!" (7,4) 16 Thought long and hard (8)

5 Communal religious meal

fellowship (4.5)

7 Band whose 1983 debut

8 Drummer who wields

9 On the whole (2,7)

10 Pullman divided into

roomettes (7.3)

11 Take advantage of the

6 Brook no refusal (6)

All" (9)

meant to promote good

album was titled "Kill 'Em

soft-headed mallets (9)

pitcher's inattention, say

17 Spanish city visited in "The Sun Also Rises" (8) 18 Took a leisurely stroll (10) 19 Levitating island in

Tribeca Productions (2.4)21 Roald Dahl's eccentric factory owner (5)

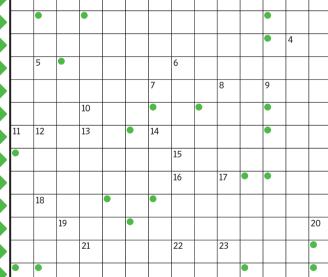
22 Lounge around the lobby?

20 Actor who co-founded

'Gulliver's Travels" (6)

(5,3)23 Distinction (6)

▶ Get the solutions to this week's Journal Weekend Puzzles in next Saturday's Wall Street Journal. Solve crosswords and acrostics online, get pointers on solving cryptic puzzles and discuss all of the puzzles online at WSJ.com/Puzzles.



## REVIEW



WEEKEND CONFIDENTIAL | EMILY BOBROW

# **Ed Catmull**

The Pixar cofounder says the key to sustaining success is recognizing that change never stops.

efore "Toy Story" came out in 1995, Pixar had hemorrhaging money. The studio seemed to be losing its gamble on using computer animation to create nuanced storytelling for the whole family. Suddenly it had a hit that critics loved and audiences rushed to see, making "Toy Story" the top-grossing film of the year. It felt like the culmination of nearly a lifetime of work for Ed Catmull, who co-founded Pixar Animation Studios with Steve Jobs and Alvy Ray Smith in 1986.

Still, he knew that Silicon Valley was full of cautionary tales about top firms that stumbled in the technological race and then disappeared. "Silicon Graphics, Sun Microsystems—most people don't even know about

them today. But was their failure inevitable? I don't think it was," says Catmull, 78, over video from his home in Marin County, where he lives with his wife Susan. He explains that the engineers at these firms often knew the market for their technology was changing, but "the leaders didn't listen to them." He wondered if it was possible to protect Pixar from the forces that ruin so many businesses.

"I saw my job at Pixar was actually to look at our process and find out why things worked or didn't work," Catmull says. He was determined to build not just a winning company but a "sustainable creative culture" by encouraging communication and removing hierarchies. The management principles he laid out in his bestselling 2014 book "Creativity, Inc.," cowritten with Amy Wallace, helped

make Pixar a seemingly irrepressible hit machine. After Disney purchased Pixar for \$7.4 billion in 2006, Catmull helped its animation studios get their groove back, overseeing such blockbusters as "Tangled," "Wreck-It Ralph" and "Frozen." By the time he retired in 2018, Pixar's films had won 15 Academy Awards and earned more than \$13 billion at the box office.

Today Pixar is in a different place. The Covid-19 pandemic sent three of the studio's movies—"Soul," "Luca" and "Turning Red"—straight to the Disney+ streaming service, which has lost nearly \$10 billion since launching in 2019. "Lightyear," the origin story of the space ranger from the Toy Story movies, bombed at the box office in 2022. The latest Pixar film, "Elemental," an animated rom-com released in June, had one

of the worst box-office debuts in the studio's history.

So it's an interesting time for Catmull to release a new edition of "Creativity, Inc.", with around 120 pages of new material. He explains that readers often thanked him for sharing his formula for surefire creative success, when in fact the book's lessons "aren't a template, they're a way of thinking." He suggests that Pixar's current struggles drive home how the work of fostering an atmosphere of candor, collaboration and problemsolving is never done.

"People think, OK, we've figured out how to do things, let's just get to that sweet spot. But there is no sweet spot," Catmull says. "Even when you get to a place where everything seems right, people come in

with new ideas, new technology, new expectations. What we need is a mindset that allows us to adapt when nothing is stable."

Growing up in a Mormon home in Salt Lake City, the oldest of five chil-

dren, Catmull "always felt, at a very early age, that I wanted to be the best in the world at something," he says. He loved to draw and wished he could crawl through his TV screen to join "The Wonderful World of Disney" each Sunday night. He recalls that he saw Albert Einstein and Walt Disney as "the two poles of creativity": Einstein explained what exists, while Disney mixed art and technology to invent something new.

Since Catmull sensed he lacked the talent to become a Disney animator, he chose to become a scientist instead. He studied physics and computer science at the University of Utah, then stuck around for a doctorate in computer science. He recalls sleeping on the lab floor to maximize computer time: "Computer science was such a brand new field, it was exactly where I wanted to be." His classmates at Utah included the future founders of Netscape and Adobe.

In his 20s, Catmull pioneered techniques for using computers to manipulate images. No one in Hollywood was interested until George Lucas used his "Star Wars" lucre to hire Catmull to helm his new computer division in 1979. At Lucasfilm, Catmull saw how hard it was to introduce new technology. His team created a special-effects computer that eased the film-editing process, but the studio's editors refused to use it. His division also began making its own short films in the 1980s, including some directed by John Lasseter, an animator who had lost his job at Disney after pitching a film with a computer-generated background. "John was a born dreamer," Catmull says of Lasseter, who went on to direct "Toy Story" and "Cars," among other Pixar hits.

When Lucas put his computer division up for sale in 1986, Steve Jobs emerged as a buyer, and Pixar was born. For the soft-spoken Catmull, Jobs's domineering nature was

initially hard to take. But Catmull, who dedicates his book to his late friend, worries that Jobs's legacy is misunderstood. "Steve underwent a dramatic transformation," he insists, explaining that Jobs's trials at Apple and NeXT made him more humble and empathetic. "He fired only two people from Pixar's board of directors, because they never disagreed with him, so he believed they weren't of any use to the company," says Catmull. "He wanted people to speak their mind. If he was wrong, he would change."

Pixar struggled for years, focusing first on hardware, then on computer animation. Jobs sunk \$54 million into the firm and considered selling it more than once. A 1991 deal with Disney to produce "Toy Story" offered a

'What we need is

a mindset that

allows us to

adapt when

nothing is stable.

lifeline, and Pixar went public on the back of the film's success in 1995. To-day nearly all animated films, Hollywood special effects and videogames build on Pixar's innovations in CGI. In 2019 Catmull and Pat Han-

rahan, a founding Pixar employee, shared a Turing Award—the so-called "Nobel Prize of computing"—for their foundational contributions to 3-D computer graphics.

As the studio grew, it became Catmull's job to ensure that employees continued to take risks and speak up about their ideas or concerns. He says that Pixar's films are so costly to make because of their lengthy iterative process. "Early on, all of our movies suck," he explains. It's only through "reworking, reworking and reworking again" that characters find their souls.

Catmull is quick to admit that even

the most vigilant and nimble leaders can miss big problems. He was blindsided when a rift between the studio's animators and production managers posed problems for the 1998 film "A Bug's Life," and he was surprised when women at the company complained about the dearth of female directors in 2014. "The answer is not to be free of bias but to realize that this is how our brain works, that there are things I can't see," he says today. In 2018, Lasseter left Pixar after accusations of workplace sexual misconduct, admitting to "missteps" and apologizing "to anyone who has ever been on the receiving end of an unwanted hug." "For all our verbiage about candor, some of our people hadn't felt safe to speak up," Catmull observes.

Failure, Catmull says, is a natural byproduct of innovation, and change is the only constant in every industry. He insists that there is still a market for original animated storytelling, even if the business of making and selling these films is in flux. "Machine learning, the changes from streaming—there are a lot of challenges coming right now," he says. "But you can't hold off what's coming any more than Kodak can go back to selling film. You just need to try to step into it to see where it goes."

MASTERPIECE | 'THE GATES OF HELL' (1880-1917), BY AUGUSTE RODIN

# **Eternal Truths in Bronze**

By Julia Fischer

THROUGHOUT HIS CAREER, Auguste Rodin (1840-1917) looked failure in the eye. Born into a poor family, Rodin applied to the École des Beaux-Arts—an essential stepping stone for aspiring artists in France in those days—three times and was rejected over and over. So he had to make his way on his own. His sculptures were often met with ridicule and rejection. Only in his late 30s did the Parisian's work spark genuine interest-both positive and negative. His breakthrough sculpture, "The Age of Bronze" (1875), a full-scale standing male nude, was so lifelike that critics accused Rodin of making a cast directly from the model.

"The Gates of Hell," widely considered Rodin's greatest work, also might be deemed a failure. In 1880, Rodin received a commission for a pair of doors featuring reliefs illustrating Dante's "Divine Comedy," intended for a new museum of decorative arts in Paris. The museum was never built, but Rodin kept working on "The Gates" until his death-nearly half his life-at which point they remained unfinished. The original plaster model resides at the Musée d'Orsay, but after 1917 several bronze casts were made and can be seen in mu-

seums around the world.

From afar, the doors are a grand, rectangular shape, 20 feet tall and 13 feet wide, with intricate forms twisting like vines in the margins of an illuminated manuscript. Up close, they are almost gruesome. A cacophony of human bodies courses through the work. Though some 180 human figures appear, more than 200 were at one point present. Rodin had as his models Lorenzo Ghiberti's "Gates of Paradise" (1425-52), the bronze doors to the baptistery in Florence, and Michelangelo's "The Last Judgment" (1535-41). But in the flowing, nonhierarchical portrayal of the contorted bodies of the damned. Rodin made something of his own. There is no end to the dynamic motion of the forms contained within the metal frame. In fact, they appear not to be contained. The souls reach out toward the viewer, pushing beyond the boundaries of the doors. On the upper left, for example, a male figure—"The Falling Man"—hangs upside down like a rock-climber, his muscular arm gripping the lintel. Below him lies a chaotic whirlwind from which he seems determined to escape.

And though Rodin eventually abandoned a direct representation of Dante's poem, the sculpture still shows the poet's influence. Faces and skulls peer out just above Ro-

din's most famous work: "The

Thinker." Originally intended to represent Dante himself, the figure later shed specificity, instead symbolizing contemplation.

Of all the people in the doors, "The Thinker" might be the most static in his pose, but even this piece of "The Gates" demonstrates Rodin's genius. As the sculptor said: "What makes my Thinker think is that he thinks not only with his brain, with his knitted brow, his distended nostrils and compressed lips, but with every muscle of his arms, back and legs, with his clenched fist and gripping toes." This physicality echoes in all the figures. Rodin's expressive manipulation of human anatomy is almost reminiscent of Goya's paintings. Instead of simply replicating a form he captures the visceral, full force of feeling behind the body. This both defines "The Gates" and explains their importance. Since the Renaissance, art had been a storytelling medium. But here, Rodin abandons the traditional narrative and makes the human form a "story" of its own, using pose and gesture alone

to express ideas and emotions—in this case, man's tragic fate. And so, as in Dante's hell, the



The doors are an arresting portrait of humanity.

damned interact with one another, both helping and harming. A man and a woman, Dante's Paolo and Francesca, cling to one another, desperate to hold on to the comfort of mutual company. ("The Kiss," originally part of the doors, was inspired by the tragic lovers too.) To the right of "The Thinker," panicked souls trample and push. Why the sculptor was heavily criticized during his time is clear: His work is

unflinchingly bold, sensual and stylized. For an eternity in which bodies are left behind, Rodin's hell is startlingly material.

The way that Rodin composed the "The Gates" broke with artistic convention as well. In places he recycles figures. The "Three Shades" at the top, for example, are casts of the same sculpture, anticipating Picasso's invention of assemblage—making sculpture out of pre-existing materials.

Rodin had a devout Catholic upbringing, and briefly joined a religious order after his beloved sister died. Beyond a fantastic depiction of a Dantean or even Christian netherworld, however, "The Gates" are a striking take on human suffering. Through his artistic rebellion, Rodin universalizes the tragedy he captures. The doors are

populated not by demons armed with pitchforks, but humans whose unfulfilled longings cause them eternal agony. Created at the turn of

the 19th and 20th centuries using sources from the Renaissance, "The Gates of Hell" nonetheless speak to us eloquently today. Admiring them on a fresh autumn day at Philadelphia's Rodin Museum, as I did nearly two years ago, one must still reckon with an internal hell.

Ms. Fischer is a Robert L. Bartley Fellow at the Journal.

| |ILADELPHIA MUSEUM OF ART



Long for This World Dan Neil on the extensive Grand Wagoneer L

FASHION | FOOD | DESIGN | TRAVEL | GEAR

# THE WALL STREET JOURNAL. \*\*\*\*

Cultivate a New Look Gardening gear is crossing over to street style **D3** 



Saturday/Sunday, August 5 - 6, 2023 | **D1** 



# Spice: The Final Frontier

It can intimidate even seasoned cooks, but these pro tips and simple no-oven recipes will help you add a pivotal dash of dazzle to peak summer produce.

merchants' market. Whether you head there by descending the stairs past Damascus Gate or navigating the labyrinth of stone-lined alleyways from the Holy Sepulchre, the aroma of this narrow marketplace is inescapable. Through domes punctuated with apertures for light and ventilation, the sun often dances upon the vivid goods on display. At first glance, the spice heaps shimmer like a collection of precious gemstones, an analogy that isn't far from historical reality. Once, spices were indeed worth more than gold.

In the kitchen they remain invaluable, particularly at this time of year, when the produce is so good you want to do the minimum to it, and anyway, you can't fathom turning on the oven. The best way to get the most out of good ingredients, simply prepared, is with a dash of spice, deftly applied.

This summer, I'm staying with family in Jerusalem, browsing the city's produce and spice markets to recreate for my Please turn to page D4

### Inside



**BRIGHT IDEA** 

Coriander makes

a classic

watermelon salad

pop. Find the

recipe on page D4.

THE WRONG WAY TO STRUT **YOUR STUFF** Pants to beat the battle of the bulge **D2** 



**ALL EYES ON SAN DIEGO** Notable locals on the best diversions for visitors—including a dog beach D6





**TRAIL AND ERROR** For hikers, lighter trail runners are edging out clunky boots. Here, pros and cons. D9

## STYLE & FASHION

By Jamie Waters

OOK DOWN. Be honest: Are your pants pockets near-bursting with earphones, keys, the latest iPhone Gigundo? If so, I'm afraid you're suffering from Bulging Pocket Syndrome (BPS). And the prognosis is fatally unattractive. No other style affliction ruins a guy's outfit so quickly (or makes walking so uncomfortable). "It comes across as clumsy and clunky," said New York stylist Michaela Murray, being kind.

Like a nasty tropical disease, BPS flourishes in summer, when men can't stash things in coats. I spent hours this July observing active cases on the New York City subway—male riders of all ages who'd jammed their side pockets with enough supplies for a survival course. Himalayan pack donkeys schlep smaller saddle bags.

Blame tight modern pants. Many styles are designed to carry, well, nothing (let alone ever-bigger-phones). I'd wager BPS has worsened in the past 15 years as men's pants cuts have clenched and contracted. When constrained, thighs push against items in pockets, causing hernias in the silhouette. And flimsy, stretchy fabrics reveal every item's contours, resulting in myriad code reds. These days, "You are noticing what's in a pocket a lot more," said Jonathan Daniel Pryce, a London photographer who has been shooting street style since 2007.

Cross-body bags could help, but many guys over 30 find them too young. "No solution is even close to satisfactory," said one magazine-editor friend, glumly. I think he's wrong. You can stylishly inoculate yourself against BPS, even in warm weather, with a bit of strategizing and the right pants. I know this as a former victim who's changed his ways-and who's spoken to a bunch of other rehabilitated pocket stuffers.

A no-duh starting point: Could you be carting less stuff? Nefaur Khandker, a Brooklyn tech designer obsessed with streamlining his daily load, fobbed off loyalty cards long ago. The 39-year-old keeps just three cards—credit, debit and ID—in a lean wallet. Declutter your key ring to further reduce heft, said Murray. That spare mailroom key can stay at home.

Do you proudly lug an iPhone the size of an iPad? Downsize it, said Khandker, who loves his puny iPhone 12 Mini. Though discontinued (for now), minis can still be found online. Khandker would scorn my chunky iPhone 13 Pro, but my new phone case might win him over. A tad bulkier than most. the Bellroy design (see right) features slots for three cards. Bye forever, wallet!

Jettison what you can. Then give your trousers a break and invest in other items that actually hold stuff. Japanese brand Porter-Yoshida & Co (see right) makes

# Lump It or Leave It

So many guys overstuff their pants pockets—spoiling any outfit. Here, tips to streamline your lower half and put this faux pas in your past.



FILL 'EM UP / CARRY YOUR ESSENTIALS, AND STAY SLEEK, WITH THESE FINDS



From left: Fatigue Pants, \$108, us.Pand.co; Miles Leon Cotton-Twill Shirt, \$275, and Porter-Yoshida & Co Tanker Bag, \$220, MrPorter.com; 3-Card Phone Case, \$79, Bellroy.com; Pull-On Pants, \$615, MargaretHowell.co.uk

cross-body bags that cling handsomely to cool dads' torsos. Or go for a shirt with generous chest pockets. If the fabric's an unflimsy Irish linen or sturdy cotton twill, those pockets will accommodate small items without sagging, said Greg Lellouche, founder of e-retailer No Man Walks Alone. Just stick to top pockets, advised Steve Kang, owner of BlackBlue, a menswear store in St. Paul, Minn. Pop a phone in the sort of lower pouch many shirts feature now, and "it weighs the garment down and affects the drape," he said.

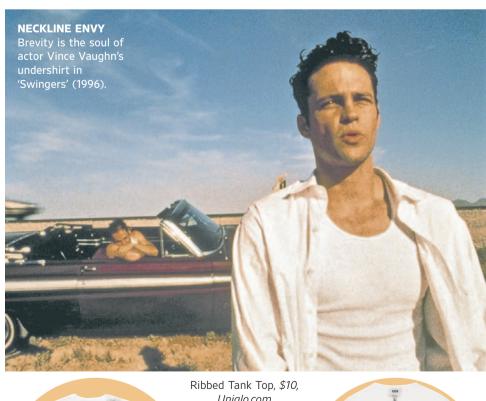
Which brings us to pants. Unless you're a free spirit or a tree sprite, you probably wear them, so find pairs whose pockets can host items while maintaining their composure. You needn't default to cargo pants overwhelmed with patch pockets. Look for wider legs and lower rises, said Murray. Both leave room for generous pockets (in lower-waisted pants, pockets tend to hang further down, where thighs are narrower).

Look for pants with wider legs and lower rises. And seek out robust natural fabrics, like cotton twill.

Seek out robust natural fabrics. In warmer months, think cotton twill; in winter, corduroy and moleskin, said Lellouche. His other tip: Keep an eye out for small pockets inside bigger ones; they keep stuff tucked closer to your leg. The outdoorsy pants by Portland, Ore., brand Earth\Studies, for instance, boast inner mesh secrets.

Always test pants' capacity before buying, as Pryce, the photographer, does. The 35-year-old favors the five-pocket fatigues by British brand P&Co (see far left). Svelte yet utilitarian, they save him when he goes out dancing. "In my group I'm like the mom," he said. "I have all the items: sanitizer, tissues, chewing gum, a lighter." But since his supply is spread between the sturdy pockets-including a slot hidden behind one knee—he doesn't feel "weighed down." Perry Khalil, a New York artist, 27, packs even more into his Carhartt workwear pants. Pencils, Sharpies, a comb, a pocketknife and more are divided between the seven compartments.

I've been saved from BPS by a pair of forest-green, "dropped pocket" Margaret Howell trousers. They have deeper pockets than Gordon Gekko. Those gullets swallow my phone, keys and tube of silicone scar gel without a ripple. "We don't skimp on pockets," said Howell, a British designer. "You don't want your hands to reach the bottom of the pocket before you've got them well sunk in." In her unconstraining, commodious but still sleek pants, my hands barely reach the bottom at all.





## **Under Considerations**

Is your idea of an undershirt just...a regular T-shirt? If so, we strongly encourage you to read this primer.

A BUTTON-UP over a white tee? That smartish-casualish uniform works for many offices and simplifies weekends the way a style no-brainer should. But it does call for a little thought: Whether your overshirt is fully or partly unbuttoned, the undershirt matters. Its neckline will be on show and saggy ones sadden us. And to avoid adding bunched-up bulk, the undershirt must be soft and slim. In short, not every basic tee is up for the job. Here's what you need to know.

Do I really need a special undershirt? Why can't I use a standard tee? To avoid looking unnecessarily thick and lumpy, you need a fine base layer that fits slimly, said Jeremy Kirkland, host of Blamo! fashion podcast. A classic, sturdy tee should be your last choice. "People love that Tshirt Jeremy Allen White [Carmy] wears in 'The Bear,' but that's way too thick for [an undershirt]," said Kirkland.

What material is best? Superfine cotton. Kirkland favors Pima (a variety with extralong fibers). Softer than regular cotton, Pima breathes well and drapes nicely, he said, so it won't bunch up under your shirt. He wears 3sixteen's designs (see far left).

Since this is a base layer, should I try any high-tech moisture-wicking, sweatzapping blends? Absolutely not. Avoid clingy, sporty fabrics. You don't want it to look like you chucked a shirt over your gym top. Stretchy undershirts, said Kirkland, also risk evoking "male Spanx" (which, he clarified, are fine to wear, but not to display).

Tank or tee? A tee is the safer. works-for-everyone choice. But if you're feeling bold and flirty, consider a ribbed tank top: It exudes masculinity and generates more intrigue than a tee, said Dan Hakimi, an attorney and tank fan in Great Neck, N.Y. Hakimi, 33, likes to mix the ribbing with different shirts to play with textures, and wears a necklace that "hits the tank's neckline: I feel like those lines enhance my

chest." Inherently sexy, a tank :

also partners libidinously with the perforated and semisheer shirts that are trending for younger guys. It matches those shirts' provocative spirit, said Steve Shuck, coowner of Austin men's store Stag. Just remember that a tank should always be snugdon't size up.

What else do I need to think about? The neckline, so prominent, matters big time on any undershirt. It better not wilt or sag. A tee's collar should be fairly high and tight, "but not like it's choking you," said Christopher Echevarria, founder of men's brand Blackstock & Weber. And no tee or tank hem should hang below the overshirt—that's just sloppy, he said. So choose shorter styles (Echevarria gets his tailored so they "hit right at the belt") or tuck your undershirt in.

How much should I fork out? Up to \$50 for a Pima tee; considerably less for a tank. Hakimi buys Goodfellow & Co from Target (a 4-pack costs \$17). —Hamish Anderson

# Blue and Improved

Ignore its bad rap: Head-to-toe denim can be perfectly polished—if you do it right

By TODD PLUMMER

**ODEL** Emily Ratajkowski is doing it. So is actor Austin Butler. Canadian tuxedos—aka double-denim outfits-have recently surfaced on Hollywood types and the runways of brands such as Coach, Alaïa and Prada. As celebrities and designers revisit this look, a decades-old question rears its head: Are Canadian tuxedos tacky?

It's a curious query, considering celebrities ranging from Elvis and Madonna to actress Dakota Johnson and multi-hyphenate Pharrell Williams have all earned plaudits for putting their own spins on the look. And it has respectable roots-

(See: Justin Timberlake and Britney Spears at the 2001 American Music Awards). Pairing incompatible denims is equally embarrassing.

Deployed strategically, double-denim snazzily "communicates casual sophistication," said Levine. Some of New York stylist Joanna Lovering's clients-mainly those working in tech—wear the look to the office, while others save it for casual Fridays. With adroit styling, "it can definitely be worn in a more conservative environment," she said. Here, expert advice on mastering doubledenim for men and women.

#### Keep it Real

Opt for 100% cotton "legit" jeans, said Levine, adding that stretchy, synthetic-infused denim can "pucker in weird

#### 'So many people are afraid of the Canadian tuxedo, but I love it. It's a great conversation starter.

miners, ranchers, welders and other laborers have relied on full denim for over a century. Even Vogue declared the combo a viable vacation look in 1935.

The outfit's unchic associations go back at least as far as 1951 when American singer and actor Bing Crosby, exhaustively bedecked in denim, was allegedly refused entry to a Vancouver hotel on account of his ensemble. (Levi's later made him an actual tuxedo out of denim, hence the moniker "Canadian tuxedo.")

Because of double-denim's workwear roots, donning the latest overwrought designer version to your accounting firm or family reunion can appear poseur-ish and costumey. Warned New York fashion designer Aaron Levine, who formerly designed jeans for Abercrombie & Fitch: "Do [it] too literally and you'll look like a clown."

ways" and "not look authentic." Denim-on-denim's appeal is its timelessness, so trendy jeans will feel off. "The idea is to keep the whole outfit looking genuine, like you've been wearing it for a long time," said Levine. His tip: You can't miss with Levi's 501s-especially broken-in ones.

To Match or Not to Match? Jeans and a matching top or jacket can connote "Fashion" with a capital F, said Lovering. But only if you know what you're doing. Beginners who attempt matching "run the risk of looking really lame," like they went to Party City and bought a Wild West costume.

In New York stylist Micaela Erlanger's view, women have better luck with matching (see Ratajkowski above). "It has something to do with the monochromatic trend that's been popping in and out," she posited. "It just works."

back Shoes, \$395, No6Store.com; Tank Top, \$39, Cos.com; Mid-Rise Jeans, \$450, NiliLotan.com For men (or anyone rejecting the match game), Erlanger advocates a near color match and pieces with consistent fabrication. So if you're going with raw denim jeans, opt for a thicker, darkbut-not-identically-dark

> **Accessories Are Everything** Sporting a single material creates a blank slate, so accessories are going to pop. Brett Haynie, co-owner of the Norumbega hotel in Camden, Maine, adds polish with classic accouterments, such as his

shirt. If faded, worn-in jeans

are your jam, opt for a top in

similarly light, soft denim.

Aimé Leon Dore penny loafers and Cartier Tank watch. An Oklahoma native, Haynie, 33, knows how quickly this look can go cartoonishly Western. Avoid turquoise or too-large belt buckles, he said.

Erlanger proposes women create sartorial tension by combining masculine denim with feminine accessories. "It looks great with a bitchy, pointy stiletto," she said.

Key to making denim-ondenim appear stylish for both women and men, added Erlanger, is "introducing other textures through accessories." If you're wearing, say, a Tshirt under your denim jacket or button-up, you can introduce contrast with ribbed, waffled or smooth cotton, but stick with white or navy so it doesn't steal the show.

Fit Jeans, \$70, Levi.com; Cotton T-shirt, \$37, JCrew.com;

Suede Penny Loafers, \$590, us.OfficineCreative.store

#### Oh, the Places It'll Go

"The look has a certain confidence that can almost take you anywhere," said Erlanger. That could mean a movie date, a brunch, even the office-provided you don't work for a strict suit-and-tie establishment. Lovering suggests tossing a non-denim blazer over your Canadian tux to make it more formal (see Butler, above).

Full-denim is a favorite ca-

immigration attorney Olivia Cheung, 34. At the week's end, she combines her favorite flare jeans with a denim Ralph Lauren button-down, a leather belt and a simple gold necklace. "The look is a great conversation starter," said Cheung. "So many people are afraid of the Canadian tuxedo, but I love it." It makes her nostalgic for the 2000s, which

sual-Friday look for New York

are "cool again," she said. Even if your colleagues have a "more conservative mind-set," said Lovering, "you can probably get away with denim. But not denim with holes in it."

Asymmetrical

seam details add

fashion-forward

flair to these

denim overalls.

Ideal for getting a

latte or (if you

insist) planting

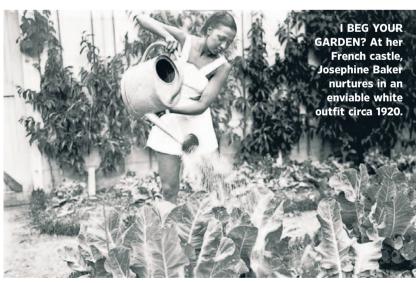
perennials. Ganni Overalls, \$495, Revolve.com



**Jean Living** / Everything you'll need for a double-denim look—including some celebrity inspiration



For \$5 you can have your initials stitched onto these sunny socks' legs. Not a bonus if vou're tending to seedlings, but it will impress your city pals. \$23, Falke.com



## The Garments of Earthly Delight

City-dwelling women who've never touched a trowel are dressing like gardeners. Some of these chic items will stand up to soil—others definitely won't.



Designed to match the drawstring shorts at right, this cotton popover says "I don't like dirt, but I can keep an orchid alive." \$138,

BuckMason.com

Rendered in squishy

straw, this packable hat

will stave off sun in out-

door cafes, among snap-

dragons or on a (yes!)

desolate beach. \$260,

EricJavits.com

Suitable for rainy-day book shopping or soggy tuliptending, these flecked clogs in recycled plastic and hemp are the sophisticated woman's answer to Crocs. \$58, Gardenheir.com



We don't recommend donning this crisp, cream cotton jacket around dirt. But those pockets could certainly hold a spade (or theater tickets). Toteme Jacket, \$680, Farfetch.com

# EATING & DRINKING



#### **Grilled Summer Squash With Garlic Yogurt**

In this refreshing dish, floral sumac and mint balance the intensity of the garlicky yogurt. **Total Time** 20 minutes Serves 4-6

For the sauce: 1½ cups Greek yogurt 1 small clove garlic,

crushed 1/2 teaspoon salt

For the squash: 4-6 medium or 8 small koosa (sometimes

called Mexican gray or Korean squash), or other summer squash Olive oil, for brushing

½ teaspoon sumac ½ teaspoon crushed dried mint

½ teaspoon Aleppo

For the garnish:

pepper ½ cup lightly toasted mixed nuts such as pine nuts, walnuts and almonds

Small handful roughly torn fresh herbs such as dill, parsley or cilantro

**1.** Make the yogurt sauce: In a bowl, combine all ingredients and mix to incorporate.

2. Heat a grill pan over medium heat. Slice each squash in half lengthwise. If the squash are quite fat, slice them into thirds, and if they are more than 6 inches long, half crosswise too. Brush generously with olive oil and sprinkle with salt.

3. Place sliced squash, cut-side down, on grill pan and cook undisturbed until dark grill marks appear, 4-5 minutes. Flip and cook until skin side is also charred, 5 minutes more. Remove finished pieces and set aside. Alternatively, if you are already firing up your grill, you can grill the squash until it has char marks on both sides. 4. To assemble, spoon yogurt sauce over a serving platter. Arrange grilled squash on top Sprinkle with sumac, dried mint, pepper, toasted nuts and herbs.

# The Ultimate Summer Spice Rack

Continued from page D1children the flavorful dishes of my own childhood. Since I was a little girl, my mother has been purchasing her spices whole and in bulk from the Al-Qaissi spice shop in Suq El-Attarine, which has been trading in spice since 1940. At home, she toasts and grinds them as needed for each dish.

In the U.S., where I live today, the dizzying array of affordable spices can intimidate even the most seasoned of cooks. But it would be a shame to settle for boring meals simply because you don't know where to begin. Spices unlock culinary possibilities like no other ingredient. An elaborate pantry isn't necessary to enhance your cooking: Just a handful of spices, used in thoughtful combinations, can elevate dishes from simple to sublime.

#### Which Spices Do I Need?

Niki Segnit, author of "The Flavor Thesaurus," advises starting with basics. "Getting to know spices in simple combinations, you can really get to know the flavor," she told me. I regularly use her book and its sequel, "The Flavor Thesaurus: More Flavors," both dedicated to the delicate art of pairing flavors, to guide my cooking and recipe development.

Cookbooks are great resources,

but nothing beats actually using spices. Once you understand a bit more about the notes they impart—savory, floral, nutty, fiery—

you can spice with confidence. By keeping just a few spices in your pantry you can cook many delicious dishes. My background is Arab and Middle Eastern, and the recipes I've included here reflect that in their spicing. Allspice, cinnamon, nutmeg and black pepper

#### You can cook many delicious dishes with just a few key spices.

are essentials for most meat-based dishes. Coriander and cumin are indispensable for dishes with onion and fish, not only for their digestive properties but for their citrusy notes that balance sharp flavors. Cardamom, cloves, caraway, aniseed and fennel each have their place, too, often in sweeter applications. Other flavor makers, as I call them—such as sumac, chile flakes and dried herbs—can really bring

#### Where Do Spices **Come From?**

While these kitchen staples are easily accessible today, they

Watermelon and Halloumi With Caramelized **Coriander Seeds Total Time 10** 

minutes Serves 4

3 cups bite-size cubes of fresh watermelon 8 ounces halloumi cheese or fresh

buffalo mozzarella 2 tablespoons extravirgin olive oil, plus more to finish

1 tablespoon coriander seeds

1 tablespoon honey ½ teaspoon dried

mint 2 tablespoons

ground pistachios 1 teaspoon freshly grated lime zest Fleur de sel or other flaky salt

1. Arrange watermelon cubes on a serving platter or bowl. Slice halloumi or tear mozzarella into bite-size pieces and scatter on top. 2. Add oil to a small saucepan over low heat. Add coriander

and toast just until

fragrant, about 1

minute. Add honey

and mint, swirl to combine, then remove from heat. 3. Scatter pistachios and lime zest over watermelon and sprinkle with flaky salt. Drizzle with the olive oil-coriander mixture. Serve immediately.

weren't always. At their peak of value, spices played a crucial role in ancient trade, sparked conflicts and propelled voyages of exploration. Spices were some of the first items to cross the globe via trade networks and the reason the sea routes from the Far East to the West were called the Spice Routes.

Throughout the Middle Ages, the Arab world served as a vibrant trade hub for fragrant resins, gums and spices. The predominantly Muslim merchants who dominated this trade cleverly concealed the true origins of the spices they sold, weaving enchanting tales to discourage potential competitors.

#### How Can I Get the Best and **Freshest Spices?**

Again, you really don't need to stock an extravagant spice cupboard. Indeed, by editing your collection down to a limited number of essentials (see "Capsule Collection," right), you can be sure to keep them in constant circulation and replace them regularly.

When it comes to shopping, storing and handling, it's worth keeping the following rules of thumb in mind:

#### Source your spices from reputable

vendors. Many spices sold in the U.S. undergo irradiation, which, while effective in removing impurities, is also believed to diminish some of the spices' nutrients and flavors. Look for spices labeled organic, which cannot be irradiated per the USDA.

#### Whole spices have a longer shelf

life than ground ones, making them far more cost effective. Grinding spices at home might seem daunting but is actually easy; you can do it in a coffee grinder.

#### Toasting is a matter of taste. It

comes down to personal preference. Toasting enhances certain flavor notes more than others. For instance, untoasted coriander has a floral and fruity profile, ideal for sweets. Once toasted, it develops a nutty flavor that pairs perfectly with cumin in savory dishes.

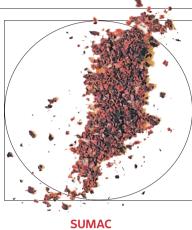
Find more well-seasoned summer recipes at WSJ.com/Food.

#### CAPSULE COLLECTION

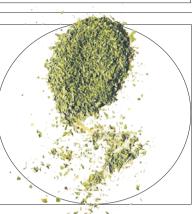
8 essential spices, endless flavor combinations

You don't need to stock dozens of spices at home, but you do want to make sure the spices you have are fresh and high-quality. Frontier Co-Op and Simply Organic brands are widely available at Whole Foods and other supermarkets, and online options have proliferated in recent vears. For more-niche items. Mountain Rose Herbs is an excellent option. And Burlap and Barrel offers a large selection of organic, nonirradiated and single-origin spices

These eight spices are all you really need in your summer spice rack. Mix and match endlessly to punch up, brighten and otherwise enhance both sweet and savory recipes, bringing depth and complexity to even the simplest meals.



A wild flowering bush with very sour berries is the source of this vibrant spice. Those berries are dried, ground, then sifted to obtain what's recognized as sumac spice across the Arab and Mediterranean world. Its tart flavor and floral aroma enliven salads (sprinkled on top or in the dressing), meat marinades, soups or any dish that needs a bright pop.



#### DRIED MINT

The grassy and bright, even sweet flavor of fresh mint intensifies and becomes more earthy and herbaceous when it is dried. A spice-rack stalwart, dried mint works beautifully with all kinds of salads and sprinkled on soups, especially when paired with a squeeze of lemon and some Aleppo pepper.



#### **CORIANDER**

rusy, coriander (aka cilantro) name that produces them. der pairs beautifully with berries and watermelon.



niment to fish. In a dish such as

mujadara, which has lentils and

copious onions, cumin is prized

for its digestive properties as

much as its flavor. It is also the

natural partner to coriander in

many recipes, from falafel to

dukkah, and across cuisines.

from Indian to Thai.

### Floral and somewhat cit-

seeds taste completely different from the herb of the same Toasting really amplifies the sweetness. And while coriancumin in savory dishes, the former truly shines in sweet recipes, or paired with fruits such as apples, oranges, blue-



The most widely used spice in

the world, black pepper has a

knack for enhancing other spices

with its pungency. Pepper variet-

ies are often called by the name

of their region of origin (e.g. Telli-

cherry or Malabar), and larger

peppercorns tend to be stronger

in flavor; you may want to try a

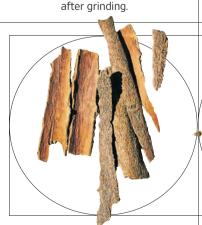
few before you settle on a favor-

ite. Never buy this spice ground:

Its aroma quickly dissipates

# **ALEPPO PEPPER**

This chile, ground into flakes, is named for the region in Syria from which it hails. It has a mild but bright heat, and subtly sweet and salty notes. The conflict in Syria has made actual Aleppo-grown pepper difficult to come by, but the spice is still produced in Turkey, where it is known as pul biber. It is ideal for flavoring ground meats and stews or sprinkling on pastas, toasts, salads and soups.



#### **CINNAMON**

When you buy cinnamon, pay attention to whether you're getting Ceylon cinnamon, which comes in thin, flaky scrolls, or cassia. identifiable by its thicker. bark-like quills. Ceylon cinnamon is more delicate, cassia stronger, more common and more affordable. Both work well in sweets. A key element in Arab spice blends alongside allspice and black pepper, cinnamon is also used in meaty broths.



With its licorice-like flavor, aniseed often accompanies similarly flavored fennel seed in Arab sweets such as date cookies and dried fig preserves. In Chinese and Indian cuisines, aniseed also features in savory dishes. This naturally sweet spice can also be used as a digestive: Simply steep it in boiling water for a few minutes for a soothing evening drink, especially after a day of indulging.



# Wines Your Host Really Wants You to Bring



**SUMMER IS** houseguest season, and if you're a guest who wants a repeat invitation, you might want to consider care-

fully which bottles to bring. I've been both a guest and a host in the summer, and the wines I bring to friends' homes are usually around the same caliber as the wines they bring to mine—though I tend to bring (a lot) more Champagne. The friends who don't bring wine when they visit me say they're afraid their wine won't be "good enough," which raises the question: What bottle is appropriate to bring when you're staying overnight—or for a week? I asked retailers in resort locations, figuring they field that question frequently. They shared some good recommendations as well as interesting insights.

One of the first considerations is, of course, price. According to Keith St. Lawrence, a sales and inventory specialist at the Bottle Shop in the seaside town of Spring Lake, N.J., a house guest shouldn't bring a wine that's too cheap. "Some people will look up the price of the wine," he said. (I'll confess that I've engaged in price-Googling myself.)

St. Lawrence suggested house guests should plan to spend between \$30 and \$60, and choose a wine hosts are likely to recognize. For example, he recommended the 2022 Domaine Bailly-Reverdy Sancerre La Mercy-Dieu (\$30), reasoning that Sancerre is always a hit and the wine is from a terrific producer. On his advice I purchased the bottle and thought it was terrific—a dazzling, minerally, layered white I'd be happy to receive as a gift.

Some guests prefer to send gift bottles to their hosts be-

fore they arrive, noted Alanna Lucas, proprietor of Nantucket Wine & Spirits of Nantucket, Mass. Lucas regularly selects cases or half cases of wines ranging from \$20 to \$60 a bottle on behalf of guests at Nantucket homes. Her choices might include chillable, light-bodied reds like Cabernet Franc from the Loire Valley or Beaujolais from producers like Jean Foillard and Anne-Sophie Dubois,

and plenty of bottles of rosé. Lucas noted that the rosé she sends won't always be Provençal. "It might be a rosé Lambrusco or a rosato from Piedmont." She named Rosabella, a wine from top Piedmont producer G.D. Vajra,

light and mineral" character, perfect for summer. I couldn't find his pick, the Aligoté of Michel Sarrazin, where I live, but I did find a few other Aligotés, including the brilliant and rather rich 2020 Anne Boisson Bourgogne Aligoté (\$35), from an oldvine vineyard in the village of Meursault.

When I asked Michael Cinque at Amagansett Wines & Spirits, in the Hamptons in New York state, what wines he recommends to house guests, he sent me a long list. It included Pinot Noir, Beaujolais, Chablis and a few local wines from Long Island, as well as Champagne and Prosecco.

A house guest shouldn't bring a wine that's too cheap. (I'll confess that I've engaged in price-Googling myself.)

noting that the flowers on the label add to its appeal.

I loved her suggestion, and I was happy to find a bottle of the 2022 G.D. Vajra Rosabella (\$22) at a wine shop in New York. It's a bright, juicy lively blend of mostly Nebbiolo, the star red grape of Piedmont and an ideal wine for the summer months.

Neil Loomis, wine director of Bin 22 in Jackson Hole, Wyo., is also a fan of Piedmontese wines as gifts. He recommends Rosato and Gavi—in particular, the La Scolca Gavi dei Gavi Black Label. He's also keen on Bourgogne Aligoté. Aligoté has long been planted in Burgundy, though Chardonnay is the much better-known and more widely planted white grape of that region. Loomis likes Aligoté's "fresh,

I was particularly intrigued by his Prosecco choice, the Bisol "Crede," a wine I hadn't tasted in a very long time. The 2021 Bisol Crede Prosecco (\$20) is the rare vintage-dated Prosecco made from the native Glera grape, plus a bit of Chardonnay and Pinot Noir. It straddles the line between a straightforward bright refreshing sparkler and a more substantial, textured wine.

Kim Prokoshyn, wine buyer at Dunn & Sons Wine of Yarmouth Port, Mass., is a fan of Champagne as a gift, though she said many of her customers want to bring a red—usually a familiar wine such as California Cabernet or Pinot Noir. Prokoshyn will make recommendations in those two categories, but she urges guests to try less-well-known options too, such as the Andrew Will Ciel de Cheval red blend from Washington state, or the 2015 Bodegas Remelluri Rioja Reserva (\$50). Of the latter she said, "It has some age but it still has depth and richness." I bought a bottle at a wine shop in New York and can vouch for its timeless appeal. It was a lush, rich, layered wine whose tannins had been softened by time in the bottle.

Several times, retailers I contacted discussed whether or not a guest should "expect" to drink the gift wine with the host. "It's a hot topic," Prokoshyn said with a laugh. It happened to be top

of mind for me since very recently, two different guests, on two different occasions, brought wines they wanted me to open and drink with them. Neither had actually

purchased the wines but had

received them as gifts from someone else.

One house guest brought a bottle of 2019 Château Pichon Longueville Reserve de Comtesse (about \$50), the Cabernet-dominant second growth of Château Pichon Lalande in Pauillac, Bordeaux. Although we were dining at a BYO seafood restaurant that night, I felt it would be churlish not to bring my friend's bottle along as he wished. The wine was elegant, polished and surprisingly accessible for its youth, although a slightly tannic red wasn't a great match with the seafood.

The second house guest brought two bottles: the 2020 M. Chapoutier La Mordorée Côte Rotie and the 2020 Château Montelena Napa Valley Chardonnay. The former, a sought-after, rather pricey small-production Syrah from the northern Rhône (current vintage around \$130), was perhaps a bit too elevated for the burgers on the grill we served, but the simplicity of the fare allowed this reddensely layered with minerals, earth and tobacco—to shine. We didn't open the Château Montelena Chardonnay, but I promised my friend we'd drink it with him upon his next visit.

While I felt it would have been rude not to open the bottles my friends brought and clearly wanted to drink, I found another perspective in an interview with English butler Dan Prattley. He said it was inadvisable to open gift wines with the guests who brought them, as it implies that the host does not have sufficient wine. He suggested alternatives to opening the bottles, including the line: "I'll put this with the other gifts and really look forward to opening it another time." Maybe I'll try that. In any case, I'll open a few bottles before my friends arrive, just so they know we'll have plenty of wine.

Email Lettie at wine@wsj.com.

**OENOFILE** / 5 WINES TO PLEASE ANY HOST



2021 Bisol Crede Prosecco di Valdobbiadene Supe-

and pleasingly fruity, with lovely aromas of citrus and pear, and a bit more body and presence than a basic Prosecco. Terrific aperitif.

2022 G.D. Vaira Rosabella \$22 Predominantly Nebbiolo, the grape of the great Barolo wines of Piedmont, the Rosabella is pure pink charm in a glass. Delightfully fruity and fresh with a terrific balancing acidity.



2015 Bodegas Remelluri Rioia Reserva \$50 From one of the great Rioja estates, vinified in stainless

steel, aged two years in oak and five in bottle. The 2015 is a standout: powerful but elegant.



2020 Anne Boisson Bourgogne Aligoté \$35 This terrific Aligoté has a bit of a cult following. Anne Boisson has crafted a wonderfully rich, beautifully

balanced wine from an

old-vine vineyard.



2022 Domaine **Bailly-Reverdy Sancerre La** Mercy-Dieu \$30 This full-bodied,

terrifically minerally, even rather flinty white, produced from a range of vineyard plots, is a textbook example of well-made Sancerre.



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# ADVENTURE & TRAVEL





**JOURNAL CONCIERGE** / AN INSIDER'S GUIDE

# San Diego

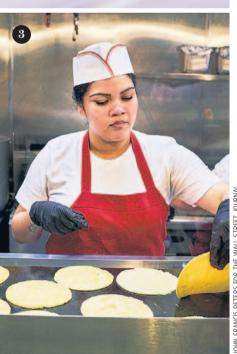
Yes, the city offers theme parks, beaches and a world-class zoo. But for its coolest hot spots, heed these four in-the-know locals.

LOOK BEYOND San Diego's natural blessings-sunshine, ocean, plentiful tacos-and you'll see what draws people to this southern California city: the iconic midcentury architecture, a burgeoning cultural scene and noteworthy restaurants galore. One standout, Kinme, gets kudos from its culinary peers. Chef at local favorite Vaga, Claudette Zepeda, said of the Bankers Hill hot spot, "You sit down for a 10-course omakase at Kinme and feel like you're watching three chefs perform a show and all of your senses

are involved as supporting cast members." The year-round mild weather means

any season works in your favor. When the heat is on, the Cabrillo tide pools get a fair share of barefoot traffic, as do the small-batch ice cream shops (a scoop of Stella Jean's Mango Enchilada, anyone?). On the rare overcast day, ogle the colorful and iconic murals in Chicano Park, or book a mini-tasting of teas at Paru, a calming break before a stroll on the Coronado promenade at sunset. —Sara Clemence





COAST WITH THE MOST Clockwise from top: Visitors throng the tidepools at Cabrillo National Monument; a scoop of Ube + Pandesal Toffee ice cream at Stella Jean's; perfecting the tortillas at the Taco Stand; views of the Rady Shell at Jacobs Park during the Tchaikovsky X Drake concert in July; a cool canine at Ocean Beach's Dog Beach; the art murals in Chicano Park.





PURE SCIENCE / Salk Institute for Biological

**Studies** Entering the open-air concrete and

stitution designed by architect Louis Kahn

self-guided or docent-led tour. Salk.edu

ANY DAY / The Taco Stand [3] You can't

are here. You're welcome. LetsTaco.com

visit without having fish tacos. My favorites

SEA IT / Museum of Contemporary Art San

Diego My favorite piece is titled "1° 2° 3° 4°,"

glass from larger windows, making a window

view of the endless oceanscape outside, and

the very idea of what art can be. McaSD.org

**NOAH THIS / Ark Antiques** Proceeds from

this nonprofit's sales have funded grants to

bird sanctuaries and more. ArkAntiques.org

by California artist Robert Irwin. In an up-

stairs gallery, he removed two squares of

within the windows. You'll reconsider the

(the subject of the documentary "My Archi-

tect") is something you'll never forget. Plan a

wood campus of this world-class scientific in-

Executive director and CEO of the Mingei International Museum

THE FOLK-ART MAVEN

Jessica Hanson York

BIG WOOF / Ocean Beach Dog Beach [5] You can't be in a bad mood here—not with so many happy dogs! Walk the shoreline along the channel and toward the lagoon. There's plenty for birders and surf-watchers to enjoy, too. OceanBeachSanDiego.com

MAGIC TRICK / Queen Califia's Magical Circle Plan ahead for a docent-led tour of artist Niki de Saint Phalle's large-scale sculptural environment, and let the mosaic-snake wall lead you into an enchanted garden. Escondido.org

**STEEP & SIP / Paru Tea** Founders Lani Gobaleza and Amy Truong's La Jolla-area shop offers loose-leaf teas, matcha and tisanes from Southeast Asia. Reserve a mini-tasting to try their custom blends. ParuTeaBar.com

MARINE MARVELS / Cabrillo Tidepools [1] Check the tide charts and get your feet wet at this intertidal zone, as you search for sea animals such as crabs, anemones, urchins, sea stars, maybe even an octopus. Nps.gov

THE CONDUCTOR Rafael Payare Music director of the San Diego Symphony



FLY AWAY / Torrey Pines Gliderport | do not do paragliding, but I like to sit along the cliffs and watch the paragliders. It's peaceful and spectacular. FlyTorrey.com

**SPICE IT UP / Callie** San Diego native Travis Swikard's dishes [like Tomato Fattoush and Aleppo Chicken] lean into Mediterranean and Californian infusions. CallieSD.com

TUNE IN / Rady Shell at Jacobs Park [4] Not only is this a beautiful park to work out in, but it's an amazing concert venue, where we've been doing most of our concerts. The dramatic sunsets seem to happen every day, just behind the stage. The Shell.org

WHAT A CATCH! / El Pescador This La Jolla seafood market has amazing clam chowder and ceviche. ElPescadorFishMarket.com

STROLL IT / Glorietta Bay Park Promenade My family likes the walking path along the east side of Coronado Island. Coronado.Ca.us

THE CHEF Claudette Zepeda Culinary director of Vaga, a James Beard semifinalist, Top Chef/

Iron Chef contender



BRAVO, BUNS! / Hommage Bakehouse Justin Gaspar's Ube Bibingka custard buns blew me away. The flan-like caramel shell covers a milk bun. HommageBakehouse.com

**CONE HEADS** / Stella Jean's Ice Cream [2] Every flavor Gan Suebsarakham dreams up is inspired by his childhood, travels and cravings—that's the secret to success in food creation. My favorite flavors now include Guava Cream Cheese, Milk + Cookies, and S'mores. StellaJeans.com

**EIGHT IS ENOUGH / Casa Ocho** Find chef Ana Ochoa and her "Mexa Grub" inside the La Jolla Open Aire Market. Our tip: La Torta del Ocho-a toasted telera roll with chilaquiles, beans, cheese, soyrizo, chipotle aioli and cilantro crema. EatCasaOcho.com

LET'S CHILL / Crudo Cevicheria & Raw **Bar** My favorite dish from Miguel Gomez? The chilled raw fish tiradito mixto with its XO sauce. CrudoCevicheria.com



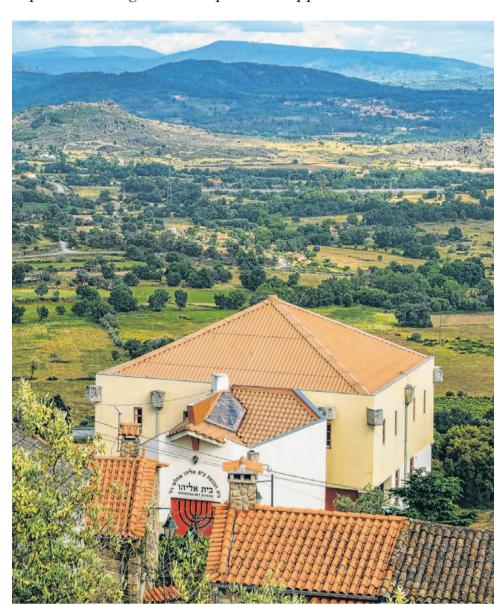
#### PLUS, DON'T MISS...

Chicano Park [6] This National Historic Landmark in Logan Heights showcases over 100 murals by Mexican American artists, thanks to activists who championed it for years. ChicanoParkMuseum.org / Little Italy Mercato Farmers' Market On Wednesday and Saturday, find the usual (flowers, eggs, honey) and unusual (uni, fermented lemonade, seamoss gels). SanDiegoMarkets.com / Palihotel San Diego This 122-room hotel has a whimsical, preppy style. PaliSociety.com / Mabel's Gone Fishing Think Iberian tapas bars: This Michelin "new discovery" in North Park serves up swordfish schnitzel with dandelion greens and clams with country ham. MabelsGoneFishing.com / Lafayette Hotel & Swim Club The revamp of this 1940s getaway makes it glam again; a mescal bar is one of several drinking and grazing options. LafayetteHotelSD.com

### **ADVENTURE & TRAVEL**

# Rites of Passage

A father and daughter explore Portugal's Jewish Route picturesque towns where the practice of Judaism was secretly kept alive during a historic period of oppression



FAITHFUL FOREVER The Beit Eliahu Synagogue with views of the Castelo Branco valley

By JOHN KRICH

N THE REMOTE hilltown of Belmonte in central Portugal, Jews were once forced to practice their religion in secrecy. After the Inquisition of 1497, a decree banned Judaism in Portugal and, while some converted and became "New Christians," attending Catholic Mass on Sundays, they privately observed the Sabbath at home.

There was nothing clandestine, however, about my arrival at the Belmonte train station with my 9-year-old daughter, Joana. Finding no taxis, we rather conspicuously got an honorary police car escort to the town center, now

dominated by a giant civic Menorah. Our mission: to explore the Rede das Judiarias-aka the Jewish Routea network of close to 40 Jewish quarters spread across Portugal's border with Spain.

I'm a secular Jew who moved to Portugal after mar rying my Portuguese Catholic wife, but I'd never expected it would be the place to explore my own roots.

Interest in the Rede das Judiarias first blossomed in 2011, when a tourism official in the Serra da Estrela mountains wanted to honor the lost heritage of these religious communities and stimulate tourism. With some digging, the history and the rites that had been passed down orally by elder "converso" women (who'd converted to Catholicism but kept the Jewish faith alive) came to light. The network began to link the excavated ruins of synagogues, as well as newly built centers and museums, in places ranging from big cities such as Lisbon to lesser known, tiny castle settlements, such as Alentejo's Monsaraz, that held Jewish enclaves.

On the Friday after we got settled, our first stop was Belmonte's Jewish Museum, which opened in 2005. My daughter then led our pilgrimage to the Beit Eliahu Synagogue, established in 1996, on a steep bluff.

We'd been told the 40family community there still maintained a lifestyle of secrecy, but we got a warm welcome from the rabbi, who blessed Joana with the Hebrew name of Yohana. Sent to the balcony where the women sat, she stuck it out through an hour of incantations so joyously sincere that I left feeling grateful, even though I couldn't share their deep faith. Our prayers for a Shabbat dinner were answered when the leader of a French-Tunisian tour group invited us to the Sinai Hotel, where we broke

challah bread together and feasted on chicken and super-sweet puddings.

Nothing prepared me for Castelo Rodrigo, a medieval village we reached the next day after a 40-minute drive northwest with our guide/ driver, Arieh, in his beat-up Skoda. With its flowering almond trees and vendors selling nuts and black olives, Castelo Rodrigo offers much to explore. Ancient stately houses line a warren of sloping streets leading to a crumbling palace, once the

I reflected on how the Jewish Route had led us to Europe's unspoiled stretches.

residence of the ruling Spanish governor in the 16th century. Farther on, the cobblestone Jewish quarter sits by a spring-fed pool with underwater steps, indicating that it might have been a mikvah, or ritual bath. Two doorways pierce the ancient propped-up wall guarding it: one Gothic, one Moorish.

The fleeting hour we spent at Castelo Rodrigo, a place worthy of deeper study, felt inadequate. But we ventured north to Trancoso, a medieval lodging, go to wsj.com/travel

fortified village that reflects a Jewish presence established centuries before Portugal's first kings. Wedged between granite buildings, the Isaac Cardoso Interpretive Center, designed by architect José M. Laranjeira and opened in 2012, looks startlingly modern. We found a Talmud inside the wood-lined synagogue, along with a weatherworn Lion of Judah and gargoyles carved into what is believed to be the rabbi's ancient abode. On closer inspection, we spied a kind of ancient graffiti scratched into the building blocks: traces of Hebrew letters and Menorahs next to Christian totems that indicate the converted's forced allegiance. "Only in Portugal have crosses become Jewish

symbols," said Arieh. With stops at the gated Jewish quarters in the town of Guarda, and at Manteigas, a spot that felt like an Alpine resort worlds apart from what we'd seen, we did a final detour to Serra da Estrela, Portugal's highest mountains, where my daughter had hoped for a glimpse of snow but got waterfalls instead. I reflected on how the Jewish Route had led us to Europe's most unspoiled stretches but also deeper into the mystery of faith.

For details on food and



At Castelo Rodrigo, vestiges of the Jewish quarter remain



# **DESIGN & DECORATING**

**PILGRIMAGE** 

# **A Midwestern** Wonderland

A writer returns to the kaleidoscopic lakeside resort that wowed her as a child

By NINA MOLINA

**WAS A** goofy kid of 8 when I first visited the Grand Hotel on Mackinac Island, a verdant, car-free isle nestled near the tip of Michigan's mitten. But even then I recognized the storied 19th-century resort was something special. Stark white and sprawled on a bluff, the Queen-Anne-style pile seemed like an apparition from a bygone era—a universe away from the drab prairie-hugging bungalows of my Chicago suburb.

Opened in 1887, the property was advertised to well-heeled denizens of Chicago, Montreal and Detroit as a genteel summer escape accessible by railroad and lake steamer. Now it endures, alongside brethren like California's Hotel del Coronado and West Virginia's Greenbrier, as one of America's last splendid, old-school retreats.

#### Imagine if the Mad Hatter had trained as an interior designer.

My mother had become enamored after watching the 1980 film "Somewhere in Time," a time-travel romance in which the hotel's iconic 660-foot-long, columned veranda (reputed to be the world's largest) stars alongside Christopher Reeve and Jane Seymour. An overnight stay wasn't in our budget, but an afternoon wandering the riotous formal gardens—replete with over 150 varieties of flowers, from cosmos to snapdragons—set my imagination abuzz. With grounds so over-thetop, what wonders would the interior hold? I swore someday I'd return to find out.

This summer, my mother and I fi-

nally made good, handing over \$10 to ogle the décor on a self-guided tour. I was wholly unprepared for the carnival of color that greeted us. Apparently, I'm not alone. "The shock is [part of the] fun," Bob Tagatz, the hotel historian, said of slack-jawed visitors's reactions.

Had I done my homework, I might have known better: Carleton Varney, who transformed the oncestaid interiors during a major makeover in 1977, was protégé to the flamboyant designer Dorothy Draper (1889-1969) and remained president of her namesake firm-and an evangelist for bold hue and pattern—until his death in 2022. It's no accident that "Live Vividly" was his mantra.

As I stepped through the grand entry into the plush parlor, wide black and white floor tiles gave way to flashy scarlet geranium-patterned carpet underfoot. Varney's son, Sebastian, said his father seized upon the cheery blooms-some 1,600 of which line the porch—during his first visit, making them the resort's unofficial calling card.

From there my eyes skipped down an esplanade of Georgian wingback chairs upholstered in raspberry velvet. Above, a phalanx of matte white chandeliers lit pastoral murals. I'd never seen so many hues—especially hot, primary ones-in a hotel before. Varney reputedly banned the use of beige in the Grand Hotel in 1979, said Tagatz. For the designer, it seems, this exuberant approach was intimately connected to hospitality. "I'm a happy person," he once told the Palm Beach Post, "and I want the world to be a friendly, colorful place."

A few more steps led to the Geranium Bar, where ruby-lacquered chinoiserie-style chairs surrounded marble-topped cafe tables. With its bold checkerboard floor, it looked like the kind of room the Mad Hatter might conjure, had he trained as an



STRIPE RIGHT The Cupola Bar features a dramatic Murano chandelier and views of Lake Michigan and Lake Huron.

interior designer.

Next we strolled to the Cupola Bar, a two-tiered space whose waisthigh trellis balcony, eaves draped in aqua-striped fabric and expansive windows make one feel aloft in a hot-air balloon's basket. A lime and magenta Murano glass chandelier sparkled like crystalline candy.

The concierge had told us the guest rooms-all 388 of which are swathed in unique combos of fabrics and furnishings, from marigold pelmets to cobalt-plaid carpetsweren't routinely open to the public. but housekeeping might help us out. When my mom, ever the explorer, discovered some staff were fellow Filipinos, a few friendly words of Tagalog were exchanged and we were offered a peek. It didn't disappoint. "[The rooms] aren't decorated, they're gift wrapped," Tagaz said of Varney's vision.

Days later, back in my Brooklyn apartment but still giddy from the visit, I found myself idly scouting Facebook Marketplace for a cabanastriped armchair. After all, who decides what's gaudy or unruly? Recalling how Tagatz had described the Grand Hotel as "elegant without taking itself too seriously," I dropped some frilly pink carnations into an equally pink vase.



for a 9-yard roll, MadcapCot-

tage.com



A room swathed in Les Fleures de Toulon, an archival Dorothy Draper print.

#### **HOW TO LIVE WITH A ROOM YOU HATE**

## **Cellars Can Be Stellar**

Transform a melancholy basement space into rooms you and your family will fight over

WHEN TRYING to make use of : a basement, many people default to dusty wine cellars and ignorable gyms. But if you want a truly livable space such as a bedroom down there, said Manhattan interior designer Kati Curtis, "the most important thing you can do is add personality." Curtis recently turned the garden duplex of a residential building—a firstfloor-and-basement space previously a doctor's office-into a homey apartment for a client. How do Curtis and her industry cohorts pull off these Pygmalion makeovers? Here, their top tricks for the lowest floors.

#### Overdress for Success

In the partially below-ground floor of the former doctor's office, Curtis created a romantic bedroom by exposing a brick ह्रे fireplace, floating a vintage ≥ chandelier and draping an entire wall—treating the room's tiny, high window as though it were much larger. "People make the mistake of dressing only the window itself," said ≚ Curtis, who instead installed

soft sheers and leaf-patterned blackout curtains floor-to-ceiling. This strategy provides "visual height and the illusion it's not a basement window." An upholstered headboard and luxe bedding further hush and cocoon the room.

#### **Vote in the Primaries**

Spirited colors can quickly rescue a dingy cellar from the doldrums. The barren basement of a newly built home in Nantucket, Mass., was shadowed in gloom until New York designer Lisa Frantz made it inviting and cheery. She painted the playroom for the couple's two children in a favorite basement booster: Silver Satin by Beniamin Moore. "It's one of the cleanest whites, with no yellow, and it doesn't go beige. The undertone of grav makes color the star of the show," she said of the vivid furnishings she chose. Shamrock-green wicker chairs encircle a zigzag-patterned ottoman. Ombrepainted wicker baskets fit snugly into a score of cubbies coated in red, blue and green.



BASEMENT INSTINCT New York designer Kati Curtis's mantra: Add personality.

#### **Be Gutsy**

Basements tend to house the mechanics of a buildingplumbing, heating and structural columns. "These things often can't be moved, so you have to get creative," said Curtis. In the basement bedroom she conjured, a custom bed hides a heating unit. To blend in awkward elements, she painted an overhead beam the same flat white as the ceiling and camouflaged a corner column by coating it in the same blue as the wall.



A cheery playroom makeover in Nantucket, Mass., by New York designer Lisa Frantz.

## **Take the Floor**

"Know the pitfalls of your house," said Frantz. "Does the basement flood?" For a Brooklyn home facing that risk, Frantz chose vinyl flooring. ("Lots of great vinyls look like wood," she said.) Under that: A rubber-based subfloor further combats mildew and mold, and delivers a bonus, "Basement, floors are not always level, and this material is very forgiving," said Frantz. For the Nantucket house, which doesn't flood, she chose engineered wood flooring that won't warp with temperature fluctuations.

#### Fake It 'Til You Make It

An artificial skylight pours "sunshine" into a bleak lowerlevel room in a London townhouse, thanks to Nathan Orsman of Orsman Design, an architectural-lighting design studio based in New York City. The fixture's panel mimics sun and sky. "It changes color temperatures based on the hour bright and studious during the day and warm and comforting at night," said Orsman of the light from Italian manufacturer Backlight. New York design firm S.R. Gambrel further energized the cellar-turned-hobbyroom with powder-blue millwork: a banquette surrounding a big table and walls of shelves packed with crafting sundries. —Antonia van der Meer

# **GEAR & GADGETS**



**RUMBLE SEAT / DAN NEIL** 



# A Grand Wagoneer That Plays the *Looooong* Game

**ANYBODY WHO KNOWS** me knows my passion for street bas-

ketball. You can't guard me, bro. My favorite YouTube hoopers

are the Ballislife.com crew. These unusually tall young men go from town to town challenging the locals on their own courts in front of the hometown zanies. I'm espe cially fond of the East Coast Squad. Shout out to Duke Skywalker and Clamp God.

Who needs the Jeep Grand Wagoneer L Series III? Those guys. An extended-length version of the full-size Grand Wagoneer SUV, the GWL adds 7 inches in wheelbase and 5 inches in rear overhang, for a total bumper-tobumper of 226.7 inches—to better accommodate yard-long shins and canoe-size Nikes.

The added overhang swells the rear cargo capacity 55%, to 44.2 cubic feet behind the third-row seats-enough to hold 50 fully inflated basketballs, which seems like a lot but you never know. The total interior volume (173 cubic feet) encloses a space with a nearly square cross-section from the dash to the rear hatch. Thus the GWL's delicate proportions, like an overturned vending machine. The wheels you see being dwarfed by comparison are 22inchers, booted in Pirelli's unstinting all-season rubber.

There's no shame in the GWL's game, though. It's all about embracing the big. I mean, literally, no shame.

The GWL gives Jeep-part of Stellantis—a competitor in the large SUV category, dominated by Chevy's Suburban and its twin-kinfolk, GMC Yukon XL and Cadillac Escalade ESV. As a group, these jumbos are of historic proportions, rivaling in overall length the notoriously overlong Ford Excursion. For the benefit of younger readers, the Excursion was based on Ford's medium-duty F-250 4x4 pickup and, also, a huge pain in the ass.

The GWL takes Jeep into uncharted waters, swagger-wise. Starting at \$94,140—\$3,000 more than the standard wheelbase—the trim ladder ascends through four rungs, topping out at the Series III Obsidian (\$115,335). Our test vehicle, in penultimate Series III trim, boasted a bounty of luxury optionalia, such as the heavy-duty trailer/tow package; dual-screen rear entertainment system with Amazon Fire TV; and the embossed-metal interior trim. The beautifully drawn and richly materialized cabin would compare favorably with any competitive product from a European luxury brand—if there were any.

Smack! goes your palm against your forehead. One-hundred and twenty grand for a Jeep? I know, right? And that's if you hurry. I tested a 2023 model. The price for model-year 2024 has gone up \$2,100. The room-spinning dissonance between the brand and price point is such that the company is now positioning Grand

2023 GRAND WAGONEER L SERIES III



**Base price** \$110,995 **Price, as tested** \$119,720

Powertrain Twin-turbocharged 3.0liter DOHC inline six engine; eightspeed automatic transmission; twospeed transfer case; fully automatic and multi-terrain 4x4

Power/torque 510 hp at 5,700 rpm/500 lb-ft at 3,500 rpm **0-60 mph** 5 seconds

Length/wheelbase/width/height 226.7/130.0/83.6/75.6 inches Curb weight 6,704 pounds, before

**Towing capacity** 5,400 pounds standard; 9,750 pounds as equipped EPA fuel economy 14/19/16 mpg, city/highway/combined

Cargo capacity 44.2/88.8/112.9 cubic feet, behind 3rd/2nd/1st row

Wagoneer as its own premiumluxury sub-brand, standing apart and above Jeep. The comms people gently suggested that I elide the "J" word altogether.

The Ballislife crew would be loving our car's game, amid three rows of intricately quilted Nappa leather seating and surrounded by display screens galore, including a dedicated front-passenger touch screen display built into the dash console. Other ballin' features include a minifridge in the front

armrest console and a head-swallowing, 23-speaker McIntoshbrand audio entertainment system.

You can't spell upsell without the L. Under the hood is the Grand Wagoneer's premium engine, a twin-turbo 3.0-liter DOHC inlinesix producing 510 hp and 500 lb-ft of highly refined torque. The waterworks downstream include an eight-speed automatic, two-speed transfer case and electronic rear limited-slip differential, all automatic and multimodal.

Speaking of highly refined, the twin-turbo I6 requires premium fuel "to help maintain the longevity of the engine," according to the consumer website. Luckily, the GWL averages a whole 16 mpg and nothing bad ever happens to the price of gasoline.

The inherently balanced I6 engine and the heavily damped mountings that hold it in place combine to thoroughly quell engine vibration and shudder during stop/start cycling. Noise is more pronounced. Among the contributing factors are the lightweight alu-

The GWL is just too big for me—or my dog, who gave me side-eye when I urged him to leap into the rear cargo hold.

minum block; high-pressure (350 bar) direct fuel injectors; not one but two turbochargers; and a light-fuse-and-get-away power density of 170 hp per liter of displacement. I'd growl too.

The GWL isn't exactly pretty. At a glance, the squarish, bus-like window openings and flat roof conspire to suggest, however faintly, a vehicle for hire. Don't forget to tip your driver.

Helping to defray the commercial vibe is the polished-mirror brightwork at the grille, window frames, door trim, roof rails and power deployable running boards; the 22-inch machined aluminum wheels; and the black contrasting roof, which is optional but should be mandatory.

Alas, in the end (sorry!), the overhang spoils the cool, fitting the GWL with what looks like a soused diaper.

From the inside looking out, the

GWL's glass affords a commanding view of the road, or at least a commandeering one. On the open waters of the interstate, this luxury liner is easy to pilot, with exceptional overall refinement and ride quality (air suspension is standard). But once you start entering no-wake zones—city traffic, parking decks and drive-through lines—the GWL demands your complete attention. As is prudent, it bristles with cameras, parking sensors, radar and even infrared Night Vision, providing sense-data to a suite of active safety functions, including dynamic cruise control; lane-keeping assistance; pedestrian and animal detection; and drowsy-driver alert—which could be a big help when Dad is driving the team back from the regional semis in Winnipeg. Dad?

Misgivings include the aforementioned 16 miles per gallon of premium fuel as well as the stateof-the-art engine supported by a mere 5-year/60,000-mile warranty. In those same five years, the EPA calculates the GWL will consume \$17,000 in fuel, \$9,000 more than

the average new vehicle. Oof. And it's just too big for me oras it turns out—my dog, who gave me incredulous side-eye when I urged him to leap four feet into

the rear cargo hold. That's it, dog. You're off the team.

# **Hiking Lightweights**

Trade your chunky boots for svelte sneakers

JEFF HESTER, 61 years old, hikes more than most people his age. Based in Bend, Ore., the founder of the Six Pack of Peaks Hiking Challenge recently wrapped up a 195-mile trek in England. But unlike in

he sported clunky hiking boots with thick rubber soles and impenetrable leather uppers, Hester undertook the route in Altra Lone Peak 7s, a sleek pair of trailrunning shoes.

the 1970s, when

"They say a pound on your feet is worth

three on your back," Hester said. "And these are way more comfortable and lighter."

Many trekkers are following Hester's lead with their footwear, leaving their more conventional hiking boots at home in favor of featherweight running sneakers. Outdoor retailer REI Co-op said sales of trail-running shoes have increased by 11% over the past five years. The reasons are obvious.

Shoes designed for

running faster of-**Two Cautions** fer lightweight **About Trail** comfort, flexibility Runners and agility. Yet, Expect them thanks to beefy to wear faster lugs-the raised than hiking rubber chunks on the soles-trailboots, and be extremely carerunning sneakers ful on rocky and still deliver root-lined paths. great traction. Your friendly

> neighborhood foot doctor, however, might not suggest you immediately toss out your hiking boots. That trail runners are lighter also means they're less durable

Dr. William Spielfogel, a podiatrist in New York City

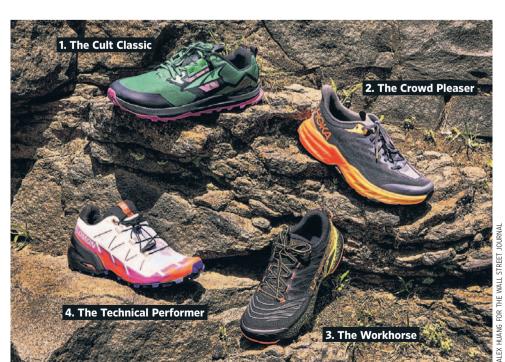
and supportive.

and medical adviser to the Good Feet Store, has seen sprains and fractures in patients who don't wear more traditionally appropriate hiking footwear. "If anatomically you have weak ankles, flat feet or a history of injuries, it would be better to add some arch support," he said.

But he notes that trailrunning shoes can capably handle a light or moderate hike over mild terrain—it's rougher environments that call for thicker soles and supportive midsoles.

Bob Doucette, 53, loves the weight savings of trailrunning shoes but thinks they fail on three types of terrain: snow, loose rock and wet trails. "It's case by case for me," said the corporate communications specialist from Tulsa, Okla. He opts for trail runners on local trails. "But if I'm going up a rubble-filled

gully, I'm going with boots." Even representatives of the shoe brands agree. "If there is a lot of overgrowth, sharp rocks, or no trail, then hiking footwear can protect



1. Altra Lone Peak 7, \$150, AltraRunning.com; 2. Hoka Speedgoat 5, \$155, Hoka.com; 3. La Sportiva Akasha II, \$175, LaSportivaUSA.com; 4. Salomon Speedcross 6, \$140, Salomon.com

the feet better and withstand the abuse of the terrain with less risk of damage to the footwear," said Travis Hildebrand, road running merchandising manager for

Salomon, an outdoor brand that makes both trail runners and boots.

Doucette suggests looking at it like car tires. Good road tires are smoother and quieter than burlier all-terrain tires, but they aren't meant to go everywhere. "They'd get cut to pieces on a 4WD road," he said.

—Heather Balogh Rochfort

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