

Lessons From  
Strange Brains  
REVIEW

# WSJ

THE WALL STREET JOURNAL WEEKEND



The Smarter Boat  
OFF DUTY

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## What's News

World-Wide

Trump said he has narrowed the field of candidates for Justice Kennedy's seat on the Supreme Court to about five and plans to announce his final pick on July 9. A1, A5

◆ Europe's leaders agreed to start holding some migrants in detention camps, as politicians face a backlash to a 2015 decision to open the continent's doors. A1, A6

◆ General Motors warned the administration that tariffs on vehicle imports would hurt its competitiveness, cost U.S. jobs and result "in a smaller GM." A3

◆ A federal judge struck down the Trump administration's approval of a Kentucky plan to impose work requirements on many Medicaid recipients. A3

◆ Authorities charged the suspect in the deadly attack at an Annapolis, Md., newspaper with five counts of first-degree murder. A3

◆ Mnuchin, facing calls for Treasury to adjust capital-gains taxes for inflation, said he would rather Congress consider the matter first. A4

◆ California banned all local taxes on groceries for 12 years, a major victory for the soda industry. A5

### Business & Finance

◆ The Nasdaq booked its eighth straight quarter of gains as investors dumped industrial stalwarts and increased bets on large technology companies. A1

◆ U.S. stocks edged higher Friday on a pause in trade tensions. The Dow added 55.36 points to 24271.41. B13

◆ An inflation measure watched closely by the Federal Reserve hit the central bank's target in May after running below it every month for six years. A2

◆ AT&T and Sprint have raised administrative fees for customers, moves that will bring in hundreds of millions of dollars of revenue. B1

◆ The sharp decline in Deutsche Bank's market value could result in the lender's exit from a major European stock index. B1

◆ China's ZTE replaced its board of directors to satisfy U.S. demands, but the changes may be less sweeping than they appear. B3

◆ Novartis plans to spin off its Alcon eye-care unit, which could be valued at more than \$20 billion. B3

◆ Xiaomi priced a \$4.7 billion IPO at the bottom of the Chinese smartphone maker's target range. B13

### Inside OPINION A13

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# Tech Stocks Shine In Bumpy Quarter

BY AKANE OTANI  
AND MICHAEL WURSTHORN

Stocks were all over the map in a jittery quarter as investors dumped industrial stalwarts on fears of a trade war stifling global growth and increased their bets on shares of large technology companies.

Indexes finished the tumultuous three months mostly higher, even as investors were buffeted by worries about

## Inflation Redux

Prices heat up after six years of falling short..... A2

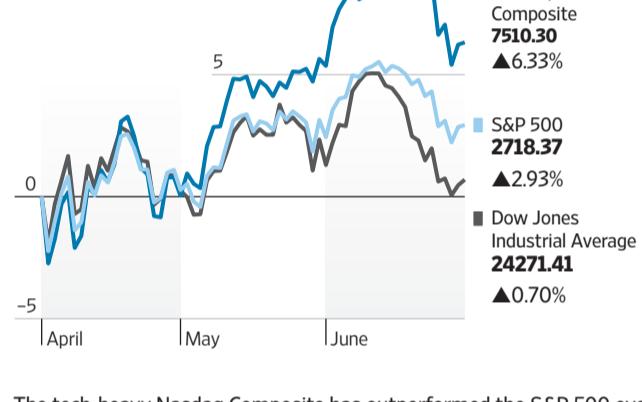
trade tensions and political uncertainty in the eurozone, as well as signs of slowing momentum in the global economy. But the real standout was the tech-heavy Nasdaq Composite Index, which overcame

an early slump in the second quarter to book its eighth straight gain.

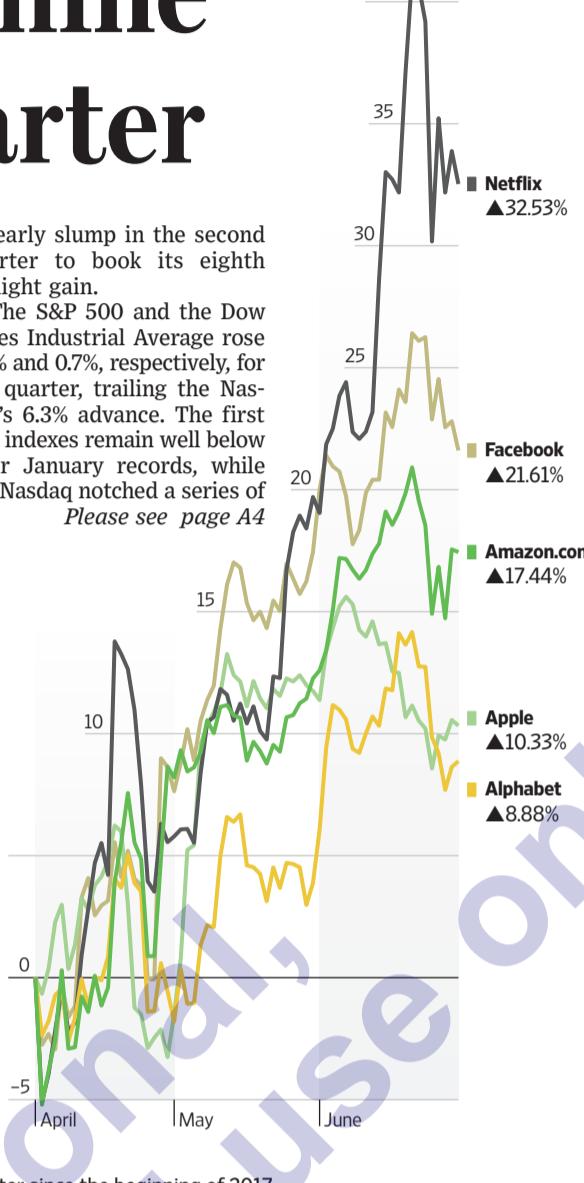
The S&P 500 and the Dow Jones Industrial Average rose 2.9% and 0.7%, respectively, for the quarter, trailing the Nasdaq's 6.3% advance. The first two indexes remain well below their January records, while the Nasdaq notched a series of

Please see page A4

The Nasdaq Composite outperformed other indexes in the quarter...

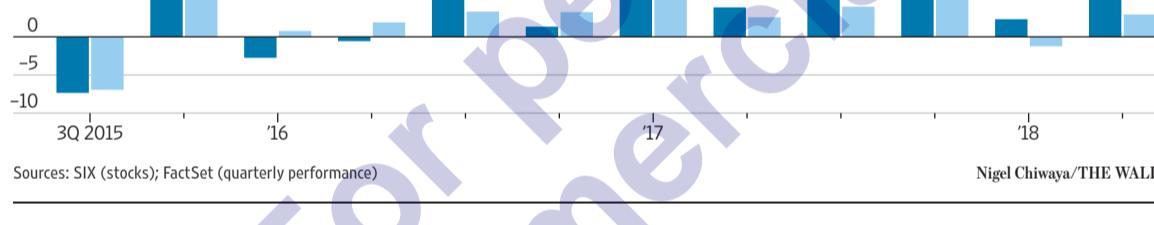


...fueled by some of the biggest tech stocks.



The tech-heavy Nasdaq Composite has outperformed the S&P 500 every quarter since the beginning of 2017.

Quarterly performance ■ Nasdaq Composite ■ S&P 500



Sources: SIX (stocks); FactSet (quarterly performance)

Nigel Chiwaya/THE WALL STREET JOURNAL.

## Victims of Newspaper Shooting Are Mourned



PAYING RESPECTS: Mourners attended a vigil in Annapolis, Md., Friday for victims of the Capital Gazette attack. Staff had been warned years ago about the suspect, who allegedly killed five people Thursday. A3

## Europe Toughens Stance on Migrants

BY VALENTINA POP  
AND BOJAN PANCEVSKI

BRUSSELS—Europe's leaders agreed to start holding some migrants in detention camps, as politicians including Germany's once indomitable Chancellor Angela Merkel face a growing political backlash to her 2015 decision to open the continent's doors to those fleeing conflict and poverty.

The heads of European Union governments endorsed the idea on Friday, which many had recently dismissed as xenophobic and inhumane, after nightlong negotiations that endorsed a tougher approach promoted by anti-immigrant governments in Italy and Austria.

For Ms. Merkel, abandoning her long commitment to more-open borders was the price of

political survival. When the EU's longest-serving national leader allowed more than one million asylum seekers to enter the EU three years ago, she unwittingly unleashed broad-based anger toward migrants.

Since then, backlash against outsiders helped drive Britain's vote to leave the EU and recently helped win elections for antiestablishment or nationalist parties in the Czech Republic, Hungary and Slovenia, as well as in Rome and Vienna.

Ms. Merkel was handed an ultimatum by her conservative junior coalition partners to broker a hardening of Europe's porous southern rim or accept unilateral closure of Germany.

Please turn to page A6

◆ New barriers to immigration mark fundamental shift..... A6

## Russia's Biggest Problem? Not Enough Boston Sports Gear

\* \* \*

'Discount Diplomat' travels to World Cup, handing out jerseys to strangers

By ANDREW BEATON

ST. PETERSBURG, Russia—Greg Conley sat down at a recent World Cup game here next to a family of Iranian fans who regaled him with stories about the team, its traditions and players.

Mr. Conley reached into his bag after Iran's win over Morocco. He grabbed a Boston Celtics shirt and gave it to the Iranian man right next to him. The man beamed and put it on immediately.

You see this whole section of Iranian-dressed fans," Mr. Conley said. "Then all of a sudden, you see a guy wearing a Celtics shirt. It was like a black spot on a white piece of paper."

This wasn't an isolated event for Mr. Conley, a 54-year-old Boston-area native who calls himself "The Discount Diplomat." It's what he does. A hospital project manager by day, Mr. Conley spends his free time traveling the world attending major

Please turn to page A10



## Tycoon's Death Turns Into Mystery Tale

Doubting police, family tries to crack case

By JACQUIE McNISH  
AND VIPAL MONGA

TORONTO—Police found the bodies seated side by side near an indoor swimming pool. Two belts were looped around their necks and fastened to a railing.

Soon after, on that mid-December day, Jonathon Sherman spotted a social-media feed that said his father, pharmaceutical billionaire Barry Sherman, and his mother, Honey, had been found dead at home.

Mr. Sherman, 35 years old, went to his parents' house. Police refused to answer

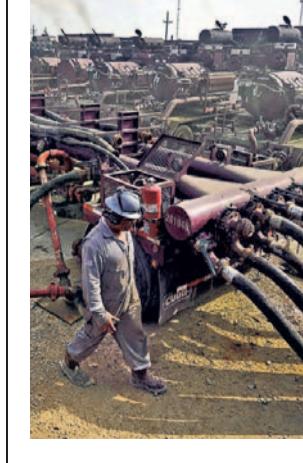
questions for hours. He and two of his sisters waited until 9 p.m. that night for confirmation that it was true their parents were dead.

The terrible news didn't end there for the Sherman siblings. Police suspected it could be a murder-suicide—that their 75-year-old father, the founder of Apotex Inc., Canada's largest generic drugmaker, had strangled their mother, 70, and then killed himself.

"My reaction was total disbelief," Jonathon Sherman said. "Anyone who knew our father would tell you the

Please turn to page A10

## EXCHANGE



THE WELL THAT STARTED A REVOLUTION

B6-B7

## U.S. NEWS

THE NUMBERS | By Jo Craven McGinty

## Burning Question: How Much Sunscreen?



A misconception about sunscreen could have you seeing red.

Lotions, foams and sprays that prevent sunburn are tested at 2 milligrams per square centimeter of skin to determine the sun protection factor, or SPF.

That amount provides the best results, but most people don't come close to using that much. The difference means they receive far less protection than promised.

Part of the problem is dermatologists have a hard time explaining how thickly sunscreen should be applied.

"Nobody is going to take their home kitchen scale and measure out grams of sunscreen," said David J. Leffell, chief of dermatologic surgery and cutaneous oncology at Yale School of Medicine.

To cover the body, a rule of thumb is to apply a shot glass full of sunscreen, but, as Dr. Leffell noted, it's unlikely the same amount would be appropriate for someone who's 5-feet-2 as for someone who's 6-feet-3.

The Food and Drug Administration, which regulates sunscreen, agrees.

"The example of a shot glass is based on an average human and is given as an example only," said Sandy Walsh, a spokeswoman for the FDA. "The amount of sunscreen applied for each consumer will be based on their specific attributes including body size, the amount of body hair and sensitivity to the sun."

Adding to the confusion, the recommended quantity—2 milligrams per square centimeter—is actually pretty sheer, making it difficult to describe how an adequate layer should look.



People cooled off by the ocean at New York City's Rockaway Beach on Friday, as temperatures reached the 90s.

SPENCER PLATT/GETTY IMAGES

"It's thinner than human hair," said Daniel Seabold, a mathematician at Hofstra University who calculated the recommended thickness of sunscreen to be about one-fifth the depth of a sheet of paper.

In practice, most people apply only 20% to 50% of the amount needed to obtain the labeled SPF, according to studies in the U.S., Australia and Denmark, which gauged how much sunscreen test subjects used by measuring the area of skin to be covered and then weighing the sunscreen before and after application.

"I've seen people put a little pea size on and say, OK,"

said Laura Ferris, associate professor of dermatology at University of Pittsburgh. "That's not enough."

**T**he precise relationship between amount of sunscreen applied in the real world and protection it offers is uncertain except for one thing: Less sunscreen means less protection.

Some studies suggest the amount applied and level of protection is linear, meaning half the recommended amount cuts protection by half. Other studies suggest an exponential relationship, meaning an even greater reduction in protection.

What to do?

Because people use roughly half as much as recommended, some research has concluded that to ensure proper coverage, sunscreen should be applied twice.

Other research has converted the shot-glass rule into a teaspoon rule: Use more than half a teaspoon for each arm or the face and neck and more than one teaspoon for each leg, the chest and the back for a total of about 6 teaspoons, or 1 fluid ounce. (A shot glass holds 1.5 fluid ounces.)

Yet another study, published in May in the peer-reviewed Journal of the American Academy of Dermatology, concluded that

despite laboratory tests to the contrary, using sunscreens with an SPF greater than 50 is worthwhile.

In the lab, SPF 50 sunscreen filters out 98% of UVB rays, which are primarily responsible for burning, according to the FDA. The additional protection offered by higher SPFs in a lab setting is negligible—for example, SPF 60 filters out about 98.3% of UVB rays.

**B**ut the recent study, paid for by Johnson & Johnson, a sunscreen maker, found that SPF 100 provided significantly better protection than SPF 50 when snow skiers were told to apply enough and massage it in so there is no residue left," Dr. Leffell said. "If you find you're still getting pink after a couple of hours or, depending on your skin type, an hour in the sun, you need to put on more."

## Ray Bans

Sunscreens are tested at 2 mg / sq cm to determine SPF, but most people don't use that much. The difference means they receive less protection than promised.

SPF Level	Percentage of UV rays blocked
15	93.3%
30	96.7%
50	98.0%
60	98.3%
100	99.0%

Source: FDA

ply the sunscreens as they normally would.

The test included 199 participants randomized to one of two groups. Some applied SPF 100 sunscreen to the left side of their faces and SPF 50 to the right; some did the opposite. All cleaned hands between applications to avoid cross-contamination.

Reapplying sunscreen after an hour or two in the sun also is necessary for achieving the labeled SPF protection, but these users, on average, reapplied only 1.1 times during their exposure.

After around six hours on the slopes, the skin treated with the SPF 100 sunscreen wasn't as red as the skin treated with SPF 50.

But the answer to the burning question of exactly how much sunscreen is enough remains less than satisfying.

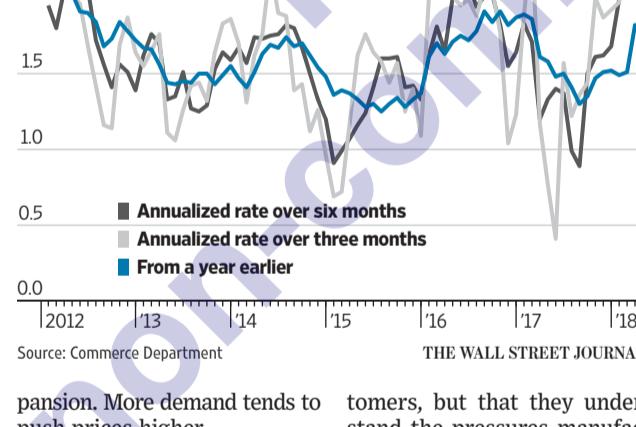
"Apply enough and massage it in so there is no residue left," Dr. Leffell said. "If you find you're still getting pink after a couple of hours or, depending on your skin type, an hour in the sun, you need to put on more."

## Long-Dormant Inflation Heats Up

By HARRIET TORY

## Hitting the Mark

Change in personal-consumption expenditures price index, excluding food and energy



pansion. More demand tends to push prices higher.

"Gas in our area has gone up quite a bit" over the past year, said Herb Houck, a funeral director from Reading, Pa. "Supermarket is about the same, it goes up all the time," the 63-year-old added.

In recent months, businesses have seen their own costs rise, in part because of high energy prices and labor shortages putting some mild upward pressure on wages. Now, some businesses say they are trying to pass those costs on to consumers.

**Tyson Foods** Inc., the largest U.S. meat company by sales, figures rising freight rates will cost it \$155 million in its current fiscal year. In response, it is raising prices for chicken, pork and beef, counting on consumers' appetite to help the company negotiate with restaurants and retailers.

"It's not an easy discussion to have with customers," Tom Hayes, Tyson's chief executive, said at an event in May. "We will do our best to make sure we get all the value back for our shareholders and for ourselves."

**General Mills** Inc. has raised some prices in recent months and started selling smaller boxes of cereal at a higher price-per-ounce, thanks in part to higher freight and food commodity costs.

Chief Executive Jeff Harmening said grocery stores have been hesitant to pass those higher costs on to cus-

tomers, but that they understand the pressures manufacturers face. "We don't need to fully offset the inflation, but we need just a little bit of pricing to go along with efficiencies," he said.

Trade tariffs could shift the inflation picture further. Tariffs impose a duty on goods imported to the U.S., costs that companies may try to pass to consumers. The Trump administration has imposed tariffs on washing machines, steel and aluminum and threatens tariffs

## A price measure hit the Fed's target after running below it for six years.

on cars and as much as \$250 billion worth of goods imported from China.

"Our goal continues to be to pass the cost increases on to the marketplace," Timothy Hassinger, chief executive of **Lindsay** Corp., which makes crop-irrigation systems, said on Thursday. "We've led the industry this year in the implementation of the steel surcharges. Our intention is to continue with this strategy."

For the broader economy, hitting the 2% inflation target is "encouraging," Michael Feroli, chief U.S. economist at JP Morgan Chase & Co., said in an interview. It means the economy is in better balance after

those higher costs on to cus-

tomers, but that they understand the pressures manufacturers face. "We don't need to fully offset the inflation, but we need just a little bit of pricing to go along with efficiencies," he said.

The central bank won't be surprised by the latest readings. When inflation slowed last year, officials looked past the drop, believing it was due to temporary factors, including one-off cuts in cellphone-service plans.

Fed Chairman Jerome Powell in June projected that "later this summer there's a good chance that headline inflation will move up above 2% because of (higher) oil prices."

Now, officials need to consider how high, and for how long, they should let inflation rise. With the expansion entering its 10th year in July and unemployment at an 18-year low, the central bank has been raising short-term interest rates to prevent the economy from overheating.

The Fed drew some unusual attention from the White House on Friday.

Lawrence Kudlow, President Donald Trump's top economic adviser, said on Fox Business Network that he hoped the central bank would move interest rates up "very slowly"—breaking with a 25-year White

House precedent of generally refraining from commenting on monetary policy in deference to central-bank independence.

Fed officials voted in June to boost their benchmark rate by a quarter point to a range between 1.75% and 2%. They have penciled in two further quarter-point increases for 2018 and project more increases to over 3% by 2019.

Fed officials estimate core inflation will steady at 2% this year and inch up to 2.1% in the two following years.

Fifty-four economists surveyed by The Wall Street Journal recently said on average the Fed would tolerate annual core PCE inflation as high as 2.5% before raising rates more aggressively than planned.

—Paul Kiernan,  
Annie Gasparro  
and Jacob Bunge  
contributed to this article.

◆ Heard: Case builds for Fed to lean against economy..... B14

## U.S. WATCH

## POLITICS

## Trump Pick Gains GOP Senate Support

President Donald Trump's pick to run a consumer-finance regulator will get a mid-July hearing before the Senate Banking Committee, where Senate Republicans are rallying around her nomination.

The White House nominated Kathy Kraninger to succeed the Consumer Financial Protection Bureau's acting director, Mick Mulvaney. Senate Banking Committee Chairman Mike Crapo (R, Idaho), scheduled a July 19 hearing on Ms. Kraninger's nomination. Senate aides said the committee could vote to send her nomination to the full Senate by the end of July.

—Yuka Hayashi

## MILITARY

## West Point Gets First Black Leader

Lt. Gen. Darryl A. Williams, a 1983 U.S. Military Academy graduate who has held high-ranking Army posts in Europe

and Asia, will become the first black officer to command West Point in its 216-year history.

Academy officials announced Friday that Gen. Williams will assume command as the academy's 60th superintendent during a ceremony Monday morning in West Point's Jefferson Hall.

Most recently Gen. Williams was commander of NATO's Allied Land Command. He takes over from Lt. Gen. Robert L. Caslen Jr., who is retiring.

—Associated Press

## IOWA

## Court Blocks Waiting Period for Abortions

The Iowa Supreme Court on Friday struck down a law requiring a 72-hour waiting period for women seeking an abortion.

An attorney for Planned Parenthood of Iowa, one of the plaintiffs, said it is the most important constitutional rights case in Iowa since the ruling that legalized same-sex marriage in 2009. The Iowa attorney general's office declined to comment.

—Associated Press

## CORRECTIONS &amp; AMPLIFICATIONS

In some editions Friday, a U.S. News article about the shooting at the Capital Gazette in Annapolis, Md., misspelled the surname of Rob Hiaasen, one of the victims, and his brother Carl Hiaasen as Hiasen.

The European Union imposed tariffs on €2.8 billion (\$3.2 billion) of U.S. exports in retaliation for U.S. metal tariffs. In some editions Friday, a World News article about European tariffs incorrectly said the EU imposed tariffs of €2.8 billion.

The name of Linda-Eling Lee, global head of ESG research at MSCI, was incorrectly given as Linda Eling-Lee in the Streetwise column on Friday about environmental, social and governance metrics.

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

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## U.S. NEWS

# New 1040 Enters World of E-Filers

Paper tax form is 'iconic,' but 89% of households filed electronically this year

By RICHARD RUBIN

The IRS tax form 1040 is an icon in transition.

For years, taxpayers followed the instructions and carefully worked their way down the form, using pens to input information on the 1040 and mailing the paper to the government with a check or a request for a refund.

Now, for most people, the 1040 is a summary of answers to questions posed by software or a paid preparer that doesn't command the same amount of direct attention from taxpayers.

The form's redesign, prompted by the 2017 tax legislation and by Republicans' desire to deliver on their promise of postcard-size filing, was unveiled formally on Friday as President Donald Trump celebrated the six-month anniversary of the tax law. Because the 1040's role in the tax-filing process has changed, the real-world impact of the shortened new form may not be so drastic.

"It's vestigial," said Robert Kerr, executive vice president of the National Association of Enrolled Agents, tax experts licensed to practice before the Internal Revenue Service. "The 1040 is this sort of iconic, symbolic thing, but no one actually fills out a 1040 anymore, so there's a lot of energy being consumed by a new 1040 without the more fundamental question of: So what?"

The IRS says 89% of households filed electronically so far this year, including 72 million depending on tax professionals and 54 million filing electronically themselves. The IRS has encouraged the shift to digital filing, which the agency says is cheaper, faster and safer. The government isn't urging people to go back to paper and expects digital filing to keep growing, Treasury Secretary Steven Mnuchin said in an interview.

"We would hope that people don't get lured into the thought of filing a postcard," said Kathy Pickering, vice president of regulatory affairs and executive director of the Tax Institute at H&R Block Inc. "Sending that through the mail would be a step backward."

Still, the updated form, together with tax-law changes enacted in December, should reduce the compliance burden on millions of taxpayers, Mr. Mnuchin said.

Many households will take fewer steps to figure out their taxes under the new system. The number of households itemizing deductions would

## It's Shorter but There Are More Forms to Fill Out

The IRS released on Friday the new version of the Form 1040, the main form used in individual taxation. Here's a guide to what changed:

### Front of form

### Back of form

**1 It's smaller**  
The old 1040 had 79 numbered lines. The new one has just 23. That enabled the form's designers to get it onto a two-sided sheet that fills up only the top half of a standard 8.5" by 11" piece of paper.

**5 Also, new tax law expanded form**  
The new line 9 is the deduction for qualified business income, the 20% deduction for income earned by pass-through businesses such as partnerships and S corporations.

Source: Internal Revenue Service

**2 Also, larger**  
The new 1040 comes with six additional schedules, or forms, that many taxpayers will have to attach to the main form. Taxpayers with very simple finances won't need to worry about those, but many people will.

**6 Vague entries**  
There's now a line labeled "other taxes," which refers filers to Schedule 4, a grab bag of items that includes taxes on high-income households, payroll taxes on certain tip income and the final year of the penalty for failing to purchase health insurance.

decrease to 18 million from 46.5 million, as a result of a larger standard deduction, according to the congressional Joint Committee on Taxation. The number of people paying the complex alternative minimum tax—which requires calculating tax liability twice—would drop to about 200,000 from five million.

"Our objective is to make this simpler for taxpayers, whether they're doing it electronically or whether they're doing it on a physical form,"

**3 Words in front; numbers in back**  
The new front page includes almost no financial information. The signature section is moved up front, and nearly all the information about income, tax breaks and payments goes on the back.

**7 New shorthand**  
The old form, in bold, refers to the earned income credit. That's the main tax break that can provide net income-tax refunds to low-income workers. The draft form calls it only EIC and doesn't put it in bold.

**4 New tax law shrinks form**  
Some items removed from the 1040 disappeared because they were taken out of the tax code.

**8 Breaks could go unclaimed**  
Deductions and other items that once appeared on the main form are now relegated to schedules. That includes the student loan interest deduction and taxes on household employees.

THE WALL STREET JOURNAL.

Mr. Mnuchin said.

The new 1040 will replace the 1040, the 1040A and the 1040EZ. The form is smaller and fits on a two-sided piece of paper that is half the size of the previous version. It has 23 numbered lines, rather than

79.

Unlike draft versions that circulated this week, the new form retains the option for taxpayers to donate \$3 to the presidential election campaign fund.

In some ways, filling out the form has become more complex. The most frequently used items stay on the main form while others get relegated to six schedules. Taxpayers with any items on those supplementary forms—such as student-loan interest or education tax credits—must complete those schedules, too. The new law added other complexities, particularly for so-called pass-through businesses filing through individual returns.

Still, the Treasury said most filers won't have to jump through many additional hoops. Among all filers, 65% will have to file only the new, simpler 1040 plus at most one additional schedule, the Treasury projects.

The IRS is working on instructions for completing the tax forms, expected by late summer or early fall. Getting the form done now was important, Mr. Mnuchin said, to allow the IRS, software providers and state authorities time to get ready for the filing season starting in January 2019.

A simpler tax code could hinder the tax-preparation business. H&R Block recently said it was closing 400 offices, or about 4% of its company-owned locations, as the tax law reduces some complexity and as people shift to digital tax preparation.

But many tax professionals say they don't expect many people to shift from seeking assistance to attempting self-preparation as a result of the new form. High-income households with complex finances and low-income households trying to qualify for tax credits still face challenges. Moreover, much of the underlying complexity of the tax code that drives people to accountants and computer programs hasn't changed.

"I haven't seen anything so far that makes it seem like it will be any easier to complete," said Karina Ron, director of the United Way's Center for Financial Stability in Miami, which assists more than 10,000 people with filing their taxes.

The 1040 is an important symbol, and creating a representation of fairness and simplicity was a reasonable goal, said tax historian Joe Thorndike.

"They should have just changed the EZ into a postcard and declared victory," he said. "The postcard aspiration is reasonable. But they should have set the bar lower and done a good job on a form that can be short rather than doing a really bad job on a form that shouldn't be this short."

# Pressure To Adjust Capital Gains

By RICHARD RUBIN

WASHINGTON—Treasury Secretary Steven Mnuchin, urged by conservatives to use his department's regulatory power to adjust capital-gains taxes for inflation, said he would rather Congress consider the matter first.

In his first public comments on the subject, Mr. Mnuchin said in an interview the Thursday he wouldn't speculate about whether Treasury even has the authority to make the change.

"Consider that with obviously other parts of Tax 2.0," he said, referring to congressional Republicans' effort to extend and expand last year's tax cuts. "If we're not able to complete Tax 2.0, then we'll go back to the drawing board and decide whether we want to consider this on a nonlegislative basis."

That broader tax-bill extension seems unlikely to happen this year, given Democratic opposition and the almost certain need for Democratic votes in the Senate to pass it.

Currently, people who sell assets generally must pay capital-gains taxes on the nominal difference between their purchase and sales prices. That discourages people from selling and helps encourage them to hold assets until death, when the gains aren't taxed as income and the base value is reset for heirs.

Consider stock purchased in 1990 for \$100,000 and sold today for \$300,000. The \$200,000 capital gain, taxed at the top rate of 23.8% for such income, would yield a \$47,600 tax bill. But, adjusted for one common measure of inflation, the \$100,000 original cost would instead be about \$197,000 today. The gain would be \$103,000 instead of \$200,000 and the tax bill would be \$24,514.

Conservatives have been urging the administration to take the step on its own, saying that the Treasury has the authority to define cost and that indexing would provide an economic jolt.

Lawrence Kudlow, the National Economic Council director, has long backed the idea.

Mr. Mnuchin said the administration doesn't have a position on indexing capital gains. "There's obviously a benefit to taxpayers because it lowers the tax," he said.

"There's obviously a revenue impact associated with that."

Indexing would reduce federal revenue by about \$102 billion over a decade, according to the Penn-Wharton Budget Model.

# Puerto Rico Braces for Budget Cuts

By ANDREW SCURRIA

Puerto Rico's federal supervisors said they would cut government spending and scale back economic-growth projections after the U.S. territory's legislature declined to overhaul labor laws.

The federal board overseeing Puerto Rico's finances voted to cut bondholder payments, university scholarships, municipal subsidies and public-employee bonuses after lawmakers didn't adopt at-will employment laws designed to spur hiring and economic growth.

The revised fiscal framework also leaves less money for infrastructure investments and for the island's legislature and judiciary. Funds available for bondholders was slashed to \$14 billion over 30 years from \$39 billion, according to the oversight board's executive director, Natalie Jaresko.

Revising labor laws has been a priority for the oversight board. Puerto Rico's 40% labor participation rate is the lowest in the U.S., while youth unemployment is 24%, more than double the overall U.S. rate, World Bank data show.

Puerto Rico owes roughly \$70 billion to bondholders and \$50 billion in unfunded pension obligations.

# Tech Shines In Bumpy Quarter

Continued from Page One

all-time highs in June.

The one-directional nature of the stock rally has left investors increasingly worried that a market whose gains have been heavily dependent on technology stocks could reverse sharply in the second half of the year.

"A lot of the investing public is piling into the same things," said Jim Paulsen, chief market strategist at Leuthold Group, who added that the S&P 500 would be mostly flat this year without technology companies. "There's a lot of sheep following one another."

Technology avoided the tariff turmoil for much of the quarter, including when President Donald Trump imposed steel and aluminum tariffs on the European Union, Mexico and Canada on May 31. Industrial stocks in the S&P 500 fell 1.5% that day, as shares of Boeing Co. and other multinational manufacturers posted losses, while the Nasdaq Composite suffered a modest 0.3% decline.

Trade actions have had a muted impact on tech stocks going back to 1995, according to Bank of America Merrill Lynch data that showed the sector tends to be among the best-performers in the 30 days

following the announcement, implementation or the end of such a policy.

But some analysts warn that the latest trade battle could play out differently, considering the Trump administration's focus on protecting U.S. intellectual property and tech's growing prominence in the global economy.

The Nasdaq on Monday posted its biggest one-day decline since April after reports suggested the Trump administration was planning to curb foreign investment in U.S. technology firms.

The tech sector's high exposure to foreign revenue also exposes it to swings in the foreign-exchange market. Should the recent rebound in the U.S. dollar continue, that could hurt multinational companies whose goods will become more expensive to foreign buyers, and overseas revenue will be worth less when converted back into dollars.

"A lot of technologies are borderless," said Tony Kim, portfolio manager of the BlackRock Technology Opportunities Fund, who said the threat of protectionist policies against China is one of the bigger perceived risks for investors right now. "Tech needs to be in a stable environment, and this would inject a sense of instability."

Any stumble in tech-stock prices could raise the risk of market contagion and wreak havoc on portfolios.

Tech's growing dominance has skewed the broader S&P 500 away from so-called defensive stocks—sectors such as

utilities, consumer staples and health care—that investors have traditionally gravitated toward during bouts of market volatility. That has left some analysts concerned that investors in index-tracking funds could be dangerously exposed to a pullback.

The degree of defensiveness within the S&P 500, which Leuthold Group calculated by using the percentage of the in-

dex's market capitalization comprised of defensive sectors, has fallen nearly 60% from 1991 through early June, according to the group's data. That has increased the weighting of highflying growth stocks within the S&P 500, reducing its overall effectiveness as a diversified portfolio for investors who opt to passively track the broad index, Mr. Paulsen said.

The S&P 500 is "not the same index it was when your father bought it," he added. Yet some analysts worry that, with uncertainty swirling over whether the U.S. will ratchet up trade tensions with China, the EU and others, investors have mispriced the risk that the tech sector faces.

Technology companies in the S&P 500 have the highest share of overseas revenue of the broad index's 11 sectors, with a foreign-exposure level of about 59%, according to FactSet and BofA Merrill Lynch data. That is greater than the broader S&P 500, which gets about one-third of its revenue from overseas and indirect exposure via commodities, the bank added.

Still, some investors have been viewing tech stocks as a safety play, betting that companies that have produced double-digit percentage gains this year will be able to continue growing earnings even under more restrictive global trade conditions.

**Amazon.com** Inc.'s quarterly profit topped \$1 billion for the first time in the most recent quarter, while **Facebook** Inc.'s earnings soared even after its user-data crisis.

Even as investors say technology firms as a whole appear to be on more stable footing than they were at the height of the dot-com era in 2000, many remain cautious, citing the tendency for the stock market to contract when it is led by just a handful of outperformers.

"Whenever the market narrows like this and everyone wants to own the same stocks like the FAANG [Facebook, Amazon, Apple Inc., Netflix Inc. and Alphabet Inc.] stocks, there is a feeding frenzy that can go on for a while," said Mike Balkin, a portfolio manager at William Blair. "When it ends, it usually doesn't end well."



Investors flocked to tech companies like Facebook and Apple.

**The Nasdaq overcame an early slump to book its eighth straight gain.**

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## U.S. NEWS

# Democrats Face Process Without Filibuster Option

BY JOSHUA JAMERSON

WASHINGTON—Justice Anthony Kennedy's retirement puts Democrats on the losing end of a yearslong power struggle over the Senate's filibuster rules.

If the Senate votes this fall to fill Justice Kennedy's seat, only a simple majority, likely 50 votes in this case, would be required to confirm President Donald Trump's pick.

Historically, Senate rules required a supermajority—60 votes when all members are present—for most legislation and presidential appointees to cabinet positions and other high-level roles. But Senate Republicans last year eliminated the filibuster for Su-

committee, which will consider Mr. Trump's pick to replace Justice Kennedy. "It is carved deep into our memory."

The majority party can change Senate rules with a simple majority, and Democrats in 2013 eliminated filibusters for most presidential nominees because they said Republicans blocked Mr. Obama's judicial appointments at an unprecedented rate. Former Sen. Harry Reid (D., Nev.), then the majority leader, engineered the rules change with a parliamentary maneuver so controversial that it is often called the "nuclear option."

When the Democrats lost the chamber in the 2014 elections, Republicans saw no need to retaliate immediately because Mr. Obama was still in the White House. But Senate Republican Leader Mitch McConnell's decision to block confirmation of Mr. Obama's Supreme Court nominee, Merrick Garland, until after the 2016 election gave Mr. Trump the power to fill it.

When the Democrats filibustered Mr. Gorsuch's nomination last year, Senate Republicans voted to remove another element of the minority party's power to exert influence in the chamber, eliminating filibusters on Supreme Court nominees. That paved the way for the swift elevation of Mr. Gorsuch to the high court.

Mr. McConnell had foreseen such a day. In 2013, as minority leader, he warned Democrats that both parties could change the Senate rules.

"If you want to play games, set yet-another precedent that you'll no doubt come to regret. I say to my friends on the other side of the aisle: You'll regret this," he told Democrats on the Senate floor, "and you may regret it a lot sooner than you think."

## WORLD NEWS

# Europe Raises Barriers to Immigration

**EU summit deal calls for detaining some asylum seekers even before they arrive**

A stricter approach to illegal migration in the Mediterranean region agreed at a summit on Friday marks a fundamental shift for the European Union, which three years

*By Bojan Pancevski  
in Berlin and Valentina Pop in Brussels*

ago had to deal with the arrival of more than a million people from Africa and the Middle East.

The shift, which drew protests from human-rights campaigners, envisions sending most asylum seekers who attempt to reach the bloc's shores back to transit zones in North Africa and placing the ones who make it to EU territory in closed centers in countries such as Greece and Spain.

The deal, which still lacks many details, was reached thanks largely to frantic efforts by German Chancellor Angela Merkel, who is under pressure politically, and Italy's new anti-immigrant government. French President Emmanuel Macron brokered a compromise among roughly a dozen countries willing to help Italy under the condition that migrants be detained to ensure they don't leave for other countries.

Questions abound as to the legal and logistical feasibility of such camps. "We have managed to reach an agreement in the European Council but this is in fact the easiest part of the task compared to what waits us on the ground when we start implementing it," said European Council President Donald Tusk, who hosted the two-day summit.

Though the number has fallen off, thousands of migrants from the Middle East, Africa and South Asia continue to try to reach Europe's shores to escape war and poverty, at



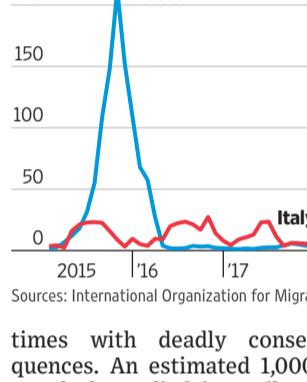
Libyan security forces carrying a baby's body Friday after an inflatable dinghy sank off the country's coast in al-Hmidiya, east of Tripoli.

MAHMUD TURKIA/AGENCE FRANCE PRESSE/GETTY IMAGES

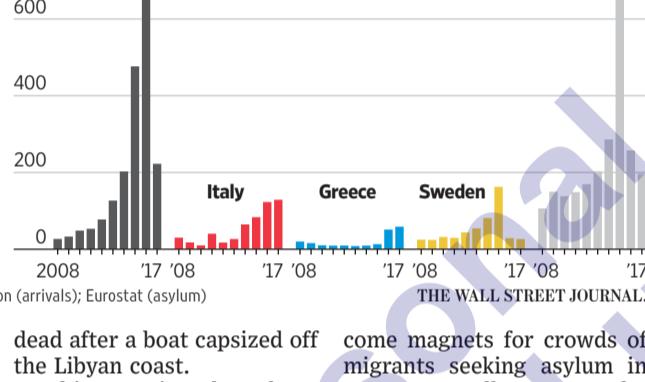
## Ebbing Wave

Arrivals in Greece and Italy have decreased dramatically since EU agreements with Turkey and Libya to take back migrants, but the influx of asylum seekers is still creating political problems within the EU.

### Monthly migrant arrivals



### Annual asylum applications by country



times with deadly consequences. An estimated 1,000 people have died in perilous passages across the Mediterranean this year alone. On Friday, 100 migrants were feared

dead after a boat capsized off the Libyan coast.

African nations have been reluctant to host what the EU calls "disembarkation platforms," fearing they could be

come magnets for crowds of migrants seeking asylum in Europe as well as targets for jihadist groups.

"There are many fears, and they are legitimate," Mr. Ma-

cron said.

European plans for shifting the processing of asylum claims to African countries were proposed as early as 2003 by Britain, but they were long considered unpalatable, said Elizabeth Collett, director of Migration Policy Institute Europe, a think tank. The new deal shows how much opinion has shifted following the migration crisis and the rise of populist movements across the continent.

The deal was partially influenced by a proposal from Austrian Chancellor Sebastian Kurz, one of Ms. Merkel's main European critics, who on Monday is set to assume the rotating EU presidency.

"This is a crucial step. Only if we ensure that people who have been rescued at sea are brought to third countries can we destroy the business model of smugglers and massively reduce the number of refugees coming

to Europe. It is now essential to swiftly implement what we agreed on," Mr. Kurz said.

The concept is inspired in part by a model long used by Australia, which turns back all migrant boats and sends them to third-country centers run by local authorities. This tough policy has prompted international outrage, Ms. Collett said, but has curbed mass migration and prevented people from drowning at sea while trying to reach Australia.

European leaders, mindful of Australia's experience, agreed to have the centers in third countries operated by United Nations entities. The bloc also pledged €500 million (about \$580 million) to support African countries in managing migration and to create a new fund to help the bloc boost border security.

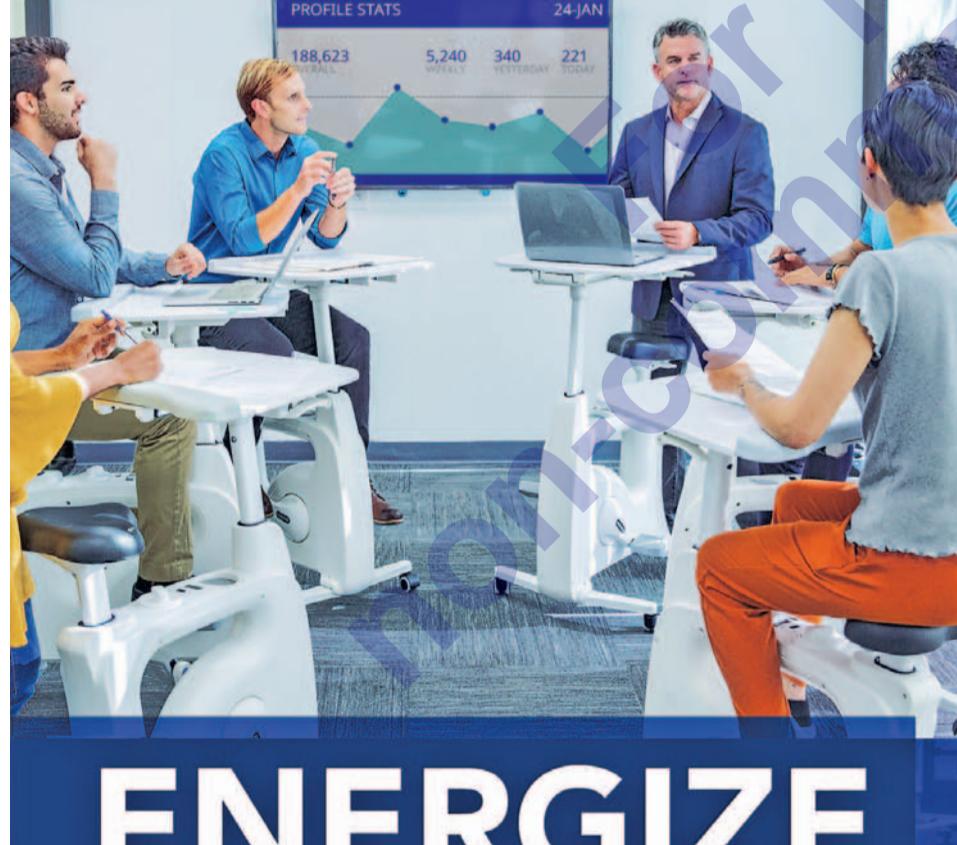
A prototype "disembarkation platform" center already exists in the Tunisian port of Zarzis, run by the Red Crescent and the U.N. High Commissioner for Refugees, the global body working to protect displaced people.

Vincent Cochetel, special envoy of the UNHCR for the Central Mediterranean, tentatively endorsed the EU plans and said detaining immigrants was admissible under EU law.

"Detention is not what we wish for the majority of people, but in some circumstances it would be necessary in order to repatriate some people," Mr. Cochetel said. He said that more than 70% of asylum claims of people who have crossed the Mediterranean get rejected, but they don't get returned after reaching Europe.

Others were more critical.

"EU leaders have signed off a raft of dangerous and self-serving policies which could expose men, women and children to serious abuses," said Iverna McGowan from Amnesty International, a human rights advocacy group. "This policy would be a far cry from the EU's founding principles of solidarity and respect for human rights."



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## EU Adopts Tougher Approach

*Continued from Page One*  
many's own borders. Since the latter option would have almost certainly brought her government to a fall, she launched a frantic diplomatic campaign last week that laid the groundwork for Friday's deal on the former.

"No asylum seeker has the right to choose which country he will apply in," Ms. Merkel said Friday, in newly toughened rhetoric.

Putting a brave face on her shift, she said managing to bridge "extremely different views" on migration policy was an important achievement. The deal, she added, "is an important step in the right direction [but] we are not yet at the end of the road."

Ms. Merkel admitted that her domestic troubles acted as "an encouragement to come to a substantial solution."

She faces pressure from Interior Minister Horst Seehofer, who is also chairman of the Christian Social Union, the Bavarian sister party to her larger Christian Democratic Union.

The CSU is itself being squeezed from the right by the anti-immigrant Alternative for Germany party, or AfD, whose rise was fueled by the migrant influx three years ago.

Polls show the AfD is sapping votes from the CSU ahead of Bavarian elections in October and suggesting Ms. Merkel's allies will lose their absolute majority in the state legislature.

CSU Deputy Chairman Manfred Weber told German media he welcomed the deal. "She delivered," he told the Bavarian newspaper *Münchner Merkur*. He said the CSU had "shaken up Europe. This is a great success."

Ms. Merkel was expected in coming days to brief politicians of her coalition partners, the CSU and the center-left Social Democratic Party, on the deal reached in Brussels. The parties' executive bodies will meet separately on Sunday before deciding whether



Austria's Sebastian Kurz and Germany's Angela Merkel in Brussels.

to bury the hatchet. An agreement might not come until Monday.

Friday's deal capped a gradual reversal of Ms. Merkel's liberal refugee policy. Pro-refugee groups in Germany and beyond have accused the German leader of abandoning principles to retain power.

Refugees will in the future have hardly any chance to apply for asylum on European soil," said Ska Keller, German co-chair of the Green Parties group in the European Parliament. European leaders "are pursuing a far-right agenda."

**Ms. Merkel had been handed an ultimatum by her conservative coalition partners.**

But this will not weaken the right—on the contrary."

Under the deal, arriving asylum seekers would be kept in new detention centers in member countries along the Mediterranean Sea, such as Greece and Spain, and potentially in Africa as well, until their asylum claims are reviewed.

EU leaders signaled willingness to resettle migrants from the centers to other nations of the bloc, but the agreement doesn't require member countries to accept them. The clause making that clear was demanded by Central and Eastern European countries that have opposed obligations to share the burden of hosting migrants.

Polish Prime Minister Mateusz Morawiecki, whose gov-

ernment doesn't want to take migrants, said he was pleased with the agreement because migrants would be distributed on a "voluntary basis"—not in forced relocations, as Ms. Merkel previously advocated.

Austria's conservative Chancellor Sebastian Kurz celebrated Friday that Ms. Merkel and others had accepted the proposal for detention camps, which he has long championed. "Finally there is support from all sides for what we demanded already in 2015," Mr. Kurz said.

More liberal politicians also expressed satisfaction with the deal. French President Emmanuel Macron, who played a significant role in brokering the agreement, lauded the achievement of "a European solution."

"Many had predicted that no agreement would be found and national measures would prevail," he said.

Mr. Macron, who has styled himself as the continent's new pro-European voice and deal maker, could now see his standing rise.

Ms. Merkel has been on the defensive since an uninspiring election victory in September, when she scored her party's worst result since 1949. It took her six months of on-again, off-again negotiations to form a coalition.

"We have had the worst election results of all time," Mr. Seehofer said in a televised interview before the summit. "After such an electoral defeat, one cannot continue with the same policy."

—Laurence Norman, Emre Peker and Matthew Dalton contributed to this article.

## WORLD NEWS

# Mattis Seeks To Assure Japan On North Korea

BY GORDON LUBOLD

TOKYO—Defense Secretary Jim Mattis sought to assure Japan that the U.S. wouldn't overlook its security concerns in negotiations with North Korea, by highlighting a small blue pin worn by his Japanese counterpart in a meeting on Friday.

The pin commemorates the 17 Japanese citizens who Tokyo says were abducted by North Korea. After five abductees were returned in the early 2000s, Tokyo has sought the repatriation of at least 12 more. Their fate remains unknown, a U.S. official in Tokyo said.

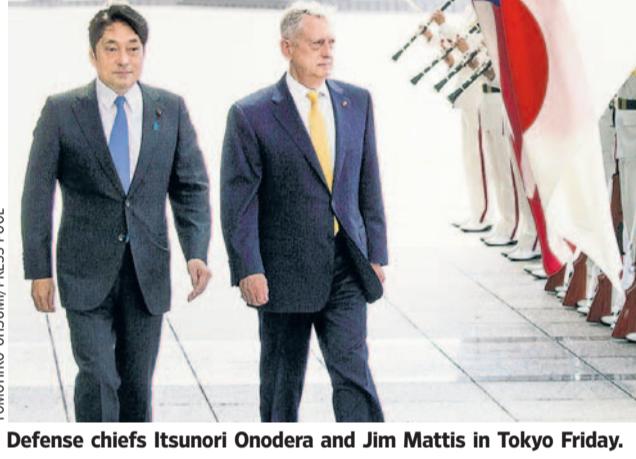
During his summit with North Korean leader Kim Jong Un in Singapore in June, President Donald Trump expressed hope on behalf of Japan that the North would return the abductees.

Meanwhile, U.S. officials are awaiting the transfer of the remains of more than 250 American service members held by North Korea since the Korean War.

That transfer, which was part of the agreement between Messrs. Trump and Kim in Singapore, was expected to take place days ago. But North Korea lacks the capacity to return the remains, including proper containers, U.S. officials said, contributing to the delay.

"I note with respect the blue lapel pin you wear, and we're with you," Mr. Mattis told Mr.

TOMOHIRO OHSUMI/PRESS POOL



Defense chiefs Itsunori Onodera and Jim Mattis in Tokyo Friday.

# U.S. Envoy's Son Touts Trump Ties

BY JAMES T. AREDDY

SHANGHAI—A son of the American ambassador to Beijing used his connections to President Donald Trump this week to drum up business for his public-relations firm.

Eric Branstad, a son of Ambassador Terry Branstad, and the U.S. Commerce Department's liaison to the White House until January, spoke on Thursday in Shanghai to more than 100 lawyers, bankers and advisers at a seminar titled "How to React To (Potential) US-China Trade War?"

Mr. Branstad highlighted his personal relationship with Mr. Trump and plans for his firm to open a China office, attendees said.

It isn't unusual for former U.S. government officials to visit China dangling the keys to understanding Washington, and ethics rules don't appear to bar Mr. Branstad from doing so. But such a move could raise the appearance of ethical conflicts, experts say.

Mr. Trump is upending long-standing U.S.-China ties that he has criticized as cozy and harmful to American interests. His administration imposed tariffs on Chinese goods that are set to begin on July 6; Beijing says it will retaliate.

Mr. Branstad endorsed Mr. Trump's challenges to China while onstage with a colleague, but his efforts to build his own business in the country appeared to hinge on his personal connection to the president, the attendees said. "It was this whole splash about how they met Donald Trump," said Richard Chenel, a Shanghai-based private-equity investor who attended the presentation.

Mr. Chenel said he had hoped to gain an understanding of how trade tensions might affect investments. He said he was disappointed that Mr. Branstad's primary message was that Mr. Trump supports American workers.

The U.S. Embassy in Beijing declined comment. The White House didn't immediately respond. Reached by email, Mr. Branstad declined to comment.



Eric Branstad, a son of Ambassador Terry Branstad, spoke to a gathering in Chicago in 2017.

XINHUA/ZUMA PRESS

Department that as of May 14 it

would act as a subcontractor to the global law firm Hogan Lovells on matters involving ZTE at a rate of \$75,000 a month for three months. In June, the U.S. Senate voted to reinstate the ZTE ban. Hogan Lovells declined to comment.

An earlier attempt by the family of a Trump administration official to promote business in China backfired.

When family members of Mr. Trump's son-in-law and adviser, Jared Kushner, visited Beijing and Shanghai in May 2017 offering chances to earn a U.S. visa by investing in New Jersey apartments that family-owned Kushner Cos. was developing the political backlash was swift.

The company later issued an apology for any suggestion it was benefiting from ties to the White House, and to cancel the participation of Mr. Kushner's sister during the final leg of the China fundraising tour.

Mr. Branstad's actions didn't violate ethics rules unless his father encouraged him to tout ties to the U.S. government, said Walt Shaub, former director of the Office of Government Ethics.

Still, he said: "The culture of the federal government has always been that if you're in a sensitive post like ambassador... you would strongly discourage your family members from going there for business purposes."

—Rebecca Ballhaus  
and Brody Mullins in  
Washington and Zhang  
Chunying in Shanghai  
contributed to this article.

In China, Eric  
Branstad sought to  
drum up business  
for his PR firm.

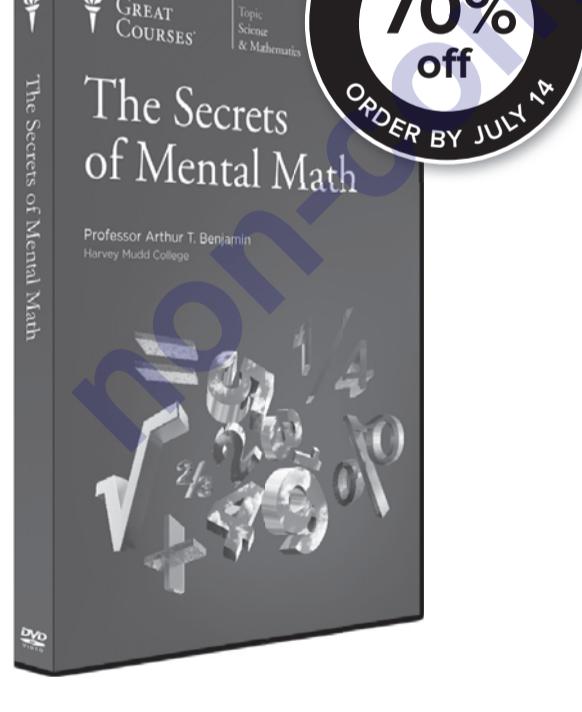
Mercury, a division of Omnicom Group Inc., recently began representing a Chinese telecommunications equipment maker that has been in the crosshairs of the U.S. government: ZTE Corp.

On May 13, Mr. Trump set in motion a reversal of a Commerce Department prohibition on ZTE's access to U.S. suppliers over allegations the company broke U.S. law. Mr. Trump tweeted his determination to work with Chinese President Xi Jinping to get ZTE "back in business, fast."

Mercury subsequently said in a filing with the U.S. Justice

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## WORLD NEWS

# Mexicans See Chance for Change

Polls show leftist López Obrador far ahead in Sunday's presidential race

By JUAN MONTES  
AND JOSÉ DE CÓRDOBA

MEXICO CITY—Andrés Manuel López Obrador, the heavy favorite to win Mexico's presidential election on Sunday, has traveled the country for the last 15 years preaching one consistent message: Mexico has been looted by its ruling class and he is the only politician serious about stopping it.

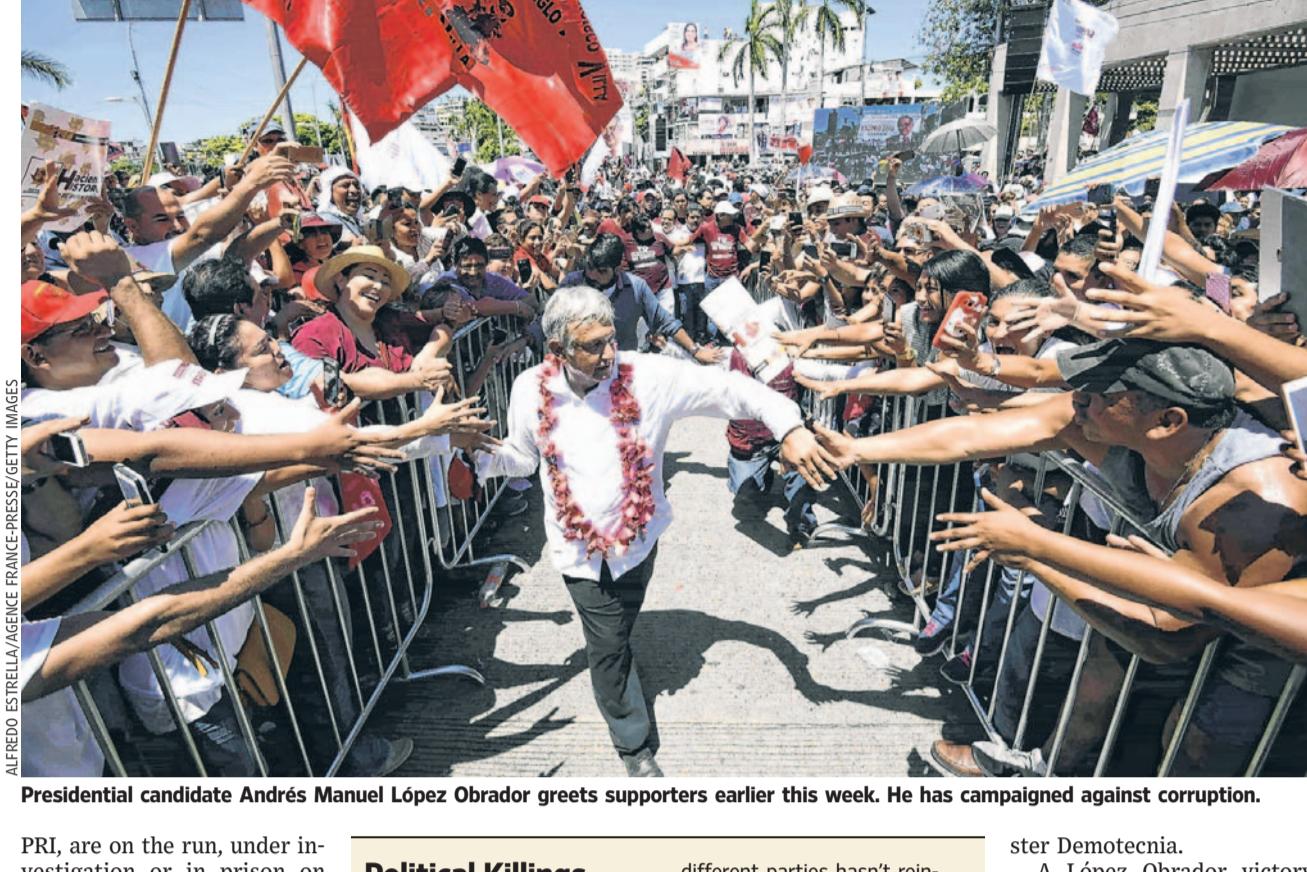
That message, along with voter dissatisfaction over the country's murder epidemic and modest economic growth, has secured the leftist politician an average lead in polls of some 25 percentage points over his closest rival. If those numbers are borne out in Sunday's vote, he would have the biggest margin of victory in a Mexican presidential race since the 1980s.

"Mexico's main problem is corruption. Corruption must be cleaned like stairs are, from the top down," the 64-year-old former Mexico City mayor says at rallies.

That hits home in a country ranked 135 out of 180 countries in the corruption-perception index of Transparency International, worse than Sierra Leone and alongside Russia and Paraguay.

While corruption has been a problem for decades, a string of scandals in recent years under President Enrique Peña Nieto has left voters increasingly disillusioned with traditional parties, opening the door for the antiestablishment Mr. López Obrador, who vows to allocate savings from ending corruption to social programs for the poor.

Ten former state governors from Mr. Peña Nieto's Institutional Revolutionary Party, or



Presidential candidate Andrés Manuel López Obrador greets supporters earlier this week. He has campaigned against corruption.

PRI, are on the run, under investigation or in prison on charges ranging from embezzlement to money laundering. All have denied wrongdoing.

Mr. Peña Nieto was tangled in scandal in 2014 when it emerged the first lady was buying a \$7 million mansion from a company that had won millions in contracts handed out by her husband as governor and president. He denied wrongdoing, but his image never recovered.

"Mexicans are fed up with corruption and impunity," said Juan Pardinas, head of government-accountability group IMCO.

An average of polls puts Mr. López Obrador at about 50% of the vote, with conservative Ricardo Anaya, who has faced his own corruption allegations, in second at about 25% and José Antonio Meade of

## Political Killings Fuel Pessimism

Since September, 130 politicians have been killed in Mexico, according to a recent study by Etelekt, a risk-analysis consulting group. The bulk of the crimes were committed by local party bosses trying to fight off rivals, the study found.

"Having presidents from

different parties hasn't reinforced democratic culture in areas where powerful political families continue to fight for power," said Etelekt director Rubén Salazar.

The killings reinforce a sense of pessimism in Mexico, where swaths of the country remain under the bloody sway of criminal gangs fighting turf wars. In 2017, homicides rose to the highest level since records began in 1997.

the PRI at roughly 20%.

Pollsters say between 40% and 50% of Mexicans decline to take part in surveys, and some 20% of voters remain undecided, so a López Obrador victory isn't a sure thing.

Mr. López Obrador has narrowly missed winning the presidency twice before, in

2006 and 2012. Still, pollsters express little doubt he will win this time. "López Obrador has dominated the campaign from beginning to end, and the question now really is how weakened the opposition will be after the election," said Rodrigo Galván, the head of poll-

ster Demotecnia.

A López Obrador victory would end the nearly century-long streak of rule by the PRI and the conservative National Action Party, or PAN, which governed from 2000 to 2012.

Some polls also show Mr. López Obrador's National Regeneration Movement, or Morena, and two smaller allies have a shot at winning a majority in the legislature, something no Mexican president has had in more than 20 years.

Mr. López Obrador has vowed to pay more attention to the economy, and some of his plans, such as building oil refineries and trying to achieve food self-sufficiency, signal a bigger state role.

"López Obrador deserves an opportunity," said José Luis Salas, a taxi driver in Mexico City. "We can't be worse than now."

## WORLD WATCH

## THAILAND

## Search for Trapped Team Is Fraught

The race to rescue a dozen boys and their soccer coach from a rain-flooded Thai cave complex is turning into a wrenching technical challenge just to find them.

As heavy rains continue, specialists from Thailand, the U.S. and Britain are poring over maps and assessing infrared images, while cave divers struggle underground. The boys, ranging in age from 11 to 16, and their 25-year-old coach entered the Tham Luang cave network June 23.

—James Hookway

## LATVIA

## ECB Official Faces Bribery Charges

The Baltic nation's central-bank governor was charged with taking bribes of half a million euros, escalating a probe that has deprived the European Central Bank of one of its top officials, prosecutors said Friday.

Illmars Rimševičs, who sits on the ECB's 25-member rate-setting committee, denies the allegations.

—Tom Fairless

## JAPAN

## Government Caps Overtime Hours

Parliament tightened limits on overtime hours, responding to concerns about karoshi, or death by overwork, and seeking to improve productivity in a country where long hours are often more a custom than business necessity.

The legislation, a priority of Prime Minister Shinzo Abe, won final approval Friday in parliament. It limits overtime work to less than 100 hours a month and less than 720 hours a year, and it sets penalties for companies that violate the limits.

Until now, employers could effectively ask employees to work without limit if workers' unions and management agreed to it, which they often did.

—Megumi Fujikawa

# Canada's Growth Slowed in April

By PAUL VIEIRA

mists at Royal Bank of Canada.

On a one-year basis, the Canadian economy increased 2.5% in April. That marks the slowest 12-month advance since February of last year.

There has been much trepidation about the Canadian economic outlook, as trade uncertainty has escalated with the Trump administration's decision to impose tariffs on Canadian-made steel and aluminum.

In the GDP report for April, Statistics Canada said the factory sector was the main contributor to growth in the month, up 0.8%.

Machinery manufacturing rose 2.8%, while primary met-

als production—which incorporates steel and aluminum—climbed 2.7%.

Canadian steel makers warned this week that sales to the U.S. have plunged recently, following the Trump administration's tariff move. Canada is America's largest supplier of foreign steel.

An unusually cold April—coupled with an ice storm that hit central Canada—weighed on some sectors in the month.

Retail trade fell 1.3%, and food services and drinking places dropped 0.9%, the biggest one-month decline in over four years. Construction also fell 0.5%.

# Trudeau Gets a Boost From Canadians After Trump Spat

By PAUL VIEIRA

OTTAWA—The rancorous Group of Seven summit in Canada in June laid bare a split between the Trump administration and its Western allies, but it produced a political boost for the host, Prime Minister Justin Trudeau.

Mr. Trudeau had been struggling in the Canadian court of public opinion for months, dragged down in part by missteps on his recent trip to India and his backing of a crude-oil pipeline to the Pacific Coast.

But now, the country has rallied around the leader amid a public rift with President Donald Trump. Mr. Trump's attacks have given the prime minister a chance to stick up for Canada—something Canadians love—as well as a political lifeline ahead of the election in the fall of 2019.

"There's a long history of Canadians not wanting to be pushed around by the U.S.," said Robert Wolfe, professor emeritus at the policy-studies school at Queen's University, in Kingston, Ontario.

Before the Trump administration's decision in late May to impose tariffs on Canadian-made steel and aluminum, Mr. Trudeau was trailing the Conservative Party in the polls for the first time since his 2015 victory, according to polling from Nanos Research. Support for his Liberal government fell to 33% in late May, Nanos said.

That was a reversal following a long honeymoon. For the bulk of his first 18 months in office, polls showed Mr. Trudeau's Liberal government with the backing of more than 40% of voters.

The decline was months in the making. Mr. Trudeau's weeklong trip to India in February was widely panned for photo ops featuring his family in traditional Indian garb, which political analysts said was in poor taste.

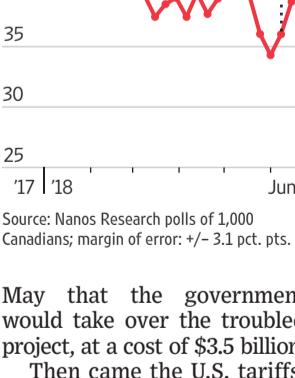
Meanwhile, he managed to offend both environmentally conscious voters and people dependent on the oil sector when for months he didn't weigh in on a dispute over expanding the oil pipeline. Mr. Trudeau then further angered his progressive base when he said in



Justin Trudeau's image reflected in a monitor at an event in Ottawa.

## Heading North

Canadian Prime Minister Justin Trudeau's approval ratings have bounced back in recent polls after falling earlier this year.



May that the government would take over the troubled project, at a cost of \$3.5 billion.

Then came the U.S. tariffs. He was quick to blast the levies as "insulting" and "absurd" and promised retaliation. Mr. Trudeau vowed at the end of the G-7 summit that Canada "will not be pushed around" by the U.S. on trade, after Mr. Trump warned retaliation would be a "mistake."

On Twitter, Mr. Trump fired back, calling the Canadian prime minister "meek," "weak," and "very dishonest." He threatened more tariffs, this time targeting Canada's auto sector. The attack and threat from Mr. Trump sent Mr. Trudeau's popularity on an upswing.

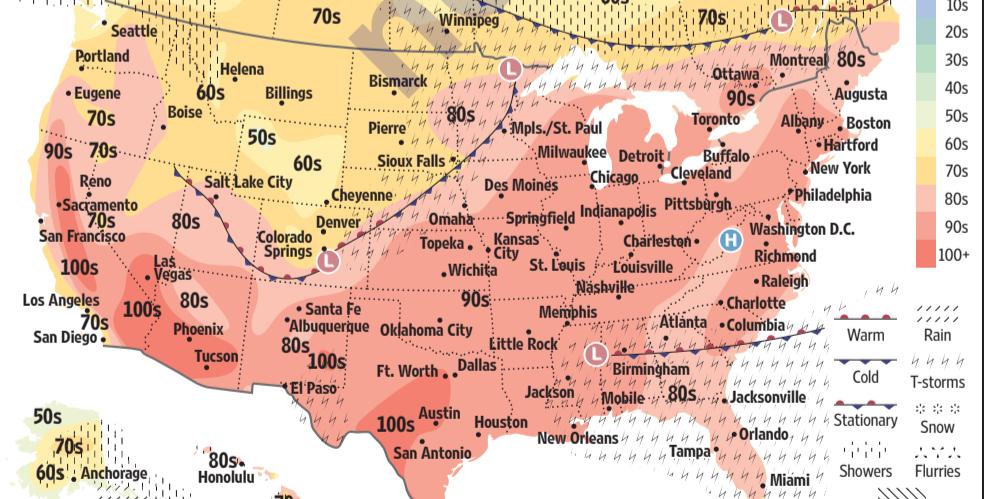
In the latest Nanos weekly tracking poll, published June 26, the Liberals opened up a 5-point lead over the Tories, holding on to 37% support.

"The reality is whenever the Liberal government has been focused on its domestic agenda, the numbers have floated around a lot," said Nik Nanos, president of Nanos Research. "But when it comes to advancing Canadian interests with the U.S., for the Liberals it's a clear win for Justin Trudeau."

Mr. Trudeau has tried to stay above the fray since the G-7 summit. "I think my approach on the [U.S.-Canada] relationship has been very much aligned with what Canadians expect of me. You know, be firm about defending Canadian values and Canadian interests, but always look to have a constructive relationship that will benefit Canadians and the nature of our closely integrated economies," Mr. Trudeau said recently.

Larry Deters, a 74-year-old retired government worker from Regina, Saskatchewan, said he generally supports the left-leaning New Democratic Party. But if an election were held today, amid the trade uproar, Mr. Deters said Mr. Trudeau would have his vote. "If it would have been me, I would have gone after Trump and called him what I think he is, whereas Trudeau has handled him like a gentleman. But at the same time he didn't back down. That was big for me," Mr. Deters said.

## Weather



## U.S. Forecasts

s=sunny; pc=partly cloudy; c=cloudy; sh=showers;

t=tstorms; r=rain; sf=snow; flr=snow; s=snw;

50s=50s; 60s=60s; 70s=70s; 80s=80s; 90s=90s;

100s=100s; 100s=100s; 100s=100s; 100s=100s;

# OBITUARIES

**GEORGE LINDEMANN**  
1936 – 2018

## Cellphone, Cable Bets Enriched Investor

**A**s an entrepreneur, George Lindemann was unpredictable. After joining his father's cosmetics and pharmaceuticals empire in the late 1950s, he built up and then sold companies in businesses including contact lenses, cable television, mobile phones and natural-gas pipelines.

Mr. Lindemann made bold long-term investments and generally reaped substantial profits when he sold businesses. Forbes estimates the family's net worth at \$3.3 billion. One minor setback was a short-lived business importing fine French wines of the type he enjoyed.

He worked from an office in the General Motors building in New York, overlooking Central Park. He owned trophy homes in

Greenwich, Conn., and Palm Beach, Fla. His 183-foot sailing yacht Adela won the 1997 Atlantic Challenge race from New York to Cornwall, England. He collected art, including German expressionists. He and his wife, Frayda, supported a young artist development program at the Metropolitan Opera in New York.

Never a seeker of publicity, he endured a painful period in the 1990s when one of his sons, George Jr., was convicted of fraud and sentenced to 33 months in prison for his role in the electrocution of a show horse named Charisma that triggered an insurance payment.

The elder Mr. Lindemann died June 21 in Greenwich. He was 82.  
—James R. Hagerty

**JAMES GIPS**  
1946 – 2018

## Professor Helped Disabled Use Cursors

**J**ames Gips, a computer-science professor at Boston College, didn't know exactly where he was heading in the early 1990s when he and two colleagues devised technology allowing people to control a computer cursor by moving their eyes. A possible application was computer games.

In Marshfield, Mass., Kathy Nash spotted a TV report on the product, EagleEyes. It involves attaching electrodes to skin around the eyes so they can pick up electrical signals generated by eye movements and relay them to a computer. It would be perfect, Ms. Nash thought, for her teenage son Michael, whose severe disabilities left him virtually paralyzed.

Dr. Gips doubted EagleEyes would help Michael and tried to

put Ms. Nash off. She insisted: "You have to try my son on this." She kept calling almost every day until he gave in. Michael quickly showed he could use the technology to communicate, create art and play games. He was able to attend public schools and graduated from high school in 2002.

The professor, who died June 10 at age 72, spent years refining the technology to help disabled people escape locked-in lives. The EagleEyes technology is now owned by a nonprofit, the Opportunity Foundation of America.

Dr. Gips is survived by his wife, the former Barbara Thompson. His survivors also include two children and a grandson. An earlier marriage ended in divorce.

—James R. Hagerty

**DONALD BRINCKMAN**  
1931 – 2018

## CEO Turned Safety-Kleen Into Wall Street Darling

BY JAMES R. HAGERTY

**I**t was a grubby business: helping auto-repair shops clean oily tools and parts. Still, Donald Brinckman saw potential.

In 1968, he was looking for new products that could be sold by the Chicago maker of automotive parts where he worked as a vice president. He visited a tiny Milwaukee company making a parts-washing machine consisting of a red washtub mounted atop a barrel filled with solvent.

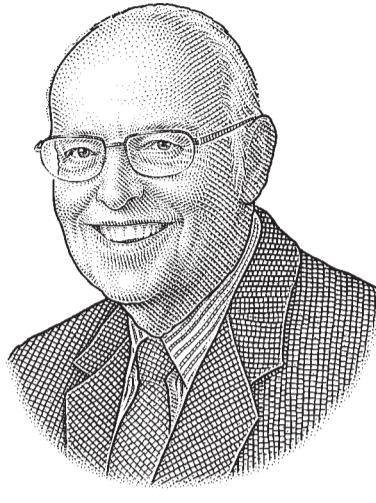
Mr. Brinckman envisioned a nationwide business. His employer agreed to pay about \$185,000 for the firm, Safety-Kleen Corp. As CEO of Safety-Kleen, Mr. Brinckman turned it into an international company that recorded profit increases of at least 20% annually for 18 consecutive years in the 1970s and 1980s and became a Wall Street darling.

Rather than selling washers, Safety-Kleen provided them to customers on a fee basis, charging for regular visits to service the devices and replace solvents. It provided a similar service to factories, paint shops and dry cleaners. The company also moved into recycling motor oil.

Laidlaw Environmental Services Inc. bought Safety-Kleen in 1998 for about \$1.8 billion, more than 9,700 times the price Mr. Brinckman negotiated decades earlier.

"Make no small plans," he often told colleagues. Mr. Brinckman died June 11 at a hospital near his suburban Chicago home. He was 87.

In his early days at Safety-Kleen, Mr. Brinckman scrawled detailed plans for expansion on a sheet of graph paper big enough to cover a conference-room table. He was determined to dominate the market before copycats could catch on. Later, smaller rivals found it impossible to match Safety-Kleen's economies of scale and expertise in handling hazardous wastes.



When they showed up to service the washtubs, Safety-Kleen reps used the opportunity to sell oil filters and other products to shop owners.

"Sure, it's simple," he told Forbes in 1981, referring to his business model, "but what could be simpler than a hamburger, and look what McDonald's did with that."

**D**onald Wesley Brinckman was born March 17, 1931, in Chicago and grew up in Park Ridge, Ill. His mother was a hairdresser and his father an executive at Jewel Tea Co., a grocer. As a boy, Donald worked as an usher at Wrigley Field, home of the Chicago Cubs. He earned a bachelor's degree in business and an M.B.A. at Northwestern University.

Chicago Rawhide Manufacturing Co., a one-time maker of buggy whips that had transformed itself into an auto-parts company, hired him in 1960 and later gave him a role in finding new products.

The parts washer was invented in the mid-1950s by Ben Palmer, who worked at a gravel pit. When Mr. Brinckman heard about the contraptions, "I had a hard time understanding what they did," he

told the Chicago Tribune later. "I wasn't impressed when I found out, but Milwaukee's not that far, so I drove up to take a look."

Tighter regulation of hazardous chemicals in the 1970s and beyond made Safety-Kleen's service even more appealing. Customers could rely on its expertise rather than figuring out how to comply with the rules on their own.

Safety-Kleen, based in Elgin, Ill., became a separate company in 1974 and went public in 1979. It is now owned by Clean Harbors Inc.

Mr. Brinckman expanded into recycling motor oil—collecting, refining and selling used oil—through the 1987 acquisition of Breslube Enterprises of Breslau, Ontario. That business grew more slowly than expected as falling oil prices reduced the value of recycled oil.

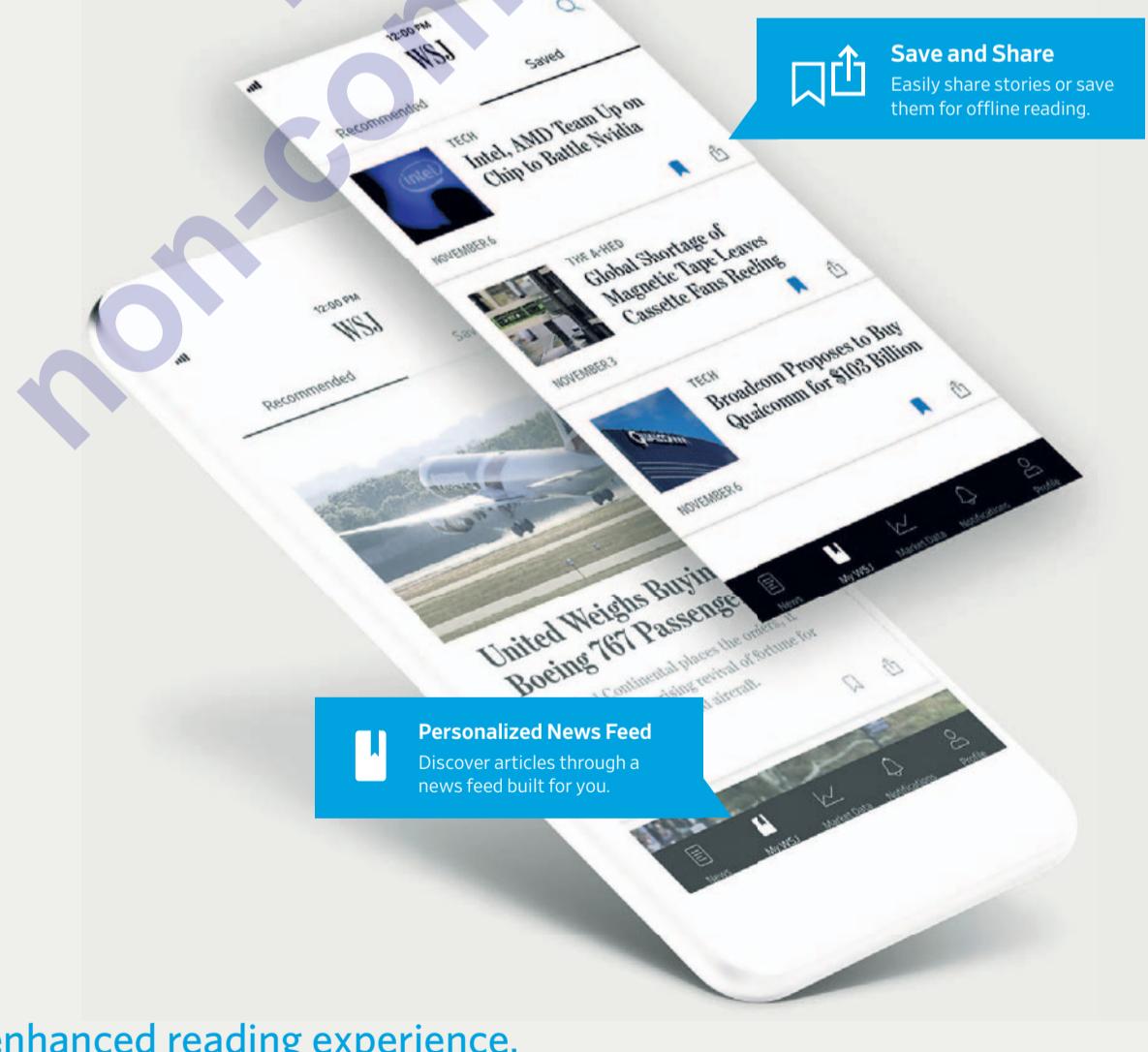
Employees driving trucks to service parts-washers remained the core of the business. On a business trip, Mr. Brinckman once spotted one of those employees napping in a Safety-Kleen truck. The CEO tapped on the window and introduced himself. The employee expressed disbelief, and then began apologizing. Mr. Brinckman laughed, told the driver not to worry, then enjoyed telling the story for years.

Growth slowed in the 1990s, and Mr. Brinckman wanted to take the company private. An initially hostile bid from Laidlaw ended up winning shareholder support. After selling Safety-Kleen, Mr. Brinckman became an investor and board member at Heritage-Crystal Clean Inc., a rival company founded by Joseph Chalhoub, a former president of Safety-Kleen.

He is survived by his wife of 64 years, Beverly, a sister, five children, 11 grandchildren and a great-grandchild.

◆ Read a collection of in-depth profiles at [WSJ.com/Obituaries](http://WSJ.com/Obituaries)

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## IN DEPTH

# 'Diplomat' Gives Away Boston Gear

Continued from Page One

sporting events—not just marquee competitions like the Olympics and World Cup, but also the Irish hurling championship and Cricket World Cup.

Wherever he goes, he brings a jam-packed suitcase. It's stuffed with cheap Boston sports gear that nobody from Boston wants and that he gives away to strangers thousands of miles away from Fenway Park and the Boston Garden.

Invariably, Mr. Conley finds, "somebody's looking at them like, 'What're you wearing a Bruins shirt in Krasnodar, Russia for?'" he says, adding: "It's easy, it's inexpensive and it's impactful."

Mr. Conley's gear is from the deepest, cheapest bargain bins he can find. The jersey shirt he gave to the Iranian man, for example, had the name and number of Isaiah Thomas on the

back. Mr. Thomas no longer plays for the Celtics. Which is why Mr. Conley was able to buy the shirt for \$4.99 at his local sporting goods store.

The gifts elicit all sorts of reactions. Some people smile. Many are confused. Others have been so touched they have broken down into tears.

Jamie Bell, director of the New Zealand Cricket Museum, met Mr. Conley at the 2015 Cricket World Cup. His first reaction was bewilderment: He wasn't expecting to hear a man with an unmistakable Boston accent watching cricket among the Kiwis. After he sold Mr. Conley a ticket to the next day's England versus New Zealand match, Mr. Bell was stunned to receive a gift in addition to cash: the Boston Red Sox jersey of Shane Victorino, who had hardly played for the team during the previous season due to injury. "I thought he was mad," Mr. Bell said.

Mr. Conley attended his first international sporting event in 1988, the Winter Olympics in Calgary, and was quickly hooked. Later that year, at the Summer Games in Seoul, he was awe-struck by the tradi-



An Iranian soccer fan wears a Boston Celtics shirt at the World Cup given to him by Greg Conley, the 'Discount Diplomat.'

tional Olympic pin-trading. Inspired by that custom, he brought some Boston apparel to thank a Japanese family who hosted him during the 1998 Olympics in Nagano.

What began as a casual endeavor turned into an elaborate operation over the years. He has now been to 17 Olympics, nine World Cups, six track and field championships, three Ryder Cups, two European soccer championships, and a Tour de France, among other events.

He aims to bring approximately 35 articles of clothing to

times when he doesn't have a good reason. In the last few years, he has given away apparel in Wellington, New Zealand, and the Demilitarized Zone between North and South Korea, where he gave the parents of a 2-year-old girl a tiny jersey of retired Red Sox star David Ortiz.

He doesn't build his inventory overnight. Mr. Conley, who also goes by the title "Clearance Ambassador," typically stocks up months before he travels, visiting stores a few times a week to inspect sales bins. His goal price point is \$4.99.

Most of the items he procures are branded the Celtics, Red Sox, New England Patriots or Boston Bruins. He's not opposed to gear from Boston College or Harvard University. Frequently, the recipients have never heard of these teams.

Mr. Conley has learned to accept one reality of the discount rack: The leftovers don't always come in common shapes and sizes. He tells people that tiny shirts are for their children, and he advises that enormous shirts make excellent pajamas.

On a recent morning, he wanted to thank Galiya Chinakava, a 34-year-old waitress at

the Pushka Inn here. Her tip was a Red Sox shirt with the name of Hanley Ramirez, who was recently cut by the team.

"Maybe I can wear it as a dress," Ms. Chinakava said.

Mr. Conley occasionally splurges on what he considers to be a deal. He blew \$9.99 on a Boston College sweatshirt before coming to this World Cup and looked for a special opportunity to give it away. Then he found it: He figured Russian President Vladimir Putin might attend Russia's match in his native St. Petersburg.

Mr. Conley raced to get ready. He scribbled a note saying spasibo—thank you in Russian—to Mr. Putin for hosting the games. He put the note and the maroon sweatshirt in a brown paper bag. The stadium was under heavy security and Mr. Conley had no hope of actually reaching Mr. Putin, who didn't wind up attending the game. Still, Mr. Conley gave his unlikely present to a St. Petersburg Stadium official, who promised to try to deliver the Boston College sweatshirt to its intended recipient.

Mr. Conley hasn't heard back from Mr. Putin.

# Tycoon's Death Is a Mystery

Continued from Page One

same thing. Our dad was a pacifist and would have trouble squashing a bug."

The senior Mr. Sherman had everything to live for, his grown children said: He celebrated the recent birth of his grandchild, a girl, and was looking forward to the marriage of his youngest daughter. He had been selected to be inducted into the Order of Canada, the country's second-highest civilian honor.

The day after the bodies were found, the Sherman siblings—Lauren, Jonathon, Alexandra and Kaelen—hired Brian Greenspan, a leading defense lawyer, to find out how their parents died.

Mr. Greenspan in his 44-year law career had represented some of Canada's most famous defendants, including supermodel Naomi Campbell, who struck a plea agreement in 2000 on Toronto assault charges.

The lawyer urged the Shermans to refute the murder-suicide idea, and the siblings issued a statement hours later: "We are shocked and think it's irresponsible that police sources have reportedly advised the media of a theory which neither their family, their friends nor their colleagues believe to be true."

The police had been called to the Sherman home after a real-estate agent saw the bodies. Mrs. Sherman had marks on her face and Mr. Sherman didn't.

There were no signs of forced entry at the house, and police suspected from the start that Mr. Sherman had strangled his wife and then hanged himself, said people familiar with the matter. Authorities gave no motive.

Jonathon Sherman and his three sisters believed the idea of a murder-suicide was "unsubstantiated and wrong-minded," Mr. Sherman told The Wall Street Journal in a written response to questions.

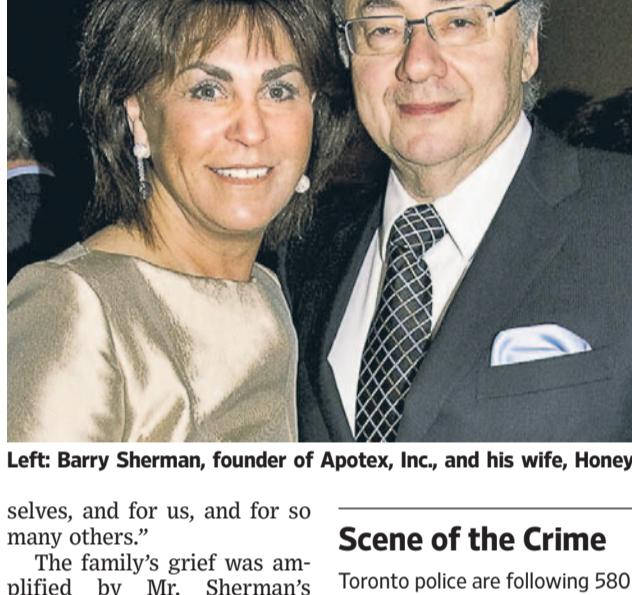
Mr. Greenspan put together a team to conduct a private investigation of the couple's deaths on behalf of the Sherman siblings. His group would grow to include a pathologist and three former homicide detectives who directed a dozen forensic specialists.

The story broke big in Canada. Many asked the same questions: Why would Mr. Sherman kill his wife and himself? How did he do it? And if Mr. Sherman didn't commit the crime, then who did?

More than 6,000 family, friends and employees attended a memorial for the couple on Dec. 21, packing a massive convention center near Toronto's airport. Many wept.

"Even though Barry worked long hours throughout his life, he was always available to give his children emotional support, either during the day, or in the middle of the night," said Joel Ulster, one of Mr. Sherman's oldest friends.

"You were like a lock and key," Jonathon Sherman said of his parents at the service, "each pretty useless on your own. But together, you unlocked the world for your-



Left: Barry Sherman, founder of Apotex, Inc., and his wife, Honey. Right: The Sherman siblings, Lauren, Jonathon, Alexandra at a memorial service for their parents.



## Scene of the Crime

Toronto police are following 580 leads in the investigation into the deaths of Canadian billionaire Barry Sherman and his wife, Honey. Their bodies were found on Dec. 15, inside the couple's 12,000 square-foot house. One of the initial theories was a murder-suicide carried out by Mr. Sherman.

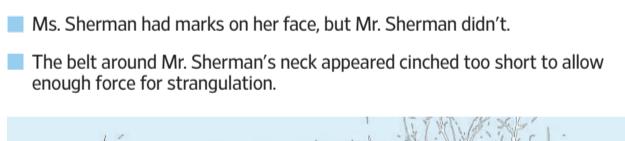
The bodies of the Shermans were found seated next to each other by their indoor pool, legs outstretched with belts tied around their necks to a railing.

If Mr. Sherman had strangled himself, why were his legs aligned so neatly with no signs of thrashing?

There appeared to be signs that the Shermans had their wrists tied.

Ms. Sherman had marks on her face, but Mr. Sherman didn't.

The belt around Mr. Sherman's neck appeared cinched too short to allow enough force for strangulation.



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There were no signs of forced entry.

The Sherman home had security cameras pointed to the outside.

The house was for sale and had a lockbox with a key inside that allowed access for real-estate agents.

Source: Based on people familiar with the investigation and police statements.

Illustrations: Siemon Chan/The Wall Street Journal THE WALL STREET JOURNAL

ing time and money to such causes as health care and Holocaust education, according to people who knew them.

Mr. Sherman earned an advanced degree in aeronautics and astronautics at the Massachusetts Institute of Technology. During summers, he had worked for Louis Winter, the uncle who owned a small Toronto generic-drug company. When Mr. Winter died, Mr. Sherman abandoned the aeronautics field and returned to Toronto to run the company.

He eventually sold the business and founded Apotex in 1974, personally formulating

and boss as a socially awkward but friendly scientist who loved unraveling competitors' drugs in the lab.

Some of Mr. Sherman's rivals, especially those who had been targets of his lawsuits, said in interviews that the Apotex founder was aggressive and vindictive in his legal attacks—once personally delivering a court order to a competitor's office.

When Canada's health ministry tightened policies for new drug applications in 2015, Apotex's law firm served lawsuits to some of the ministry's staff at their homes.

Apotex engaged in hundreds of lawsuits against competitors and the Canadian government.

He was involved in lawsuits against multinational pharmaceutical companies, which challenged with mixed success his right to market generic versions of their brand drugs. Mr. Sherman told author Jeffrey Robinson in the 2001 book "Prescription Games" he was surprised branded drug companies hadn't murdered him.

"The thought once came to my mind, why didn't they just hire someone to knock me off?" he said in the book. "For a thousand bucks paid to the right person you can probably get someone killed."

## Private eye

The Sherman home wasn't gated, but security cameras pointed outside. The 12,000 square-foot house had been listed for sale at more than \$5 million. Real-estate agents could enter the house using a door key kept in a lockbox that, police said, could be thwarted.

When the housekeeper came to work early on Friday, Dec. 15, she kept to the first floor. Around midmorning, a real-estate agent arrived with prospective buyers.

As the visitors toured the top floor, the agent moved to the lower level to show the indoor pool. After seeing the two slumped bodies, the agent ushered the others away.

Mr. Sherman's net worth last year was estimated at \$3.58 billion by Canadian Business, an online magazine. Yet he drove an older, rusting Ford Mustang and often dressed in the same rumpled outfit: black pants, shirt and white lab coat. He typically worked 10-hour days and weekends.

Jack Kay was appointed chief executive of Apotex after the death of Mr. Sherman. He described his longtime friend

many of its successful products. It is now a global business with 11,000 employees and \$2.1 billion in total revenue last year, the firm said.

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thrashing and contortion, which mark such deaths.

The photos showed another clue inconsistent with a suicide, these people said: The belt loop around Mr. Sherman's neck didn't appear to extend far enough from the railing to provide the force he would need to kill himself.

On Dec. 20, five days after the bodies were found, police and forensics experts continued to scour the house and grounds. They had not yet ruled out homicide. That day, the Greenspan team's forensic pathologist, David Chiasson, completed his own autopsies of the Shermans.

After examining Mr. Sherman, the pathologist questioned whether the belt found on his neck was the cause of his death, people familiar with the matter said. Dr. Chiasson also spotted marks on their wrists that suggested their hands had been tied.

The Greenspan team came to believe that the crime scene had been staged, the people said, and was likely the work of hired professionals.

On Jan. 24, the lead investigator for the Toronto Police Department operation, Detective Sgt. Susan Gomes, met with Dr. Chiasson.

Two days later, Ms. Gomes told a packed room of reporters at police headquarters that the killings weren't a double suicide or a murder-suicide. The couple had, in fact, been strangled by one or more perpetrators. "The Shermans were targeted," Ms. Gomes said.

People familiar with the investigation said that conclusion was reached not long before the news conference. The precise reasons are unclear.

Mr. Sherman told the Journal that police would likely have stuck to the possibility that his father killed his mother and then himself if not for the family's efforts. "We have tried to be patient and understanding," he said.

Mark Pugash, a spokesman for Toronto police, said police had been investigating three theories all along: a double suicide, a murder-suicide and a double homicide. He said police evaluated evidence from autopsies, witness statements as well as the crime scene before reaching their conclusion.

Investigators are pursuing 580 leads, he said. They are wading through Mr. Sherman's business ties, as well as his personal investments and hundreds of lawsuits.

No suspects have been publicly identified.

"I don't think we'll ever know what happened," Mr. Kay said.

## OPINION

THE WEEKEND INTERVIEW with William Messenger and Jacob Huebert | By James Taranto

## The Lawyers Who Beat the Unions

**T**he Supreme Court closed its term this week with what Jacob Huebert calls "a perfect decision for worker freedom." In a landmark First Amendment case, the justices ruled 5-4 Wednesday that the government may not authorize labor unions to exact fees from public employees who choose not to join.

For six years, in a series of majority opinions written by Justice Samuel Alito, the court had signaled that such a decision was in the offing. It was widely expected in 2016, when a similar case was heard. Then Justice Antonin Scalia died, leaving the court with a 4-4 deadlock. The vacancy apparently prompted a change in the unions' litigation strategy, the ironic result of which was that Wednesday's case, *Janus v. American Federation of State, County, and Municipal Employees*, arrived more quickly than it otherwise might have.

Mr. Huebert, 39, is director of litigation for the Liberty Justice Center, a public-interest law firm in Chicago. He and Bill Messenger, 43, of the National Right to Work Legal Foundation led the team that won the case on behalf of Mark Janus, a Springfield, Ill., social worker.

**Vindication for the First Amendment rights of public employees was a long time in coming, and states are still trying to rig their laws against workers who don't want to join.**

A state employee, Mr. Janus, 65, had declined to join the union for political reasons. "Mark's view," Mr. Huebert says, "is that the things that Afscme has advocated have gotten Illinois into the bad financial shape that it's in." But under Illinois law, Mr. Janus was still required to pay Afscme a so-called agency fee—78% of regular union dues—to help cover its collective-bargaining expenses.

The rationale behind agency fees is that a union-negotiated raise or benefit goes to all employees, so a nonmember who doesn't pay for that representation is a "free rider." Unions also engage in political activities, including candidate endorsements and electioneering, but in an agency shop only fees from members can be used for that. The high court imported this concept from the private to the public sector in a 1977 case, *Abood v. Detroit Board of Education*. It held that while governments could not make union membership a condition of employment, they could allow unions to impose agency fees to cover expenses "germane" to collective bargaining.

Drawing the line to separate such expenses, called "chargeable" in labor-law parlance, from non-chargeable political expenses proved a difficult, hairsplitting exercise. In a 1991 case, the high court held that, in Mr. Messenger's

words, "lobbying is not chargeable—unless you're lobbying for the enforcement or ratification of the collective-bargaining agreement."

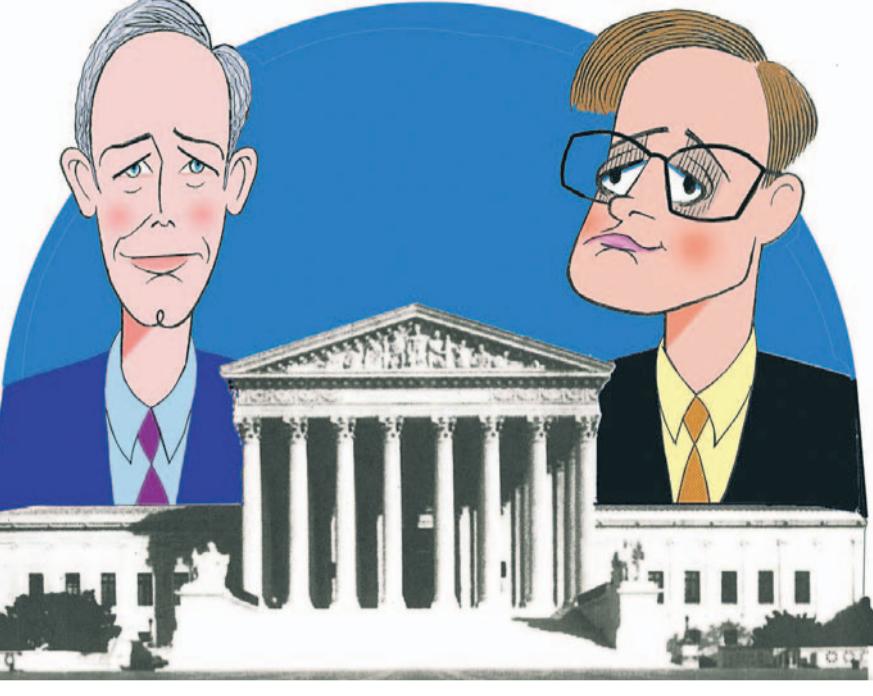
For public workers, Mr. Janus and his lawyers argued, the entire distinction was spurious. When the people on the other side of the negotiating table are government officials, Mr. Messenger says, "collective bargaining is basically like lobbying," or like "petitioning the government for redress of grievances"—either of which is a "core First Amendment activity." In this view, requiring a government employee to pay an agency fee is the equivalent of forcing him to take an oath against his conscience.

"Everything a public-sector union does is political," Mr. Huebert says. Illinois's Afscme Council 31, which he calls "an incredibly influential force in state politics," has spent years "deadlocked" in negotiations with Republican Gov. Bruce Rauner. "They've been advocating not only increased pay and increased benefits, but also increased taxes," Mr. Huebert says. "That's part of the bargaining—that they tried to get the governor to join with them in advocating for higher taxes." Under *Abood*, the union could still fund that activity with money from dissenters like Mr. Janus.

The first cracks in *Abood*'s foundation were heard in 2012. A National Right to Work lawyer went before the justices to argue a case called *Knox v. Service Employees International Union*, which challenged what Mr. Messenger calls "an obnoxious scheme by the SEIU in California." The union had imposed a "special assessment" on members and nonmembers alike for "a political fight-back fund" to oppose three 2006 ballot measures backed by Gov. Arnold Schwarzenegger. When nonmembers complained, Mr. Messenger says, the SEIU promised to "refund the money after the campaign's over, in the next dues cycle. So basically, it's like a forced loan for a political campaign."

The justices held 7-2 that this scheme was unconstitutional. Because it clearly involved non-chargeable political activity, the case didn't implicate *Abood*. But Justice Alito, in a majority opinion joined by four colleagues, criticized *Abood* as having been decided "without any focused analysis."

He went much further in *Harris v. Quinn* (2014), which Mr. Messenger argued before the high court. It involved a scheme initiated by Illinois's former Gov. Rod Blagojevich, in which the state government declared that people who accepted Medicaid payments to care for a disabled person at home were, as Mr. Messenger puts it, "public employees solely for purposes of labor law." Many of them were caring for their own parents or children, but the SEIU chapter



William Messenger (left) and Jacob Huebert.

grabbed a share of their subsidy as dues or agency fees.

As in *Knox*, the issues *Harris* raised were too narrow to require a reconsideration of *Abood*. But in a 5-4 decision against the SEIU, Justice Alito delivered a scathing critique of the 1977 ruling, which he called "questionable on several grounds." Among other faults, he wrote, the justices who decided *Abood* had "seriously erred" in interpreting earlier cases, "fundamentally misunderstood" one of them, and "failed to appreciate" the difference between public- and private-sector unions, as well as "the conceptual difficulty of distinguishing" chargeable expenses from nonchargeable ones in the government context. He added that "a critical pillar of the *Abood* Court's analysis rests on an unsupported empirical assumption."

Although near collapse, *Abood* was still binding on the lower courts, meaning that unions were assured of winning any challenge at the district and appellate levels. Justice Alito and his colleagues seemed to be inviting precisely that: a case they could use to overturn *Abood*. One possibility was *Janus*, which was launched in 2015 when Gov. Rauner petitioned a federal court to approve his executive order banning agency fees. The court held that the governor lacked standing to bring such a claim, but it allowed the case to proceed with Mr. Janus as lead plaintiff.

A different legal challenge reached the justices first. On Jan. 11, 2016, they heard arguments in *Friedrichs v. California Teachers Association*. Justice Scalia died Feb. 13. On March 29, *Friedrichs* ended with a whimper: "The judgment is affirmed by an equally divided Court." Rebecca Friedrichs would have to keep paying an agency fee, and Scalia's death had extended *Abood*'s lease on life.

Back in Illinois, *Janus* had been on hold pending a *Friedrichs* de-nouement. Evidently the unions, expecting the Scalia vacancy to be filled by a Democratic appointee,

thought *Abood* was safe. After the *Friedrichs* fizzle, Mr. Messenger says, Afscme "moved to dismiss" *Janus*, "which is different than what they did in all the other cases, where they tried to drag it out." The Seventh U.S. Circuit Court of Appeals granted the motion to dismiss in March 2017, so the case was ready for the Supreme Court. This February Mr. Messenger faced a nine-member court, including Justice Neil Gorsuch.

The result was everything Messrs. Janus, Messenger and Huebert could have hoped for, save a wider majority than 5-4. The high court unequivocally rejected the idea the unions' interest in collecting what they call "fair share" fees trumps a non-member's First Amendment rights. "Petitioner strenuously objects to this free-rider label," Justice Alito wrote. "He argues that he is not a free rider on a bus headed for a destination that he wishes to reach but is more like a person shanghaied for an unwanted voyage."

Importantly, the court also held that public unions can collect fees only from employees who "affirmatively consent" to pay them. Mr. Messenger explains: "The unions take the position that it's not a First Amendment injury unless the individual complains about it." Since *Harris*, for instance, some states have continued collecting agency fees from home-care workers, refunding the money only if the nonmember demanded it.

"*Knox* sharply criticized the idea of objection requirements," Mr. Messenger says. *Janus* struck them down altogether.

But there are other strategies that unions—and their supporters in state legislatures—are sure to employ to limit the effects of this week's ruling. "Four states," Mr. Messenger says, "have actually passed laws forcing every public employer to negotiate with the union about having a mandatory orientation" for new employees.

"Imagine it's your first day on a job somewhere," he says. "You're just going through the forms. They

say, 'Hey, this union—sign this card,' and, 'Oh yeah, by the way, you're going to go meet with the union organizer in 30 minutes, everybody is going to sign.' It's a very coercive kind of setup." He offers an analogy: "Imagine if the state of Texas said: Anyone who wants to own a firearm, you have to go down to the National Rifle Association, attend a 60-minute meeting [to] get you to join the NRA. The ACLU would be screaming bloody murder." (The American Civil Liberties Union had stayed out of these labor cases until this year, when it filed a friend-of-the-court brief urging the justices to reject Mr. Janus's First Amendment claim.)

When it comes to tilting the field in favor of unions, Mr. Messenger says, "California seems like they keep inventing new things."

The same day the court decided *Janus*, Gov. Jerry Brown signed a state budget with a provision that the timing of the mandatory orientations is not public record—it can't be disclosed to the public," in Mr. Messenger's words. An earlier law provides that "the names, contact information, of public employees is not a public record, and can only be given to a union."

Another tactic that burdens workers' First Amendment rights is to permit them to rescind union membership only during a brief annual window. "So if the card says an individual can only revoke between Dec. 25 and Jan. 5," Mr. Messenger says, "the public employer must keep taking the money, no matter how much the employee complains." Sometimes the card doesn't even inform the worker of this date limitation: In Hawaii and New Jersey, the window is codified into statute.

**B**ecause of tactics like these, even a favorable Supreme Court ruling doesn't necessarily end the matter. After the justices decided *Harris*, Mr. Messenger petitioned the courts for the refund of some \$32 million in fees the SEIU had wrongly collected from home-care workers. Even after losing in court, the union took the position that non-members were entitled to a refund only if they individually requested one. The Seventh Circuit agreed, and in January Mr. Messenger appealed the case, *Riffey v. Rauner*, to the Supreme Court.

On Thursday the justices vacated the circuit court's ruling and sent the case back "for further consideration in light of *Janus*." The high court's holding on affirmative consent ought to oblige the appellate judges to rule in favor of Mr. Messenger's clients. That would likely resolve things—but should *Riffey* reach the Supreme Court again, Mr. Messenger hopes there will be a full complement of nine justices.

*Mr. Taranto is the Journal's editorial features editor.*

## Why California Is Losing Teachers and Laying Off Secretaries



CROSS COUNTRY  
By Alyssia Finley

Nine years into a bull market, housing prices in California have reached record highs. Investors are enjoying soaring capital gains, which in turn has created a windfall for the state budget. California is now sitting on \$16 billion in budget reserves while many states struggle to balance their budgets. But beneath this patina of prosperity, many cities are careening toward bankruptcy. Schools are laying off employees and slashing programs. Some districts complain they are having trouble retaining teachers. What gives?

California property taxes, which fund local governments, are capped by the state constitution's Proposition 13 at 1% of a home's value and can't rise by more than 2% annually. So although housing costs have soared since the recession—the median home price in San Francisco is \$1.6 million—cities and school districts aren't rolling in the dough.

At the same time, municipalities are getting socked with big bills from the California Public Employees' Retirement System and the California State Teachers' Retirement System, known as Calpers and Calstrs. For years the two funds overestimated their investment returns while underestimating their expected payouts.

This helped keep local-government and worker pension costs low for a while, but now the state, cities and school districts are having to play catch-up.

School-district pension costs have more than doubled since 2013, and the state legislative analyst's office predicts they will climb another 30% over the next two years. For every dollar cities spend on worker salaries, they have to pay 32 cents to Calpers. This effective payroll "tax" charged by Calpers will increase to nearly 50 cents on the dollar by 2024. Retirement costs already equal 44% of teacher pay in San Francisco.

"Cities want to make it clear that our foundation is rocky at best," Dane Hutchings, a representative of the League of California Cities, told the Calpers Investment Committee last month. "It's crunch time, and quite frankly, we simply cannot stand another market slowdown or sub-standard returns."

Mr. Hutchings warned of impending municipal bankruptcies and urged Calpers to shoot for higher investment returns to forestall layoffs and cuts to public services. Schools last year issued thousands of pink slips. Hundreds more have gone out this year. Many are laying off secretaries and support staff to pay for teacher raises and pension benefits that have been collectively bargained.

Meanwhile, California's high cost

of living is making it harder for districts to recruit and retain teachers. A Sacramento Bee analysis found that about 18,000 teachers left the state between 2003 and 2016, with the biggest losses occurring during the housing-price peaks. A third of the teachers went to Texas, where the average teacher salary is \$53,167, compared with \$38,126 in California.

## Sacramento is flush, but cities and school districts can't keep up with rising public pension costs.

Golden State teacher salaries are the second highest in the country after New York and about \$13,000 above the state's median annual household income. A midcareer teacher in an affluent district can earn six figures. But even then, many will struggle to afford a home. Thanks to local zoning and state environmental regulations, which have restricted the housing supply, home prices have soared. The median home price in Orange County—which encompasses high-poverty areas like Santa Ana and Anaheim—is \$714,000. Good luck finding a house for less than \$1 million in the Bay Area. A condemned home in Fremont—about 30 miles south of Oakland—sold for \$1.2 million in April.

School districts are raising pay to improve teacher retention, but their budgets are simultaneously being squeezed by increasing pension costs. In 2008 San Francisco voters approved a \$198 parcel tax to recruit and pay teachers a living wage so they don't leave. Parcel taxes are a uniform surcharge on each home that lets school districts circumvent Proposition 13's limits because they are not based on the property's value. Between 2012 and 2017, teacher salary costs rose by a healthy 23%, but retirement costs soared 106%.

In June, voters approved another \$298 parcel tax to cover a 16% pay raise so that, according to the referendum, school districts can "increase the salaries of teachers and paraeducators, and . . . increase the compensation or benefits of other school district employees." But Reeta Madhavan, chief financial officer of the San Francisco Unified School District, said the second parcel tax was necessary because pension costs are rising by about \$5 million each year.

"Think about it: if we had that \$5 million each year, we could put that towards teacher salaries versus paying it out in increased Calstrs contribution," Ms. Madhavan recently explained.

Meantime, higher salaries are pushing up pension costs. That's because teachers' annual pension benefits are linked to their salaries—

typically, final compensation multiplied by 0.02 multiplied by the number of years they worked. Calstrs contribution rates are also set as a share of total payroll. So when teacher salaries increase, so do district pension bills.

Local officials are typically loath to tell voters that they need to raise taxes because pensions are squeezing out services. To sell a \$620 parcel tax in 2016, Davis Joint Unified School District in Yolo County warned: "Without the parcel tax, we could not sustain the enrichment and choice that other districts no longer can afford."

But the local teachers union complains that the parcel tax burdens school employees, who are being priced out of the area. State Sen. Bill Dodd, a Napa Democrat, has introduced a bill to exempt Davis school-district employees from the parcel tax. The bill passed the state Senate in May and is currently being considered by the Assembly.

"This bill would provide an additional incentive for public educators and school staff to live in the community in which they work, despite the severe shortage of affordable housing," a legislative analysis says.

Behold California's house of cards, propped up by subsidies and exemptions for Democrats' special friends, while taxpayers pay the mortgage.

*Ms. Finley is a member of the Journal's editorial board.*

## OPINION

## REVIEW &amp; OUTLOOK

## Trump Boils Maine Lobstermen

**D**onald Trump has upended global trade relationships, promising that temporary disruption will end in better terms for American businesses. Tell that to the Maine lobster industry that his policies are putting at a major disadvantage in Europe and China.

These should be halcyon days in lobstertown. Maine harvests more lobster than any other U.S. state or Canadian province. Last year it landed nearly 111 million pounds—its fourth-largest annual haul—which it sold for \$450 million. The lobster industry accounts for 2% of Maine's economy.

And China represents a hungry new market. The post-molt lobsters Maine harvests from July through November have softer shells than Canadian lobsters, so they're lower quality. But they also sell for several dollars less a pound. In the price-sensitive Chinese market, that has given the U.S. industry a competitive advantage over its Canadian counterparts. In 2017 the U.S. exported more than \$137 million in lobsters to China, up from \$52 million in 2015.

Yet Mr. Trump's unilateral tariffs are about to erode the price advantage of American lobsters. After the U.S. announced on June 15 plans to impose a 25% tariff on \$50 billion in Chinese goods, Beijing retaliated with a new 25% tariff on American seafood, farm products and autos, effective July 6. That's on top of the 10% to 15% tariffs China already imposes on U.S. and Canadian lobster.

Meanwhile, on July 1, China's tariff on Canadian lobster will drop to 7%. "I suspect that will virtually wipe out my company's Chinese sales," says Tom Adams, CEO of Maine Coast Company, a lobster dealer.

Mr. Adams founded Maine Coast in 2011, but he's been in the lobster business since summer 1985, when he turned 15. His "sweat equity" has paid off, and last year his company brought in \$57 million in revenue. More than one-fourth of those sales are in China. The company employs 50 workers in Maine and Massachusetts, and last year Mr. Adams expanded his York facility, borrowing for much

of that \$1.5 million investment.

"What happens if we lose 30%, 40%, even 50% of our market share?" he says. "We have to keep paying the bank for that borrowed money. If we do have an impact in sales, it's going to have a direct impact on jobs. That's the only way we reduce our expenses. I hope that doesn't happen. And to date we haven't laid anyone off." Mr. Adams adds that if the trade

tensions don't abate, he would consider moving some of his operations to Canada.

The lobster-sales forecast is also stormy across the Atlantic. While Mr. Trump tweets, the world's trade negotiators are moving on without the United States. The Comprehensive Economic and Trade Agreement between Canada and the European Union took effect in September 2017, and over seven years it eliminates tariffs on 99% of trade between the two.

The EU has already eliminated its 8% tariff on Canadian live lobster. And over the next three years it will phase out a 6% tariff on frozen whole lobster, a 16% tariff on frozen lobster parts, and a 20% tariff on processed lobster. Those penalties still apply to the United States. In 2017 American lobster exports to Europe dropped by more than \$20 million.

"Never did we expect it to be so intense," Mr. Adams says. "Between China and Europe, it's a double whammy. It's like taking body blow after body blow."

The losers here will be small family businesses and blue-collar workers. Maine lobster wholesalers and processors employ around 4,000 people. Much of the work is highly physical, with workers grading and packing lobsters. Maine also licenses around 4,500 lobster fishermen, limiting them to one boat and one set of gear. You can usually count their crews using your thumbs.

Mr. Trump is furious with Harley-Davidson for moving some motorcycle production abroad amid his tariff battles, but at least Harley is big enough to move. Most of Maine's lobster industry won't have that luxury as it pays the price for Mr. Trump's trade folly.

## A Climate Shakedown Flops

**T**he first wave of lawsuits to make oil companies atone for their alleged climate sins was beaten back this week by federal Judge William Alsup. One hope is that this victory for judicial sanity will stop the tide of litigation from spreading across the country.

The cities of San Francisco and Oakland sued BP, Chevron, ConocoPhillips, Exxon Mobil, and Royal Dutch Shell, demanding billions of dollars to remedy future environmental damage caused by fossil fuels. The Supreme Court ruled in *AEP v. Connecticut* (2011) that regulating emissions is the Environmental Protection Agency's bailiwick. But the cities tried to circumvent the ruling by arguing that the mere production and sale of oil is a public nuisance.

Judge Alsup, a Bill Clinton appointee, rightly refrained from trying to regulate global carbon emissions from the bench. The problem of climate change "deserves a solution on a more vast scale than can be supplied by a district judge or jury in a public nuisance case. While

it remains true that our federal courts have authority to fashion common law remedies for claims based on global warming, courts must also respect and defer to the other co-equal branches of government," he wrote.

The judge also ridiculed the notion that fossil fuels are a public nuisance and even suggested that they have been a boon for humanity. "Our industrial revolution and the development of our modern world has literally been fueled by oil and coal. Without those fuels, virtually all of our monumental progress would have been impossible," he noted. Fetch the smelling salts for Tom Steyer.

Judge Alsup shrewdly saw through the gambit by Democratic politicians and plaintiff attorneys to loot big oil companies to pad their coffers. Six other California cities and counties, Seattle, New York and Massachusetts have filed similar suits. While Judge Alsup's ruling doesn't bind other courts, his ruling is a sound legal guide for them to follow.

## Amazon the Rx Disrupter

**A**mazon has remade retail by adopting Apple founder Steve Jobs's dictum of showing consumers what they want before they know they want it—and then getting it to them fast. CEO Jeff Bezos is now betting he can use this strategy to disrupt the pharmacy business, which could use the competition.

This week Amazon announced it is paying \$1 billion for online pharmacy PillPack. The five-year-old startup sorts prescriptions by dose and provides labels and directions for patients with a picture of each pill. This is a godsend for patients with chronic conditions who have difficulty following a regimen. Think of the 85-year-old with high cholesterol, anemia and arthritis.

Amazon's deep corporate pockets will enable the fledgling company to build out its innovation. PillPack has about 1,000 workers compared to the 235,000 or so employed by Walgreens, the giant drug-store chain. The startup needs more scale to compete with the pharmacy giants and negotiate with benefit managers that act as middle-men with insurers. Both industries have been consolidating.

Walgreens last year bought 2,000 Rite Aid stores while Albertsons announced it would absorb the remaining 2,600 in February. CVS acquired Target's pharmacy business in 2015, and its \$68 billion bid for health insurer Aetna will allow it to direct millions of customers to its retail stores and clinics. The three major pharmacy benefit managers—Express Scripts, CVS Caremark and United Health's OptumRx—control 70% of the market and run their own specialty pharmacies. This makes it harder for PillPack to expand, but Amazon's backing will help.

Amazon will gain a pharmacy license in 49 states and avoid regulatory rigmarole. The Seattle retailer has previously shown interest in the pharmacy business and acquired wholesale

licenses in several states, but bureaucracy has frustrated its expansion.

PillPack's pharmaceutical expertise combined with Amazon's logistics mastery should let patients obtain medications faster and cheaper. Patients or their caretakers might be able to refill prescriptions simply by asking Alexa. Drugmakers are

experimenting with digital sensors embedded in pills to track adherence. So someday Alexa could cue an Alzheimer's sufferer to take her pain medicine.

Amazon's dip into the business has already spurred pharmacies to improve service, and they will now have to raise their game even more. CVS this month announced a deal with the U.S. Postal Service to deliver prescriptions in one to two days to customers for \$4.99. But what if Amazon can deliver prescriptions within hours for free?

As it happens, Amazon this week also announced that it would contract with small businesses to expedite deliveries. Amazon ships about 1.2 billion packages each year and has more than 100 million Prime subscribers who get two-day free shipping. The online retailer also offers two-hour shipping and is expanding fresh food deliveries.

Even while wading into new industries, Amazon is trying to head off competition from brick-and-mortar retailers like Target and Walmart that are fast expanding their online sales. But the U.S. Postal Service, FedEx and UPS can't deliver packages within hours as many Amazon customers may come to expect. Contracting with small businesses could expedite deliveries and lower costs.

We've criticized Amazon's e-book monopoly that the U.S. Justice Department aided when it blocked competition from Apple. But its entry into drug delivery is welcome disruption that could benefit consumers.

## A case study in how a tariff war will hurt small businesses and blue-collar workers.

## OPINION

## LETTERS TO THE EDITOR

## The Facts, When Revealed, Will Tell the Story

David B. Rivkin Jr. and Elizabeth Price Foley's "Mueller's Fruit of the Poisonous Tree" (op-ed, June 23) made me realize that an active FBI operation, such as Crossfire Hurricane, will have a strong, discoverable factual trail. In a very real sense, if illegitimately constructed, founded or pursued by more than one actor, it involves its own fully discoverable "collusion." Despite the 24/7 media spin and constant, frantic buzz, it's a relief to discern the outlines of a clear, factual pattern that will reveal itself fully if Congress can successfully access enough of the FBI and Justice Department's records. With these facts, the proof of either antecedent political bias or a legitimate national security concern will finally emerge. Democratic FBI apologists want to discredit any investigation of these facts.

That Russia might meddle in our elections or attempt to sow political discord to create wedges in our society should be a given, and nothing remotely surprising to U.S. intelligence and law enforcement. That this was somehow twisted into a narrative of Trump campaign collusion should be inherently suspect.

Let's get all the facts out into the sunlight, protecting only the essentials of sources and methods absolutely critical to our national security. Unlike our Russian counterparts, U.S. intelligence services are, and should always remain, in service to the principles of our republic, our society's order and the free and legitimate elections that support it.

RANDALL J. RADEMAKER  
Sioux Falls, S.D.

The authors convincingly make

the point that the Trump-Russia collusion narrative was ginned up from the start for purely political reasons. This raises many disturbing questions. What was the purpose of the 2016 meetings involving Christopher Steele, Trump-hating personnel from the FBI and the Justice Department and Fusion GPS (the public-relations firm that commissioned the dossier on behalf of Hillary Clinton's campaign)? Why do so many senior members of President Obama's national security team continue to perpetuate the obvious fiction that the dossier is being "more and more" corroborated over time, as James Clapper recently claimed in an interview without, needless to say, providing details?

Finally, could Robert Mueller's sitting on the truth of no collusion for over a year while his attack attorneys comb through the Trump Organization's finances in hope of unearthing malfeasance be rightly considered anything other than the perpetuation of a national scandal?

TOM FAMULARO

Long Valley, N.J.

It's hard to explain why the Russians would seek to aid the Trump campaign. About one-quarter of Russian GDP and two-thirds of exports involve energy. It makes little sense to aid a candidate who seeks to increase American fossil-fuel production that would have the effect of lowering energy prices. Common sense would lead one to dismiss the Russian investigation as purely political. Sadly, common sense is a rare commodity in Washington.

MICHAEL W. SHERER

Mercer Island, Wash.

## GMOs Are Safe, As Far as We Can Tell Today

Mark Lynas should have learned his lesson when he changed from an antagonist to a protagonist for genetically modified organisms ("Confession of an Anti-GMO Activist," Review, June 23). Science should be involved only peripherally in politics and economics. It should remain neutral. It should never be "settled." For all we know GMOs might produce a dangerous micro-organism, and the global warming of the past 12,000 years might reverse itself into the next glaciation.

ROBERT M. CRAIG  
Lake Geneva, Wis.

It isn't only environmentalists who are wary of "messing with nature." I agree that scientific consensus supports global warming and humanity's contribution to it and the safety of nuclear power. But a better analogy in this case might be our use of antibiotics in health care and agriculture, and the resulting rise in antibiotic-resistant bacteria. Mother Nature has had 4.5 billion years adapting on planet Earth. There's no reason to believe

that other organisms won't adapt over time to whatever changes we make in crop genomes. To think that we can outsmart nature is hubris.

MICHAEL W. SHERER

Mercer Island, Wash.

Mr. Lynas's ability to reason will eventually lead him to reject the claims of another pillar of modern environmentalism: man-made climate change. The science behind GMO is studied by true scientists—specifically, biologists and chemists. Both understand that nature is the result of complex phenomena that must be discovered and that theories must be tested by verifiable experimentation. Climate scientists are speculative computer modelers at best. Their early theories and dire predictions are being refuted by reality with each passing year. The climate is a far more complex phenomena-driven system than fields of crops. Attributing changes in it to one cause, carbon dioxide, is absurd.

PAYNE KILBOURN

Neavitt, Md.

## Bias Response Teams Tend to Bend One Way

Your editorial "Responding to the Bias Response Team" (June 18) is even more interesting in light of the following. On the night after Donald Trump was elected president, a vigil of more than 1,000 unhappy students assembled on the University of Michigan's campus to mourn the result. They were addressed by the president of the university, Mark Schlissel, who bucked them up with this brilliant insight (widely reported in the media): "Ninety percent of you rejected the kind of hate and the fractiousness and the longing for some sort of idealized version of a nonexistent yesterday." So, according to their

own university president, those students who voted for Mr. Trump embraced hate and fractiousness and illusory yesterdays.

Neither Mr. Schlissel nor the university as a whole has ever, to my knowledge, apologized for or retracted this superlatively foolish remark—a remark that obviously manifests bias against students who voted for Mr. Trump. There are no reports that the university's bias response team ever investigated or punished Mr. Schlissel; one wonders why they failed to do so.

DAVID E. WEISBERG

Cary, N.C.

## The Language One Uses Often Defines the Issue

Regarding the letter from the ACLU's David Cole (June 27) on defending unpopular causes: When did pro-life become "antichoice"? Careful, Mr. Cole, your bias is showing.

JOSEPH SCHMIDT

Kew Gardens, N.Y.

## Pepper ... And Salt

THE WALL STREET JOURNAL



"Oops. I just confused my share prices with my resting heart rate."

Letters intended for publication should be addressed to: The Editor, 1211 Avenue of the Americas, New York, NY 10036, or emailed to [wsj.ltrs@wsj.com](mailto:wsj.ltrs@wsj.com). Please include your city and state. All letters are subject to editing, and unpublished letters can be neither acknowledged nor returned.

SEAN P. COLGAN

Delray Beach, Fla.

## OPINION

# The First Amendment's Undisputed Champion

By Floyd Abrams

**I**t's no surprise that many of the quickly drafted assessments of Justice Anthony Kennedy's three decades on the Supreme Court have focused on his role as the man in the middle—the fifth, "swing" vote that determined monumental cases of a deeply divided court.

This visage of Justice Kennedy can be overdrawn. In his final term, for example, he voted with his conservative colleagues in all 19 of the court's 5-4 decisions. But there is no way to

**On free speech, Justice Kennedy adhered to his principles even when his colleagues swung.**

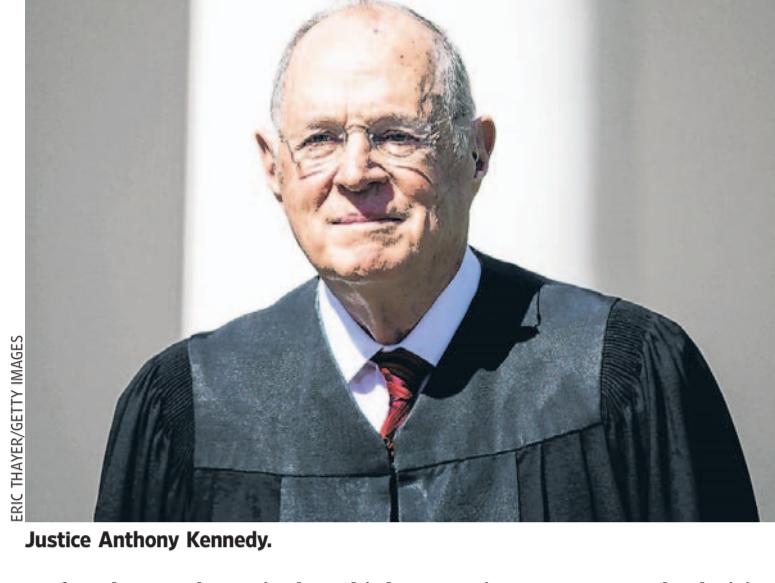
minimize the effect of the rulings that preserved *Roe v. Wade*, that established the right of gay Americans to marry, and that assured that those accused of terrorism and detained by the government were able to petition for a writ of habeas corpus. In all those cases and more, it was the fifth vote provided by Justice Kennedy, joining his more liberal colleagues, that carried the day.

But in one area of the law Justice Kennedy was not in the center of the court—he was its leader. He was the Supreme Court's most dedicated, consistent and eloquent defender of the First Amendment. He played that

role when other conservatives rejected First Amendment arguments, and when liberals did. He was the First Amendment champion of the High Court.

Since joining the court in 1988, Justice Kennedy has written so many First Amendment opinions and dissents that it is difficult to choose which ones best illustrate his views. Some are well known, at least by their names, including his majority opinion for the court in *Citizens United v. Federal Election Commission* (2010). Too many people do not know that *Citizens United* is rooted in two generally undisputed constitutional propositions: that "political speech must prevail against laws that would suppress it by design or inadvertence," and that the "First Amendment 'has its fullest and most urgent application' to speech uttered during a campaign for political office."

It is instructive to recall two cases decided in Justice Kennedy's early days. In 1989 the court considered the issue of whether burning an American flag in protest was protected by the First Amendment. It was a crime in Texas and 47 other states, and Gregory Lee Johnson had been convicted of a violation near the 1984 Republican Convention in Dallas. The court held 5-4 that the law was at odds with the First Amendment. Then, as now, issues relating to the flag were incendiary. If NFL players kneeling when the national anthem is played can create national unrest today, literally burning the flag has sometimes led to near-nuclear reactions of those in the area.



Justice Anthony Kennedy.

So fraught was the topic that Chief Justice William Rehnquist's dissent included the entire text of the national anthem and a patriotic poem by John Greenleaf Whittier that covered two full pages.

In that context, the young Justice Kennedy's response was telling. Justice William Brennan wrote the majority opinion holding the statute unconstitutional. Justice Kennedy added a brief concurrence, in which he agreed with the dissenters that, as he wrote "the flag holds a lonely place of honor in an age when absolutes are distrusted and simple truths are burdened by unneeded apologetics." But that could not affect his First Amendment judgment. "The hard fact is that

sometimes we must make decisions we do not like. We make them because they are right, right in the sense that the law and the Constitution, as we see them, compel that result." However repellent Mr. Johnson's conduct was, Justice Kennedy concluded, "the fact remains that his acts were speech, in both the technical and the fundamental meaning of the Constitution."

And consider *Hill v. Colorado*, a case decided in 2000. A Colorado statute made it a misdemeanor for anyone within 100 feet of a "health care facility"—meaning a place where abortions occurred—to "knowingly approach" another person within 8 feet, without her consent, to engage in "oral protest,

education or counseling." Adopted in an obvious attempt to avoid efforts near abortion clinics to intimidate women who had decided to have abortions or pressure them not to do so, the law's drafting was extremely broad. A 6-3 majority nonetheless held it constitutional in an opinion by Justice John Paul Stevens, rooted in the "privacy interest in avoiding unwanted communication."

Justice Kennedy dissented vigorously. "For the first time," he wrote, "the Court approves a law which bars a private citizen from passing a message, in a peaceful manner and on a profound moral issue, to a fellow citizen, on a public sidewalk.... So committed is the Court to its course that it denies these protesters, in the face of what they consider to be one of life's gravest moral crises, even the opportunity to try to offer a fellow citizen a little pamphlet, a handheld paper seeking to reach a higher law."

The *Hill* decision was one of the least sympathetic in living memory to First Amendment values. In *McCullen v. Coakley* (2014), the court changed course. An opinion by Chief Justice John Roberts, which Justice Kennedy joined, struck down a similar Massachusetts law—without even mentioning the *Hill* case.

*Mr. Abrams is senior counsel at Cahill Gordon & Reindel LLP and author of "The Soul of the First Amendment" (Yale, 2017).*

Peggy Noonan is on leave and will return in the fall.

## No Country for Old Pretentious Titles

By Alexandra Hudson

**S**ince the founding of the United States, two competing forces have battled for primacy: precedence and equality.

In May 1789, during the debate over how the leader of the U.S. should be addressed, John Adams advocated a "first among equals" mentality. He campaigned for the American president to be "His highness, the President of the United States of America, and Protector of the Rights of the Same." Such a lofty title, he argued, was necessary to confer appropriate respect for the chief executive of the nascent country's federal government—especially important since not all states had yet adopted the Constitution.

"His Excellency," "His Elective Highness" and "His Majesty George" were also contenders. Yet George Washington was satisfied with the unassuming "Mr. President."

Thomas Jefferson, author of the country's "all men are created equal" creed, wrote off Adams's title campaign as "superlatively ridiculous." Perhaps Jefferson even had the title campaign in mind when he developed his *pêle-mêle* etiquette, which set out to eliminate protocol based on title,

class or rank. In an 1803 memo to his cabinet, President Jefferson outlined new procedures that would require his guests to check their status at the door.

"When brought together in society, all are perfectly equal, whether foreign or domestic, titled or untitled, in or out of office," he wrote. "No titles being admitted here, those of foreigners give no precedence. Difference of grade among the diplomatic members gives no precedence." Congressmen, judges, lords, foreign diplomats—all were equal in the Jefferson White House.

The Adams-Jefferson debate persists to this day. In 2009 Sen. Barbara Boxer showed herself to be a modern Adams. During a congressional hearing, she corrected a brigadier general: "You know, do me a favor, could you say 'Senator' instead of 'ma'am'?" She added, "I worked so hard to get that title, so I'd appreciate it."

Fortunately, much of America still emulates Jefferson's skepticism of inordinate deference. Vice President Joe Biden said in 2009, "In Delaware I've always been Joe, and everyone calls me that. And I hope they always will." He's not the only politician who insists loud demands for deference

are laughable and contrary to the American democratic ideal. Yet the longing for priority over others will never be entirely eradicated. This created complications in Jefferson's time that continue today.

Jefferson, abiding by his *pêle-mêle* principles, once snubbed the British ambassador to the U.S. and his wife. During a state dinner, the president

### In America, the premise that each person is equal generally outweighs the desire to pull rank.

didn't prepare a planned seating arrangement. Rather, Jefferson hosted the dinner at a round table—where, unlike at a rectangular table, no one could be distinguished as a guest of honor.

Today visitors to America are often confused and suspicious of the informality—especially in the South and Midwest. Language is partly a contributor to this cultural casualness. Numerous languages offer two forms of the pronoun "you," which

are used for informal and formal contexts. One form is meant for close friends and family, while the other shows social distance and respect for peers and superiors. Today Americans are informal unless formality is explicitly needed—or commanded, as in Ms. Boxer's case.

Finding a balance gets to the heart of American equality. The self-evident truths in America's founding documents refer to equal treatment under the law. They don't mean that all people are equal in their abilities, interests or life outcomes. But the American credo recognizes that each human life is valued equally, and that everyone is owed, and owes to others, a level of respect by virtue of being a part of the human community.

America's democratic view of respect is well-embodied in the Midwest, where people of every income level don bluejeans and flannel button-ups—and everyone eagerly demonstrates an equal measure of courtesy toward all. Surrendering professional narcissism is easier said than done. But man's competing desire for precedence and equality can be ameliorated by drawing distinctions in context—private and public, informal and professional.

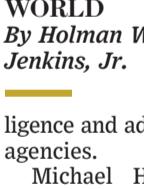
Honorifics that highlight hierarchy are important in professional settings. A clear chain of command is critical in places like courtrooms and battlefields, so deferring to title and rank there makes sense. But when professional hierarchies are appealed to in private and social settings, they dangerously distract from the equal value in all persons. Imagine if a senator demanded her family and friends refer to her as such in private settings.

Before the subject of presidential titles was broached, George Washington offered his thoughts on this topic. He wrote to Alexander Hamilton in August 1788, "I hope I shall always possess firmness and virtue enough to maintain (what I consider the most enviable of all titles) the character of an honest man."

From this country's beginning, the first president voluntarily surrendered rank-related pretense—mindful to avoid exalting himself as Adams would have liked, or unduly offending others as Jefferson did. His aim was to better value and respect his fellow Americans. Let us each endeavor to do the same.

*Ms. Hudson is writing a book on civility.*

## Why the CIA Needs Its Own Horowitz Report



By Holman W. Jenkins Jr.

Now that the world has digested the Horowitz report, notice how much of the story it doesn't tell. The Federal Bureau of Investigation is treated as a closed loop when, in fact, much of its decision making was based on intelligence and advice supplied by other agencies.

Michael Horowitz deals with some of this information in a classified appendix, which the public can't see. Even so, as Justice Department inspector general, he is not authorized to examine and dissect the internal communications and decision-making of other agencies the way he did the FBI's. Yet the necessity of doing so fairly screams at us.

Mr. Horowitz mentions Russia many times in relation to the Trump collusion investigation but never in

relation to the Hillary Clinton email investigation. He refers to secret intelligence that was pivotal to FBI Chief James Comey's decision to intervene publicly in the Clinton case, but he doesn't mention (as media reporting last year did) its Russian origins.

He tells us that the FBI regarded the intercepted information, involving a purported improper communication by Attorney General Loretta Lynch, as "objectively false." He doesn't tell us, as the Washington Post and CNN did last year, that some in the FBI regarded the information as a Russian plant.

He tells us that Mrs. Clinton and President Obama exchanged emails on her private server while Mrs. Clinton was especially vulnerable in the "territory of a foreign adversary." He doesn't tell us the foreign adversary was Russia.

One thing we learned, because Mr. Horowitz blurted it out in Senate testimony on June 18, is that the

Loretta Lynch information, so crucial to Mr. Comey's actions, has been kept from the public and even members of Congress because it "was classified at such a high level by the intelligence community." Which is certainly convenient for the intelligence community.

Let's be realistic. We've been told officially many times that Russia didn't hide its activity in the 2016 race. It carried out its meddling in a blunt, in-your-face manner that would have been seen as a direct challenge to our own intelligence agencies. These agencies, in turn, viewed Mr. Trump as a witting or unwitting Kremlin agent.

We don't need to speculate about this. The FBI's Mr. Comey, since Election Day, has been a model of discretion compared with Obama CIA chief John Brennan and Obama Director of National Intelligence James Clapper. Mr. Brennan suggested on national TV that Vladimir Putin possesses secret information he uses to control President Trump. Mr. Clapper, also on national TV, called Mr. Trump a Kremlin "asset" whose election was secured by Russian meddling.

Their involvement in the events Mr. Horowitz details was extensive and pervasive and yet these men are invisible in his report. And it is hardly plausible that they were more restrained in their accusations

against Mr. Trump in their private dealings with Mr. Comey before the election than they have been on TV since.

Which brings us to Mr. Comey's potentially most consequential decision, his reopening of the Hillary email investigation just before Election Day, which many Democrats and independent analysts say may inadvertently have elected Mr. Trump.

### No need to speculate: The intelligence agencies saw Trump as a de facto agent of the Kremlin.

Mr. Horowitz finds no convincing explanation of why a month elapsed between the surfacing of the Weiner laptop and Mr. Comey's action. It might be useful, though, to understand what else was going on between Sept. 26 and Oct. 28. The Yahoo news article based on the Steele dossier had recently appeared. A Mother Jones piece would soon appear. Inquiries about the Steele dossier would have been pouring into the agency. The FBI would soon break off relations with Christopher Steele for speaking to the press. Harry Reid would soon exploit the FBI's

possession of the dossier to try to get its allegations into the media.

Mr. Comey would have seen that a partisan explosion was coming. Nothing would remain secret. Even in the expected Hillary victory, a GOP Congress would insist on an investigation.

This is the environment in which he made a decision that objectively seems aimed at redeeming the FBI's reputation as a straight shooter amid a welter of intelligence community actions that eventually would be exposed and second-guessed.

An underremarked facet of the Horowitz report reveals just how much illegal leaking to the press FBI officials were guilty of. The same rock needs to be turned over with respect to Mr. Brennan's and Mr. Clapper's former agencies. If Mr. Putin's goal was to make a mockery of U.S. democracy, his most useful if unwitting allies may well have been our so-called intelligence community.

Mr. Comey's FBI is not the only intelligence branch that needs a good shaking out. Historians have a strong case already that both sets of today's partisan talking points are valid: The Obama intelligence agencies were biased against Mr. Trump and also blunderingly helped elect him—a conclusion based in fact and yet so disconcerting that the press has turned away from it.

## THE WALL STREET JOURNAL.

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From "The Right Way to Shun the Trumpsters" by Margaret Carlson,

TheDailyBeast.com, June 29:

Last summer at a party on Long Island, the largely Manhattan crowd was surprised, but polite, when Jared Kushner and Ivanka Trump were among the guests. . . .

## SPORTS

## WORLD CUP

# Uruguay: Soccer's Dead Poets Society

Óscar Tabárez, the man they call Maestro, has found success by running his team like a boarding school

BY JONATHAN CLEGG  
AND JOSHUA ROBINSON

Sochi, Russia

**IN THE 150 YEARS** since soccer was invented on the muddy playing fields of English boarding schools, the sport has changed so much that it would be almost unrecognizable to the blue-blooded boys who kicked around a heavy leather ball.

But it hasn't changed completely.

Because in a small outpost on the Volga River, a gray-haired 71-year-old who walks with a cane, the man they call Maestro, is still educating young men to carry themselves with character—and win World Cup games.

His name is Óscar Tabárez. And in 12 years in charge of Uruguay's national team, he has helped turn a country of 3.5 million into the best pound-for-pound team in world soccer by treating his players as if he were a housemaster at Eton or Harrow.

Just as any British boarding school, Tabárez has long said his primary goal was to mold well-rounded men. He imparts lessons about respect, decency, and the importance of good manners. At Tabárez's request, Uruguay might be the only team in Russia to have its squad of millionaires share bedrooms for the tournament.

"He would always say that being a football player is a profession but it is the way you behave as a human being that is important," said Diego Forlán, a former Uruguay captain under Tabárez.

Nothing reflected worse on the team than its record in the years before Tabárez took over in 2006. Though Uruguay won World Cups in 1930 and 1950, when squads were still traveling to the tournament by boat, the modern era had been less kind to them. The team hadn't been near a World Cup semifinal since 1970. Worse still,

## TV Listings

**Saturday, June 30**

(All times Eastern)

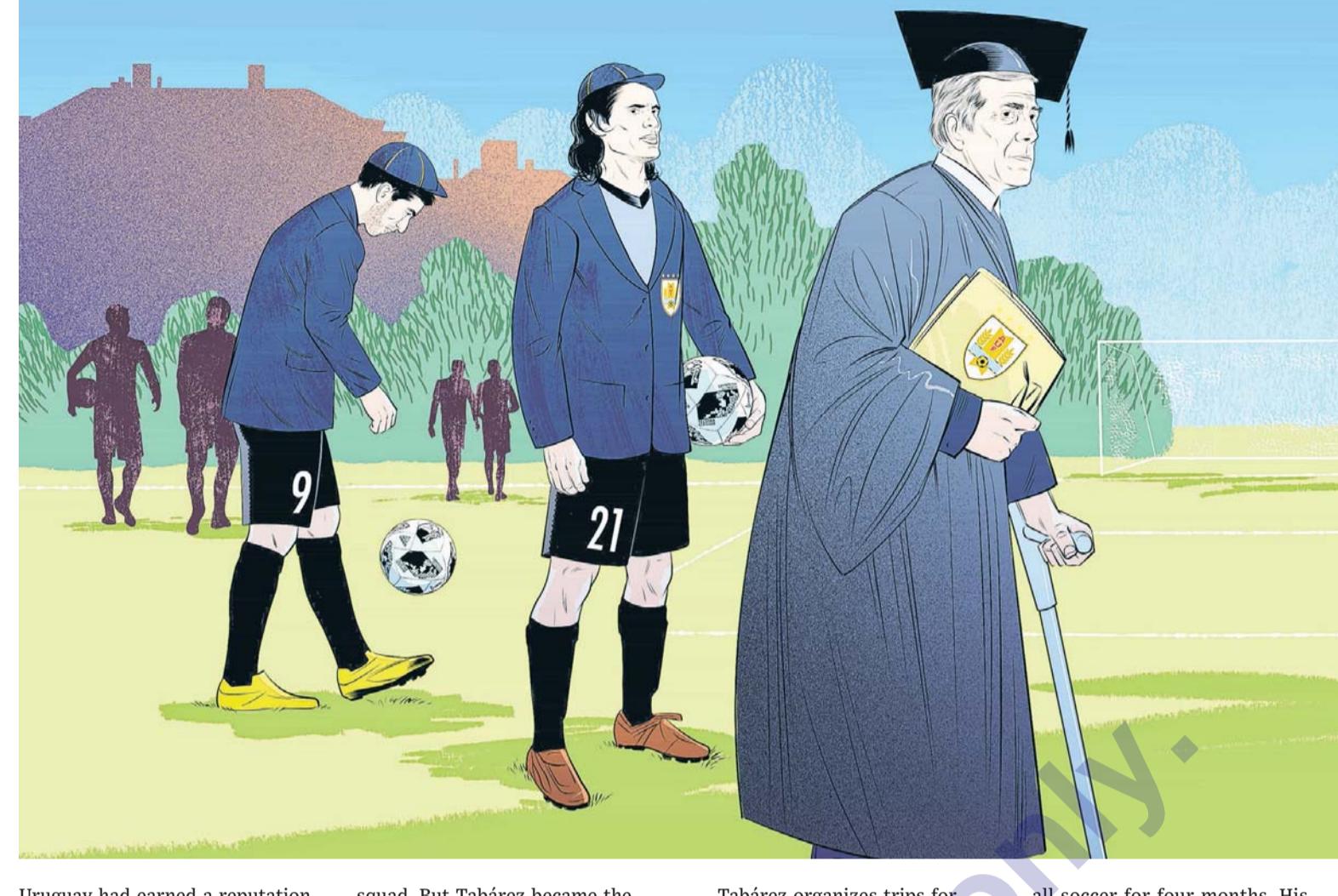
10 a.m.: France vs. Argentina (FOX)

2 p.m.: Uruguay vs. Portugal (FOX)

**Sunday, July 1**

10 a.m.: Russia vs. Spain (FOX)

2 p.m.: Croatia vs. Denmark (FOX)



DOMINIC BUGATTO

Uruguay had earned a reputation as playground bullies with their reckless and physical play.

When Tabárez was called in to fix it, he immediately identified the problem. Uruguay had talented players, but lacked the structure to turn them into upstanding citizens. He drew up a plan to revamp the training of the national teams, a dossier known by the catchy title, "Project for Institutionalizing the Processes of the National Teams and the Training of Their Soccer Players."

The document wasn't so much a tactical or technical treatise as a charter for his program. "A young talent should train and prepare for life's challenges," Tabárez wrote. "The young person must study, we shouldn't obstruct that, we should favor it, it increases their sporting potential."

Other managers at the World Cup simply coach the senior

squad. But Tabárez became the dean of the entire men's program, from the Under-15s to the team that travels to the World Cup. Every member of those squads would come to train under Tabárez at the national training center, where he could shape their development as players and as people.

Tabárez's professorial air is no coincidence. Before he went into management full time, he was an elementary-school teacher. He likes to educate his players on history, geography, the arts, and anything else he happens to find interesting in the moment. This too is part of the Tabárez curriculum. "One time we played in Japan and we were talking about how we were surprised by the culture," said Forlán, an analyst for Telemundo Deportes at the World Cup. "So after dinner, the Maestro got the lads together and we listened to him talk about Japan."

Tabárez organizes trips for young players to attend museums and the theater. He engages his players on subjects as diverse as classical music and botany. "What Tabárez knows about plants is tremendous," Claudio Pagani, who runs Uruguay's national training complex, has said.

Before Uruguay competes in any tournament at senior or youth level, Tabárez lectures the team on what behavior is expected of them. His message is always the same: No fouls, no bad conduct, and whatever happens, no back talk to the referees.

Like every teacher, the Maestro knows that some lessons go in one ear and out the other. During his time in charge, he has overseen striker Luis Suárez commit a deliberate handball in the 2010 World Cup finals and bite an opponent at the 2014 World Cup, for which he was suspended from

all soccer for four months. His team has also racked up eight red cards at tournaments, plus countless yellows, including a whopping 18 in six games at the 2011 Copa America, since he took over in 2006.

Still, Uruguay captain Diego Godín said Tabárez continues to tell players how disappointed he is with them, even when they are sent off while playing for their clubs. And Suárez credits the Maestro's exhortations with turning him into a reformed character.

No matter what happens to this team at this World Cup, Tabárez's mission to educate Uruguayan players on matters away from the field will continue.

"It is as I say to the players of the National Team," Tabárez said. "You can make good contracts in clubs, gain prestige, but there are some things you can only get playing for Uruguay."

## WORLD CUP

# Video Review Has an Impact

BY ANDREW BEATON

Saransk, Russia

**BEFORE** the World Cup began, you could have circled one match on the calendar that would almost certainly be sent into anarchy by the newly implemented video review system.

The game featured the player the cameras love more than anyone else, Portugal's Cristiano Ronaldo, and soccer's most brutally candid manager, Iran's Carlos Queiroz.

The expected fireworks went off as planned. First, there was a controversial review involving Ronaldo. Then there was another controversial review involving Ronaldo. Later there was a third controversial review. This one, did not involve Ronaldo.

The game finished in a 1-1 tie, but not until after this circus reared its head and brought an issue into the spotlight: Video Assistant Referee has the capacity to turn o jogo bonito into an ugly game.

"The VAR doesn't work,"

Queiroz said after the match.

It is having an impact, though. Through the first 48 games of this World Cup, encompassing all of the group stage, there have been 335 incidents checked by VAR and 14 decisions changed, said Pierluigi Collina, Chairman of the FIFA Referees' Commission, at a Friday press conference in Moscow.

The most notable impact to fans, other than the awkward dance of soccer games regularly being stopped for reviews: Because of VAR, this tournament has already broken the World Cup record for most penalty kicks—and we still have the entire knockout stage to go. VAR has already contributed to six penalty kicks.

Collina, a legendary Italian referee, noted that even though referee accuracy has improved this World Cup due to the implementation of the system, the games have



Through 48 matches, there have been 14 decisions changed after video review.

gotten longer as a result, too.

"Something has always been said: VAR doesn't mean perfection," Collina said.

But the cost, critics have noted, can be disrupting the game, confusing the people on the pitch and possibly still getting calls wrong, even after review.

Denmark star Christian Eriksen said the video review system is costing soccer some of its charm. Other players and coaches have criticized either its implementation or specific calls that were reviewed.

In the Iran-Portugal game, Iran was awarded a penalty kick on video review. But Queiroz noted, as others have, that coaches and

players can feel completely ignorant to what's going on because they don't get to see what's being reviewed, at least not as much as the half-dozen angles fans are shown on TV broadcasts. At the stadiums here in Russia, most replays have been shown only after the VAR decision has been rendered, and those angles have frequently been more limited.

Collina said Friday that of the decisions checked, 95% were correct and 99.3% were correct after VAR. This, somehow, does not jive with the optics of what players and coaches are seeing. "Everybody agreed VAR is not going well," Queiroz said.



NICK KYRGIOS

## TIME IS RIPE FOR A SURPRISE

BY TOM PERROTTA

**FOR THE FIRST TIME** in a decade and a half, something shocking could happen at Wimbledon this year: A player who is not a member of tennis's Big Four could actually win the men's title.

Since Roger Federer won the first of his eight Wimbledon titles in 2003, no man other than Federer, Rafael Nadal, Novak Djokovic or Andy Murray has become a champion at the All England Club. It's a remarkable collection of titles by the most punishing group of men in the sport's history.

But this year, there are signs that others have a chance—and are craving it. Ivan Lendl, the former No. 1, sees that a number of players have a chance to win their first Wimbledon.

"Roger and Rafa have taken the last six Slams," Lendl said. "But they came off injuries, they came off layoffs. Novak is coming off a layoff, Andy hasn't played in a year," he said. "Just by creating a vacuum it's more open."

The opportunity is there, in

part, because the Big Four are older and less stable. Murray is returning from a hip operation and still may not even enter Wimbledon. Djokovic is beginning to look more like himself, but he has not won a Grand Slam title since 2016.

As for Nadal, he's a contender at Wimbledon, especially if he survives the early rounds when the courts have more grass and less of the dirt that suits Nadal's running and rallies. Nadal won Wimbledon in 2008 and 2010, but has not gotten past the fourth round since 2011.

Then there's Federer, the best grass court player in men's history. He won last year's tournament without dropping a set and has eight career Wimbledon titles. After Nadal, Murray and Djokovic lost to other players, Federer faced one tough opponent: Marin Cilic, who had a rough blister on his foot that weakened him in the final.

That shouldn't happen this time. Cilic just won a title in London's prestigious Queen's Club by beating Djokovic in the final. Standing at 6-foot-6, Cilic, who won the U.S. Open in 2014, has a big serve and slugger forehand, and a two-handed backhand that is his most dangerous stroke. He's at his best on grass, and he's the top contender at Wimbledon besides Federer.

In Halle, Germany earlier this week, 21-year-old Borna Coric beat Federer in the final. It was Coric's first win against Federer; he had another chance to beat him at Indian Wells this year, when he led Federer by a set and a break before losing.

Even more dangerous, if unpredictable: Nick Kyrgios, the 23-year-old from Australia. Kyrgios has one of the finest serves in tennis (he hit 32 aces in two consecutive matches at Queen's Club, and one of those matches was just two sets). Kyrgios said he's holding up well and seems to have recovered from recent elbow pain.

Asked how much of a threat he would be at Wimbledon, Kyrgios said, "Big one."



**Big Gamble**  
Investors keep putting  
money into funds  
that keep losing **B14**

BUSINESS | FINANCE | TECHNOLOGY | MANAGEMENT

DJIA 24271.41 ▲ 55.36 0.2%

NASDAQ 7510.30 ▲ 0.1%

STOXX 600 379.93 ▲ 0.8%

10-YR. TREAS. ▲ 1/32, yield 2.847%

OIL \$74.15 ▲ \$0.70

GOLD \$1,251.30 ▲ \$3.50

EURO \$1.1683

YEN 110.71

# EXCHANGE

THE WALL STREET JOURNAL.

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SATURDAY/SUNDAY, JUNE 30 - JULY 1, 2018 | **B1**

**Battle Ready**  
Why the Marines  
ditched the best  
offense in history **B5**



## The New Sheriffs of Silicon Valley



The privacy posse:  
Roger McNamee,  
Tristan Harris and  
Jim Steyer.

**T**ristan Harris walked out of a sushi lunch and switched his phone out of airplane mode when it practically vibrated out of his hand. Ex-colleagues at Google and other friends were frantically trying to reach him.

Google Chief Executive Sundar Pichai had just announced that the search giant was going to give customers tools to help them limit the time they spend on smartphones. The idea was to help promote their "digital well-being." In Silicon Valley, where keeping users online as long as possible has been the traditional path to greater profits, the notion that companies should curb screen time was heresy—and it was Mr. Harris's idea. Not only that, but Mr. Pichai was using almost the exact same language Mr. Harris did when he proposed the concept five years ago as a disillusioned Google software engineer.

The message was largely ignored then. It isn't anymore.

Mr. Harris, 33, forms one-third of an unlikely triumvirate of Silicon Valley insiders who for more than a year have been cajoling executives and buttonholing lawmakers about the tech industry's at times reckless approach

An unlikely trio of tech insiders is aiming to reform an industry they say can no longer police itself

BY BETSY MORRIS

to privacy and seeming indifference toward its broader impact on society. The troika, which also includes maverick investor Roger McNamee and Bay Area power broker Jim Steyer, is taking on the industry's most powerful players, including Facebook Inc., Apple Inc. and Google parent Alphabet Inc.

"We will hold the industry accountable," Mr. Steyer says. "That means direct dialogue with all of the companies and, when necessary, shaming them."

The three men driving the coalition have contrasting personalities and motivations—and sometimes conflicting tactics. But they are united against a precept that defined Silicon Valley for decades: that technological progress is by definition good for society. As

scandals rocked technology firms ranging from Facebook to Uber Technologies Inc. through the fall and into this spring, the men pushed their agenda in private meetings with top executives including Alphabet Chief Financial Officer Ruth Porat; Satya Nadella, chief executive of Microsoft; Marc Benioff, chief executive of software company Salesforce.com; and senior officials at Apple.

"Our entire industry is in a crisis of trust," says Mr. Benioff. "All of us are now recognizing they are prophets....They saw it coming."

In addition to Mr. Pichai's announcement, Facebook Chief Executive Mark Zuckerberg in January said in his blog that a big focus of 2018 would be "making sure the time we all spend on Facebook is time well spent"—phrasing that echoed the previous name of Mr. Harris's nonprofit, Time Well Spent. (The organization is now called the Center for Humane Technology.) Facebook also has introduced measures designed to curb fake news and better monitor political advertising.

Apple in early June unveiled new controls designed to help curb the amount of time spent on the company's products.

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THE INTELLIGENT INVESTOR | JASON ZWEIG

## Investors Are Behaving Better. It Won't Last.



On the eternal treadmill of the financial markets, investors can't even keep up with their own investments.

In what's often called the behavior gap, investors underperform the investments they own, partly because they tend to buy high and sell low instead of vice versa.

New evidence suggests investors may be behaving better—but they aren't turning into financial angels.

A study published in June by Morningstar, the investment-research firm, finds that the average mutual fund gained 5.79% annually

over the 10 years ending March 31; the average investor, 5.53%. That gap of 0.26 percentage point is much narrower than in the past; over the 10 years through the end of 2013, investors lagged their investments by a horrific 2.5 percentage points annually.

What's behind this puzzle?

Let's imagine a fund that starts with \$100 million in assets and earns a 100% return from Jan. 1 through Dec. 31. Assuming that no one added or subtracted any money along the way, \$100 million at the start of the year turns into \$200 million at the end.

Attracted by that spectacular 100% return, investors pour \$1 bil-

### Laggards

Investors could have earned decent returns if they had just bought and held emerging-market bond funds and European stock funds.

Instead, they traded them—buying high, selling low and ending up earning

much less than the funds themselves..

Average returns\* if investor...

...had just bought and held funds

...traded fund

-7.78

\*annualized over the 10 years ended March 31, 2018

Source: Morningstar

### EMERGING MARKETS BOND

6.10%

### EUROPE STOCK

4.04

### 2.57%

THE WALL STREET JOURNAL.

lion into the fund overnight. It thus begins the new year with \$1.2 billion. This year, however, its investments fall in market value by 50%.

After gaining 100% in year one and losing 50% in year two, an investor who had bought at the be-

ginning and held until the end without any purchases or sales would have exactly broken even. (Losing half your money after doubling it puts you back where you started.)

Such rigid buy-and-hold behav-

Please turn to page B8

## Carriers Cash In On Fees

AT&T and Sprint raise administrative charges

BY DREW FITZGERALD

**AT&T** Inc. and **Sprint** Corp. have recently raised the administrative fees they charge customers, moves that will bring in hundreds of millions of dollars in additional revenue for the companies.

AT&T, the second-largest U.S. carrier by subscribers, has more than doubled the administrative fee it tacks on to the bottom of many wireless customers' bills. The monthly fee, which affects most noncorporate wireless plans excluding prepaid service, recently hit \$1.99, up from \$1.26 earlier this year and 76 cents in 2017.

Financial-services firm BTIG estimated the higher fees could add \$970 million to AT&T's annual revenue and throw off enough cash to finance more than \$12 billion of debt.

The increase to monthly bills could help the companies whittle away at their sizable debt.

The extra cash could be crucial as AT&T works to pay down about \$180 billion of net debt. The company closed its \$81 billion takeover of Time Warner Inc. in June after a federal judge denied a government antitrust lawsuit challenging the deal. The transaction made Dallas-based AT&T the most indebted nongovernmental corporate-bond issuer in the world, according to Moody's Investors Service.

The telecom company followed up the Time Warner acquisition with a \$1.6 billion deal for advertising technology company AppNexus.

Aside from debt, AT&T must also cover its dividend, which paid out more than \$12 billion to shareholders last year.

AT&T said it isn't alone in charging fees atop customers' base service rates. "This is a standard administrative fee across the wireless industry, which helps cover costs we incur for items like cell site maintenance and

Please turn to the next page

## Deutsche Bank Poised For Removal From Index

Many ETFs would then sell the sliding stock

BY MIKE BIRD AND JENNY STRASBURG

The sharp drop in the market value of **Deutsche Bank** AG could mean an exit from a major European index, jeopardizing its inclusion in the giant funds that track that benchmark.

Deutsche Bank's market capitalization has fallen to a level that would see it removed from the Euro Stoxx 50, taking the lender out of the orbit of exchange-traded-funds with €42.5 billion (\$49.17 billion) in assets that follow this index.

A large bout of buying could save Deutsche Bank's place in the index when it is rejigged in September, but its presence in the relegation zone is an indicator of the once-European banking champion's fall from grace.

The company's share price has dropped by more than 40% this year, as it struggles with falling profitability and other legacies of pre-financial crisis exuberance.

On Thursday, the Federal Reserve said it had failed a big chunk of the U.S. operations of Deutsche Bank in the second leg of its annual stress tests, citing "material weaknesses in capital planning." The result was widely expected but underscores the bank's problems in the key American market.

The prospect of dropping out of the index is on Deutsche Bank's radar, according to a person familiar with the matter. By the bank's estimates, somewhere less than 5% of its shares outstanding would likely be affected by investor rebalancing, in

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## THE SCORE

THE BUSINESS WEEK IN 7 STOCKS

**HARLEY-DAVIDSON INC.**

**HOG** Harley-Davidson said Monday it plans to shift production of more of its iconic motorcycles overseas to avoid European Union tariffs, a move that sent its shares tumbling. The 31% levy enacted by the EU last week was in response to U.S. tariffs on aluminum and steel, and would raise the cost of each Hog Harley ships to Europe from the U.S. by about \$2,200. President Donald Trump on Tuesday condemned Harley's decision, saying it would mark "the beginning of the end" of the iconic brand. "[T]hey will be taxed like never before," he tweeted.

**GENERAL ELECTRIC CO.**

**GE** GE shares notched their best day in three years, after the company said Tuesday it would shed two of its units in an effort to reverse a painful slump. GE, whose appliances once filled American homes, will spin off its health care division and sell its ownership stake in oil-services company Baker Hughes. The company also plans to shrink its headquarters operations with \$500 million in additional cuts by the end of 2020. The announcement coincided with the first day Walgreens Boots Alliance replaced GE in the Dow Jones Industrial Average.

## PERFORMANCE OF AMAZON AND ITS COMPETITORS

Source: SIX

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-5%

-10%

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-35%

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-970%

-975%

-980%

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-1000%

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-1010%

-1015%

-1020%

## BUSINESS NEWS

# Amazon Puts Drugstores on Edge

PillPack deal threatens chains' generic sales, but costliest drugs may stay out of reach

By JONATHAN D. ROCKOFF  
AND JOSEPH WALKER

**Amazon.com** Inc.'s agreement to buy an online pharmacy sets the stage for the internet retailer to make it more convenient to fill a prescription. But the deal alone won't likely address a bigger problem for patients and their employers: the high cost of many drugs.

The purchase of **PillPack** Inc. will give Amazon a platform to sell medicines but not alter how high-price drugs are paid for, industry experts say. And the deal doesn't yet give Amazon the expertise to handle the costliest drugs—biotech medicines that require special handling.

"That's a long way from a fundamental disruption of the U.S. drug channel," says Adam Fein, chief executive of the Drug Channels Institute, which provides research on the drug supply chain.

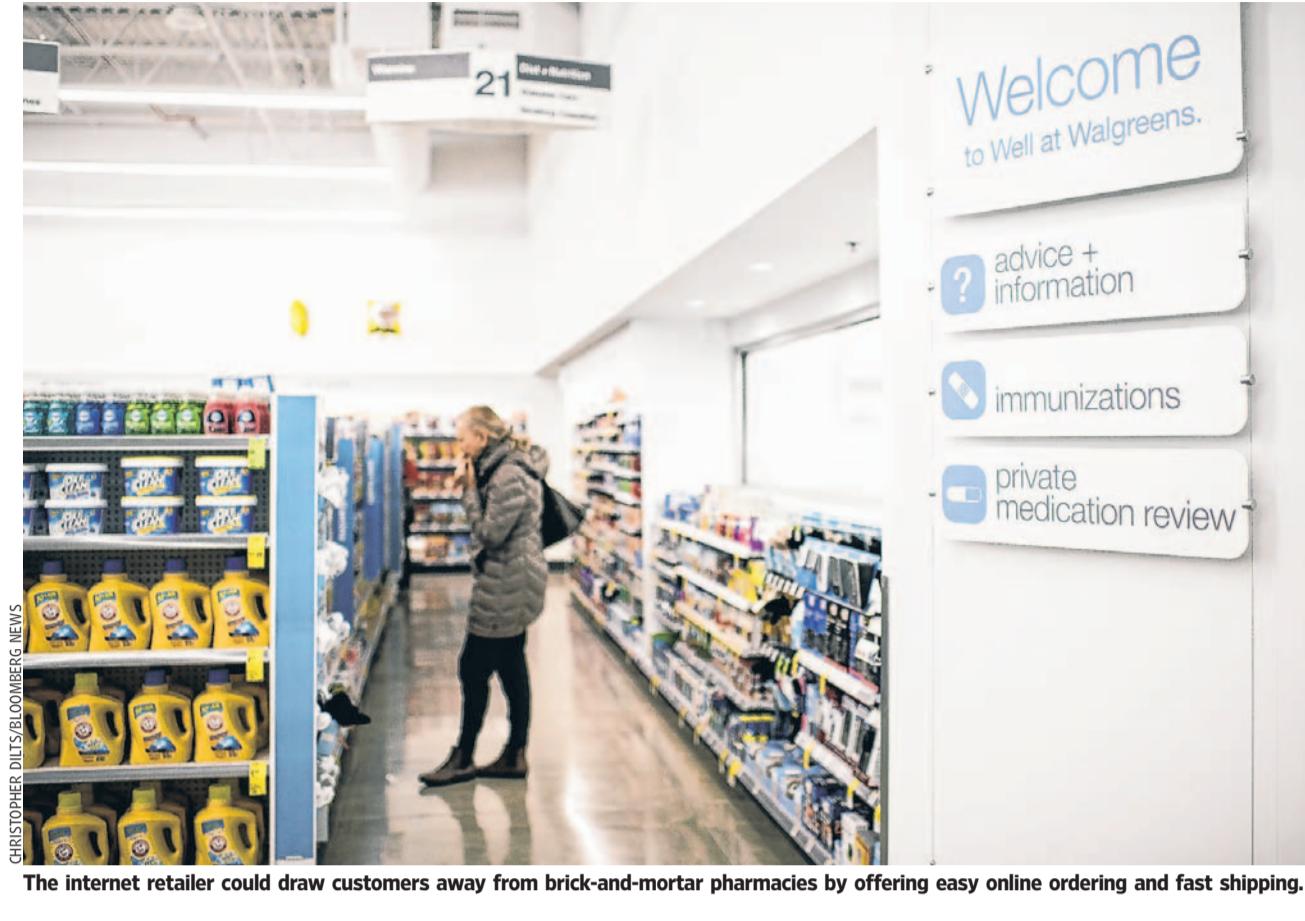
The details of Amazon's plans remain uncertain. The company hasn't said how it will use PillPack to move deeper into health care, after some earlier forays into selling medical supplies and over-the-counter medicines.

Amazon declined to comment.

Amazon's entry does threaten to siphon market share from the brick-and-mortar pharmacies that have long dominated the \$413 billion annual U.S. market for filling prescriptions experts say. About 5.8 billion prescriptions are filled each year, according to the Drug Channels Institute.

Amazon could draw customers, especially its loyal Prime members, away from the 64,500 retail pharmacies in the U.S. by offering the ease of ordering on Amazon's website and the convenience of its fast shipping.

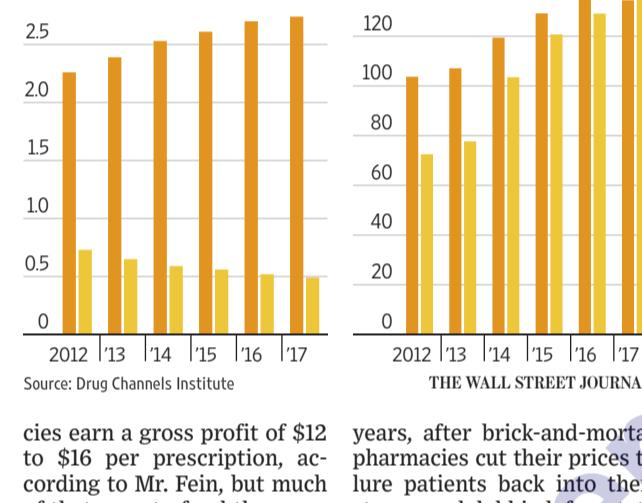
Amazon, which had \$16.7 billion in cash at the end of March, can afford to undercut its competitors on price to take market share, similar to the way it did with books. Pharma-



The internet retailer could draw customers away from brick-and-mortar pharmacies by offering easy online ordering and fast shipping.

## Prescription for Growth

Chain drugstores dispensed 2.7 billion prescriptions last year, up 21% from 2012. But the most expensive branded medications are increasingly distributed via mail-order.



cies earn a gross profit of \$12 to \$16 per prescription, according to Mr. Fein, but much of that goes to fund the overhead costs of operating stores.

Retail pharmacies are expected to put up a fight. Spending on mail-order pharmacies slowed the past several

years, after brick-and-mortar pharmacies cut their prices to lure patients back into their stores and lobbied for state laws limiting health plans' ability to require mail order, Mr. Fein says.

CVS Health Corp. said in a statement Thursday that it al-

ready offers the services provided by PillPack, but hasn't seen a "large shift of patients" interested in prescriptions by mail. "We are well positioned in the market and ahead in this area," CVS said.

On the low end of drug costs, the Seattle company could have an impact. Amazon could quickly apply its order-fulfillment and distribution capabilities to pills, which usually don't need special handling like cold storage. And Amazon might be able to use its negotiating power to offer generic pills—which are often made by several rival manufacturers that compete on price—cheaply enough that patients would be able to afford paying for them without the help of their health plans.

Officials from the online retailer have met with generic-drug-industry leaders to learn about the business, according to people familiar with the discussions.

But industry experts say that would be trimming around the fringes because much of the increase in U.S. drug spending is now driven

by extremely costly biotech therapies, which are made from living organisms, often infused or injected, require cold storage and aren't dispensed through retail pharmacies. These therapies are usually sold through specialty pharmacies with the capability to handle and dispense complex therapies—and many haven't lost patent protection, so they are sold by a single manufacturer able to charge higher sums.

Because of the storage and handling issues, Amazon may stay away, at least initially, from selling such drugs, which treat diseases like cancer, multiple sclerosis and rheumatoid arthritis.

Much of the power over drug costs is in the hands of middlemen like pharmacy-benefit managers that negotiate discounts for employers and insurers. Analysts have speculated that Amazon could be interested in taking over the work of PBMs, which have faced criticism for making patients pay high copays or deductibles and making money off drug-price increases.

## Novartis To Shed Eye-Care Business

By BRIAN BLACKSTONE  
AND CARLO MARTUSCELLI

**Novartis AG** on Friday said it would spin off its Alcon eye-care unit, a business analysts think could be valued at more than \$20 billion, marking the latest strategic move by the Swiss drugmaker's new chief executive.

Vasant Narasimhan, who took the helm earlier this year, has pledged to refocus Novartis on drug development. After the Alcon spinoff, Novartis will be entirely a prescription-medicine company, "which is where I think we need to be to be successful," Mr. Narasimhan said in an interview.

Under his leadership, the Basel-based company agreed in March to sell its stake in a consumer health care business to joint-venture partner GlaxoSmithKline PLC for \$13 billion. It also agreed in April to buy U.S.-based gene-therapy company AveXis for \$8.7 billion.

Novartis said Alcon will become a stand-alone business publicly traded in Switzerland and the U.S. Novartis bought Alcon in two transactions starting 10 years ago for a total of more than \$50 billion. The acquisition proved a big disappointment, and over the past year Novartis has been reviewing its ownership of the unit, whose sales growth picked up recently.

"Alcon has returned to a position of strength and it is time to give the business more flexibility to pursue its own growth strategy," said Mr. Narasimhan.

Novartis didn't provide an estimated valuation of the spinoff. Analysts at Vontobel Research said Alcon could have a market capitalization between \$15 billion and \$23 billion. The expected value is lower than what Novartis paid for Alcon in part because the drugmaker is retaining the ophthalmology pharmaceuticals business that was part of Alcon before being transferred to Novartis's innovative medicals unit two years ago.

## SandRidge Seeks Bids

By WAVERLY COLVILLE

Now under the control of activist investor Carl Icahn, the board of **SandRidge Energy** is pushing plans to sell the company by casting a wider net for interested parties.

SandRidge has been working with RBC Capital Markets LLC on a possible sale since March, when the oil and natural gas producer rejected an unsolicited offer from **Midstates Petroleum Co.**

The company, which had set a June 25 deadline for bids, said Friday the deadline was being extended but didn't specify the date. The Oklahoma City company also encouraged other potential bidders to join in.

SandRidge said it has entered into 26 confidentiality agreements with parties who are actively pursuing the company, including Midstates.

## ZTE Overhaul Leaves Power Structure Intact

### Wired for Influence

Outgoing board members of ZTE will retain power in the company through their stakes.

### ZTE's shareholding structure



Note: As of Dec. 31, 2017  
Sources: ZTE, company filings

THE WALL STREET JOURNAL.

**ZTE Corp.** replaced its board of directors on Friday to satisfy U.S. demands and secure a deal to save the Chinese telecom giant's stricken business, but the changes may be

less sweeping than they appear, a Wall Street Journal review of corporate records found.

All 14 directors, including Chairman Yin Yimin, resigned from ZTE's board. The company named eight new directors as part of an overhaul that includes the firing of dozens of top executives. The incoming board members, however, were handpicked by ZTE's state-backed controlling shareholder, filings show, and the majority are veteran officials of the shareholder or its state-backed parent companies.

As SoftBank expands the network of entrepreneurs it backs, its executives also want to create a government-relations group that can help those company founders navigate policy and regulation, the person said.

In May, SoftBank said Marcelo Claure, its new chief operating officer, would lead its global government-affairs efforts. Mr. Ojakli is the first of several planned hires aimed at aiding SoftBank's transition from a Japanese telecommunications firm into a global investment company, the person said.

Mr. Ojakli, 51 years old, has been a steady presence for Ford in Washington, helping to steer its government-relations strategy through some pivotal moments, including the U.S. auto industry's near collapse.

At least two of ZTE's outgoing directors may also continue to wield influence over the firm because they hold stakes in a company that owns part of the shareholder, a holding company called Zhongxingxin. The U.S. Department of Commerce demanded new leadership at ZTE but it doesn't require any executives or directors to divest stakes.

The shuffling at ZTE may end up resembling "musical chairs," said Mark Stokes, a former China director in the Office of the Secretary of Defense. "If you want real change in leadership, you'd probably have to target the actual institutions behind those people," said Mr. Stokes, who is now executive director of the Project 2049 Institute, an Arlington, Va.-based think tank.

The settlement sets "a new standard for protection of American technology," Commerce Secretary Wilbur Ross said in a statement to the Journal. "Removal of the directors

and executives will have a deterrent effect on other individuals at ZTE and elsewhere, by showing that violative behavior has consequences for the individuals involved," Mr. Ross said.

"There is no basis for requiring shareholders of a public company to pick our director candidates, nor for requiring the largest shareholders to divest," he added.

A spokeswoman for ZTE, which is publicly traded in Hong Kong and Shenzhen, declined to comment.

The Commerce Department in April banned American companies from selling components and software to ZTE that the Chinese company needs to make smartphones and telecoms gear. The ban, which remains in effect, was instituted to punish ZTE for violating terms of an earlier deal meant to settle allegations that it engaged in sanctions-busting sales to Iran and North Korea.

After President Donald

Trump intervened, the Commerce Department struck a deal earlier in June to overturn the ban if ZTE agreed to personnel changes and paid a \$1 billion fine.

The continuing influence of key personnel and Chinese state actors in ZTE's affairs adds ammunition to critics of the deal, which was brokered by the Trump administration amid a broader trade fight between the U.S. and China. A large, bipartisan group in Congress is advancing legislation to ensure that the April sales ban remains in effect.

"The seemingly endless pitfalls and loopholes that come with the administration's bad ZTE deal, including the board restructuring, are exactly why the administration shouldn't be bending over backwards to help the government of China while they threaten our nation's jobs and security," Senate Minority Leader Chuck Schumer said in a statement to the Journal.

## SoftBank Gains Washington Lobbyist at Ford's Expense

By CHRISTINA ROGERS  
AND ANUPREETA DAS

**SoftBank Group Corp.** poached **Ford Motor Co.**'s chief global lobbyist to lead the Japanese technology company's effort to build a Beltway presence.

Ziad Ojakli, a Ford group vice president who has led the Detroit auto maker's government relations strategy since 2004, resigned Thursday and will leave the company mid-July, Ford said. He starts at SoftBank on Aug. 1.

Mr. Ojakli is the latest in a line of prominent executives to leave the No. 2 American car maker since Chief Executive Jim Hackett was hired last year.

His move comes as Ford and other auto makers are seeking to court influence

during the financial crisis and a deal to implement new fuel-economy regulations under President Barack Obama. He reports directly to Ford Executive Chairman Bill Ford Jr. and oversees the company's efforts to engage with governments world-wide. Mr. Ojakli also leads Ford's philanthropic arm.

Mr. Ojakli's name recently surfaced in the news in connection with an overtire that Michael Cohen, Mr. Trump's former personal attorney, made in January 2017 to provide consulting services to Ford, according to people familiar with the matter. Mr. Ojakli quickly rebuffed Mr. Cohen's offer, which special counsel Robert Mueller later learned about in the course of his investigation, the people said.



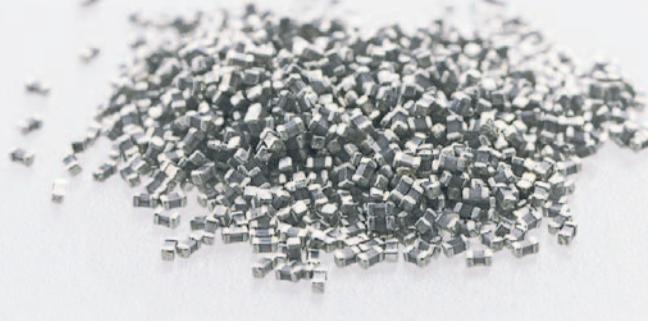
Ziad Ojakli, right, accompanying then-Ford CEO Mark Fields after a visit to the White House in early 2017.

## TECHNOLOGY

# Without This Tiny Part, Your Phone Won't Work

Speck-sized components called MLCCs power everything from smartphones to cars. And there's a global shortage of them.

By TAKASHI MOCHIZUKI



**The smallest capacitors are  $\frac{1}{3}$  the size of the period at the end of this sentence.**

If store shelves don't have the electronic device you're looking for, the cause might lie in a chunk of ceramic less than a millimeter on each side.

It happened in Japan earlier this year when Sony Corp.'s PlayStation 4 suddenly became hard to find. A popular new game called "Monster Hunter: World" led to a surge of demand for the video-game machine. Engineers at Sony say the company couldn't quickly make more because components ran short, especially the part called a multilayer ceramic capacitor, or MLCC.

Consumers never see one of these tiny components, but their smartphones have hundreds of them and their cars have thousands. The part, which costs less than a penny apiece, helps control the flow of electricity and stores power for semiconductors, a function without which virtually no

electronic device could work.

A proliferation of smart devices, factory automation robots and more sophisticated cars has lifted demand for the MLCC. A typical gasoline-powered car may require only a few thousand, but an electric car might need 10,000, say industry experts.

"The industry is going through tightness it has never seen before," says SMBC Nikko Securities analyst Ryosuke Katsura. He says electronics makers accustomed to getting the part right away now have to wait six months.

Only a handful of makers, mostly Asian, produce the component. The top three companies—Murata Manufacturing Co., Samsung Electro-Mechanics Co. and Taiyo Yuden Co.—own 60% of the market, according to research firm Paumanok Publications. Samsung said in June that it wouldn't be able to accept new orders "for a while."

Companies compare making an

MLCC to making a piece of pottery. A material called barium titanate is mixed with a variety of organic solvents, then poured flat, with layers piled one on another like a tiny layered pastry. The product is then fired in a tunnel furnace.

**Each maker has its own recipe for making the capacitors, and most of the details are secret.**

Each maker has its own recipe—how much of which solvents to use, how long to mix the materials, how to set the furnace—and most of that is secret.

"It's impossible to steal the complete formula by studying our product because some materials get evaporated during the firing

process," says Katsuya Sase, head of electronic components at Tokyo-based Taiyo Yuden.

In recent years, companies have learned to make the ceramic bits ever smaller, helping smartphones get thinner. The smallest MLCC is less than a quarter of a millimeter on each side, a barely visible speck.

The big makers of MLCCs are responding to the shortage by investing more in the component. Kyoto-based Murata, which makes many electrical parts and batteries, doubled company-wide capital investment to more than ¥300 billion, or about \$2.7 billion, in the year that ended in March. It plans to invest more this year and add 10% to its MLCC capacity, which already tops 1 trillion units a year.

Murata's share price has risen about 30% since late April, giving it a market capitalization of nearly \$40 billion. Its shares rose 7% in mid-June when it said it was ask-

## Tiny Power

Devices like game machines and smartphones have hundreds of the part known as a multilayer ceramic capacitor.

### Average MLCC units per device

Automobile	3,050 units
TV Set	820
Computer	760
Smartphone	400

Source: Paumanok Publications  
THE WALL STREET JOURNAL.

ing customers to pay more for MLCCs, the first price increase in 18 years. Taiyo Yuden shares are up more than 50% since late April.

"Demand during the internet bubble around 2000 was mostly from personal computers and cellphones, but what we have today is a much wider range of devices, such as smartphones, cars, smart devices, data centers and equipment for telecommunication base stations," said Shoichi Totsuka, Taiyo Yuden's chief executive, in May.

Some analysts say demand might have peaked because the growth rate of smartphone sales has flattened. U.S.-China trade tensions could slow the global economy and reduce Chinese exports to the U.S. of electronic products that use MLCCs. Still, these analysts say the tight supply of the parts is likely to last another 12 months.

That is forcing electronics makers to alter their usual practice of keeping on hand only the amount of MLCCs they need right away, say people in the industry. Normally, a large inventory of parts is a risk because a product might fail or the economy could cool down. But now, the bigger risk is getting caught short, so companies are building up stockpiles of several months' or even a year's worth of the component.

Some electronics executives are adding the personal touch in a bid to ensure supply. CEOs usually leave parts procurement to lower-ranking executives, but in May the head of Taiwan-based electronics assembler Pegatron Corp. joined the company's head of procurement in visiting Murata, say people who saw the visit. Pegatron was seeking Murata's support for securing MLCCs for the second half of this year when demand peaks, they say.

—Timothy W. Martin and Yoko Kubota contributed to this article.

KEYWORDS | CHRISTOPHER MIMS

## Tech's Hot New Talent Incubator: Community College

Two-year institutions emerge as a pipeline for companies like Amazon, Google and IBM



Long stigmatized as "junior," community colleges might seem like an unlikely source of talent for major tech companies. Yet, increasingly, tech giants are turning to these two-year schools to find the skilled workers they desperately need.

"Community colleges are just absolutely key" in companies' search for new tech talent, says Edward Alden, a senior fellow at the Council on Foreign Relations and author of a recent report on the future of work. Tech companies like Amazon, Google and IBM have all caught on, he adds, and the trend of using community colleges to establish talent pipelines is "taking off across the country."

Americans are burdened with about \$1.4 trillion in student loan debt. One in four has a low-wage job. Meanwhile, there are hundreds of thousands of open positions in the U.S. in fields like cybersecurity, cloud computing, computer programming, data science, tech support and skilled manufacturing. In many of these fields, the "skills gap" between available candidates and open positions is only projected to grow.

Tuition costs at community colleges are typically less than half those of an in-state four-year institution. As a result, they tend to attract low-income students and members of racial minorities, another reason tech giants—which are lately being held accountable for their poor diversity numbers—are interested in them.

There's promise in this strategy: Because of a growing difference between wages for different kinds of jobs, 30% of those with an associates degree now out-earn the average holder of a bachelor's degree. Yet since many of



Google training in Columbia, S.C., above. Tech firms are creating apprenticeships and degrees to get workers.

these programs are so new, it's too early to say whether or not they are successful.

Sam Edwards, a 20-year-old student at Wake Tech Community College in Raleigh, N.C., embodies both the opportunity and the challenges facing students who choose this route. Wake Tech offers internships with companies that have local offices, including IBM, Lenovo and Cisco, and also does continuing education for employees of companies such as Infosys and Credit Suisse. Five years ago, Wake Tech had fewer than 20 students doing internships at companies like these; today it's in excess of 400, says college President Stephen Scott.

Overall, the college serves

part-time. Mr. Edwards, for one, has three part-time gigs, primarily in tech support. This allows him to work remotely and balance them with his studies. He was eligible for Wake Tech's Fostering Bright Futures program, which was established to help address the challenges faced by young people who were once in foster care.

The program provides Mr. Edwards with living expenses, mentors and a faculty contact he can call anytime, to help with nearly any issue, from finding a place to live to buying a car.

Amazon recently launched, in partnership with Northern Virginia Community College, both an associates degree in cloud computing and an apprenticeship program in which Amazon pays students to

get a degree, in preparation for a full-time job at Amazon.

One reason tech companies turn to community colleges is that they may have need for candidates they can't get elsewhere.

For example, all of the 130 apprentices in the Northern Virginia program are military veterans. One reason Amazon pursues veterans is that so many have already have government security clearances, says Chad Knights, dean of math, science and engineering at Northern Virginia. Security clearances, which can take years to get, are a necessity for Amazon employees who will work on data centers that handle sensitive government data. Amazon also says it wants to address high rates of veteran unemployment by

hiring 25,000 veterans by 2021.

Tesla has announced partnerships with two community colleges to train people to assemble and service electric vehicles, and is in talks with at least one more, Miami Dade College, to expand the program, says the dean of MDC's engineering and technology department, Antonio Delgado.

The Amazon apprenticeship and Tesla's 12-week training program are unusual in that they lead directly to jobs at those companies.

Google recently announced it is partnering with 25 community colleges in seven states, as well as more than a dozen companies including Walmart, Hulu, Sprint, GE and Bank of America, to launch an IT-support professional certificate that students can earn in eight months.

Certification programs tend to be more about training students to go to smaller firms where they can use the technology of the companies sponsoring the programs, such as Amazon's cloud services and Google's web apps, not about recruiting for these companies, says Debbie Hughes, vice president at the Business-Higher Education Forum, a not-for-profit sponsored by government grants and Fortune 500 companies in need of talent.

The challenge for community colleges in particular is that companies may say they are more willing to hire based on skills rather than education, but analyses of their hiring patterns and job postings reveal they still favor workers with traditional four-year degrees, says Ms. Hughes.

Which means students like Mr. Edwards, who have already overcome considerable odds to get entry-level jobs in tech, may still be left behind by a system that talks about alternate paths to jobs yet acts in ways that run counter to these goals.

## HUMAN CAPITAL



Gen. Robert Neller speaks at Camp Pendleton, Calif., in 2015.

OFFICE OF MARINE CORPS COMMUNICATION (2)



The most brilliant tactical formation devised by any team in the last half-century isn't football's Packer sweep, basketball's triangle offense or anything else relating to sports.

It's the rifle squads of the United States Marine Corps.

No matter what hard-bitten corner of the world they've deployed to, the Marines have organized themselves into divisions, regiments, battalions, companies and platoons. The tip of this tail—the last infantry formation of substance—is a squad of 13 Marines composed of a leader and a dozen riflemen grouped into three "fire teams" of four.

Opposing commanders knew the Marines had honed their battle tactics to a lethal degree in fields, forests, mountains and deserts.

Former Marine Capt. Nate Fick, author of "One Bullet Away," a best-selling account of the invasions of Afghanistan and Iraq, likens Marine squads to world-class dance troupes. "Everybody's movement depends on everybody else's," he says.

On a recent morning at the Pentagon, I asked Marine Corps Commandant Robert Neller about these iconic squads of 13. He began by saying they had taken on "an almost mythical lore and status." Then he placed his elbow on an impeccably polished conference table and addressed the question many Marines can't wrap their heads around: why he wants to scrap them.

With his steady gaze, close-cropped silver hair, permanent field tan and congenital seriousness, Gen. Neller is every inch a Marine Corps general—the caretaker of a proudly insular warrior culture that has prevailed in decisive battles from Belleau Wood to Iwo Jima. Underneath that armor, however, lurks one of the most ex-

## THE CAPTAIN CLASS | SAM WALKER

# One General's Bet on Reshaping the Marines

The 13-member rifle squad, a signature formation, was the best offense in history—until technology and a new leader sealed its fate

otic leadership breeds of all—the inside outsider.

Not long after he joined the Marines in 1975, Gen. Neller says, his first commanding officer dubbed him the president of the "I don't see why" club. As he climbed the ranks, his contrarian streak came with him. "I was always the guy in the audience throwing the metaphorical Molotov cocktail," he says.

Few resident gadflies ever get to the top; they ruffle too many feathers along the way. But when the commandant's job opened in 2015, the Marines had spent nearly two decades in a state of constant deployment. They hadn't had time to fully address the shifting map of global threats. Above all, they needed to get a handle on technology.

Any large business in this predicament might look to the outside for a disruptive CEO to shake things up. As a tradition-bound citadel, the Marine Corps didn't have that option—but it did have Robert Neller. "The powers that be were almost like, 'OK, Neller.'

You've been out here wanking for 38 years. We're going to make you own this," he says.

In less than three years, he's reconsidered everything about the Marines, from rifles to socks. He's



Gen. Neller is reshaping the Marine Corps to adapt to new technologies.

brushed aside all suspicions about technology by investing in tablets, drones and laser-guided munitions. He once proposed offering enlistment bonuses to hackers.

Convinced that the Marines are in "the people business," he's conducted scores of town halls and has more than lived up to his reputation for bluntness. In December, he made headlines in Norway by telling a group of Marines to be

prepared for a "bigass fight."

When it came time to re-examine rifle squads, the Marines conducted a number of tests—but Gen. Neller didn't believe there was time for exhaustive study. The battlefield intelligence pouring in from new forms of technology was enormously valuable, but it needed to be collected and analyzed. Traditional squads lacked the bandwidth to do this

without losing focus in combat.

Gen. Neller concluded that each rifle squad needed two additional billets—an assistant squad leader and a squad systems operator focused on technology. Adding two people presented a problem, however: Marine squads were already unusually large. When Gen. Neller asked squad leaders if they thought they could manage 15 Marines at once, they said no.

In May, Gen. Neller unveiled the most sweeping changes to Marine infantry combat organization in 70 years. Not only did he add those new billets, he decided to reduce a squad's size to 12 by eliminating one Marine from each of its three fire teams.

Longtime Marines worried the changes might undermine squads in battle by disrupting their instinctive ability to maneuver together.

Gen. Neller counters that the Marines have used different squad formations before—particularly in Vietnam, where squads had to absorb heavy casualties.

It goes without saying that there's a lot riding on this.

In the end, though, Gen. Neller knew that leaders must be decisive. He also believes that sometimes the biggest risk of all is doing nothing. "So I made a decision," he says.

It's difficult to say whether insiders are better or worse at shaking up tradition-bound institutions. But all members of this breed have one major advantage: They're natives. They understand the people involved and what they're capable of.

"I know I'm asking a lot," Gen. Neller said of his squad reforms, "but Marines aren't normal people."

—Mr. Walker, a former reporter and editor at The Wall Street Journal, is the author of "The Captain Class: The Hidden Force That Creates the World's Greatest Teams" (Random House).

## Sri Shivananda

Chief Technology Officer, PayPal

During his 17-year climb through the ranks of eBay and PayPal from software engineer to the C-suite, Mr. Shivananda was guided by a belief that "successful leaders get good advice from everywhere." He relies most heavily on five different sources of guidance: personal connections, authors, mentors, sponsors and reverse mentors. Here, standouts from each of Mr. Shivananda's advisory categories.

**Age** 45

**Education** Bachelor of technology in mechanical engineering from JNTU College of Engineering (Hyderabad, India); M.S. in mechanical engineering from Ohio University

**Family** Two children (Mahima, 18, and Aakash, 12)

**If you could have any entry level role at PayPal, what would it be?** Software engineer on the security team

**When does your alarm go off on weekdays?** 6 a.m.

—Laine Higgins



JASON HENRY FOR THE WALL STREET JOURNAL

**Malini Bhattacharya**  
Wife

Mr. Shivananda's most important adviser is also his closest personal connection—his wife of 22 years. "I've known her since I was 17, so given that, I just naturally go to her," he says.

**Patrick Lencioni**  
Author and president of Table Group

Mr. Shivananda regards authors as key sources of insight: "It's people I never meet but I get the opportunity to have a conversation [with] through their literature." He likes Mr. Lencioni's book "The Five Dysfunctions of a Team" for its emphasis on finding positives in negative situations.

**Beth Axelrod**  
Vice president of employee experience at Airbnb

Raji Arasu  
Senior vice president of core platform and services at Intuit

From Ms. Arasu he learned to tackle dilemmas with courage; from Ms. Axelrod he learned "the art of modulation as a leader," he says.

## PERSONAL BOARD OF DIRECTORS

**Mark Carges**  
Former chief technology officer at PayPal

Every week, Mr. Shivananda meets with a different junior employee—Mr. Entin is one he's met with—to mine his or her knowledge, a practice he dubs "reverse mentoring." He says it helps him stay current as a leader: "it gives me good direction in how I should run an organization that helps everyone thrive."

**Jed Entin**  
Data engineer at PayPal

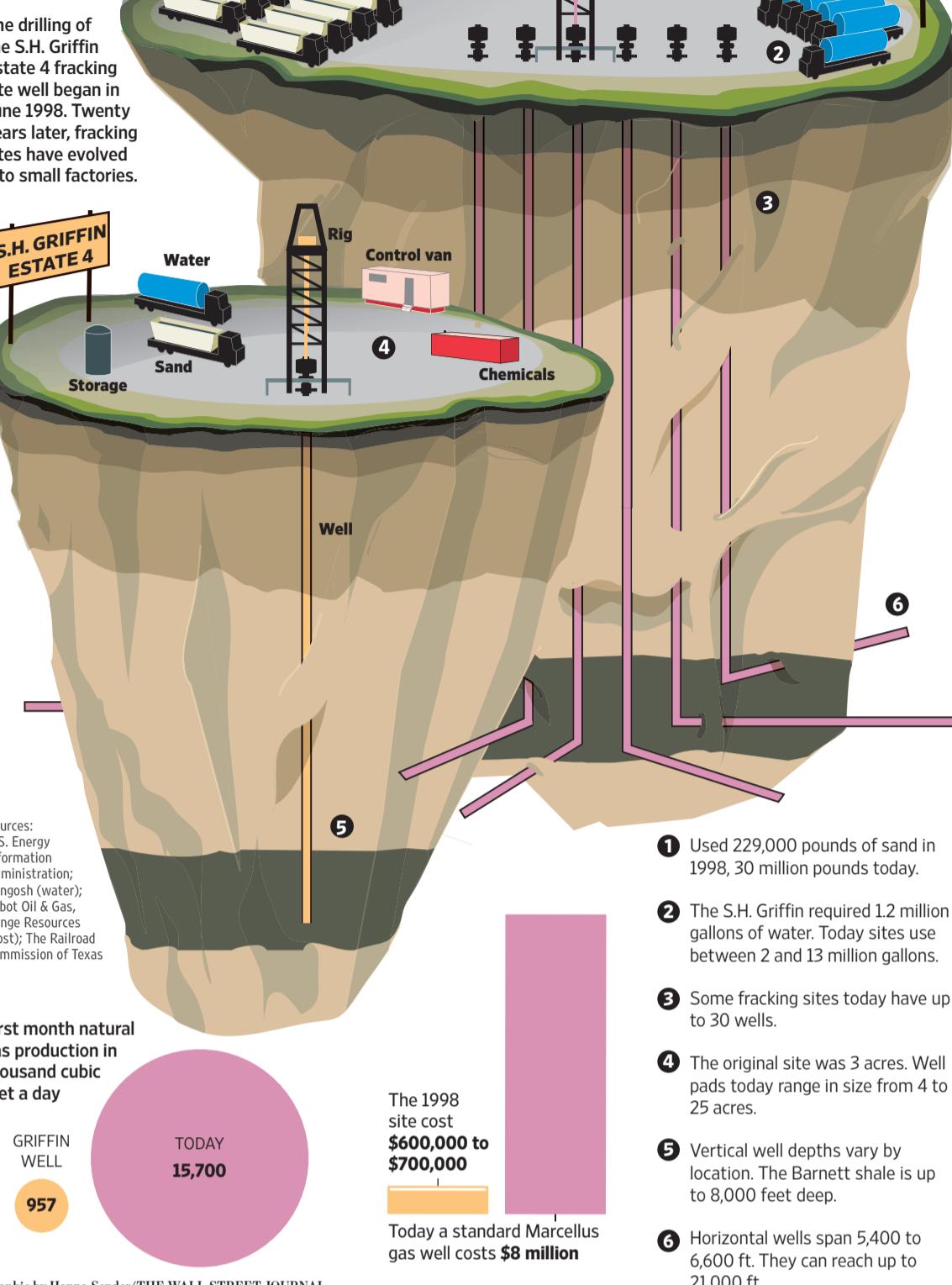
Mr. Shivananda considers Mr. Carges an important sponsor who helped him meet his potential by putting him "in front of opportunities that would otherwise not be something I pursued," he says. When eBay split off PayPal, Mr. Carges offered lessons on how to drive transformation within organizations.

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## STRATEGY



## History of Rock



# The Texas Well That Started a Revolution

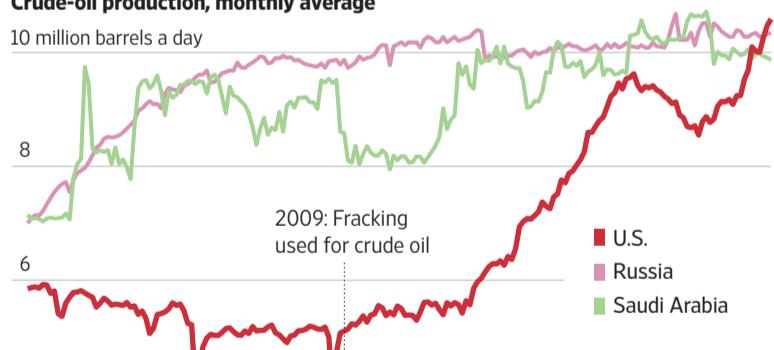
Two decades ago, an engineer got permission to try a new way to get gas out of the ground. Energy markets and global politics would never be the same.

BY RUSSELL GOLD

## Seek And Ye Shale Find

The arrival of fracking helped turn the U.S. into an energy powerhouse. It's a major exporter of natural gas and became the world's largest producer of crude oil this year.

## Crude-oil production, monthly average



**T**wenty years ago, a well was drilled in Dish, Texas, that changed the world. Nothing at the time suggested the unassuming well in the rural town north of Fort Worth would hobble OPEC, the powerful oil cartel that had governed prices of the world's most important commodity for more than a generation. Or that it would help turn the U.S. into a global energy exporter, or shuffle the geopolitical deck.

But it did all of that—and more. The well used hydraulic fracturing to crack the incredibly tight shale rocks below. It fired the first shot in the fracking revolution—a blast soon felt in Riyadh, Tehran and Moscow.

"I had no idea it would cause so much change. I was just trying to keep my job," said Nick Steinsberger on a recent visit to the well pad. He was the engineer who obtained permission to try a new approach to completing the well that had been drilled a mile and a half deep into a thick gray wedge of rock known as the Barnett Shale.

Mr. Steinsberger, now 54, called the experiment "my slick-water frack." It was the first commercially successful use of sand, water and chemicals, pumped into the shale under high pressure, to break open the rock and unleash the natural gas trapped inside. It was the beginning of modern fracking.

"It was a good well, cost \$600,000 or \$700,000," Mr. Steinsberger said, walking over the pad to the chain-link fence that surrounds the well. A sign identifies it as the S. H. Griffin Estate 4.

Today, most wells drilled in the U.S. use some variation of Mr. Steinsberger's fracking technique. It has unleashed an unimaginable wealth of natural gas, gas liquids and crude oil, turning the U.S. from an energy pauper into a muscular exporter. It also started an often acrimonious environmental debate about the potential im-

## Front-month crude-oil price



After a few years, more companies began to copy the wells drilled by Mr. Steinsberger's employer, Mitchell Energy, the firm founded by the late George P. Mitchell.

It started in the Barnett Shale. Then other gas-bearing shales were discovered. The Marcellus Shale in Appalachia turned out to be larger and more fecund than the Barnett.

In 2008, more than a decade after Mr. Steinsberger's well, the industry made another quantum leap: Not only could fracking liberate small natural gas molecules from rocks, it also worked on the longer hydrocarbon chains that make up crude oil. Companies such as EOG Resources Inc. began to drill and frack shales bearing crude oil and natural gas liquids in North Dakota and Texas. The technique has since spread to other countries such as Argentina.

The proliferation of oil and gas production transformed the U.S. energy landscape. A looming dearth of natural gas had led companies to build import terminals. Now there is so much gas the U.S. exports the fuel around the world.

The low-cost fuel has become the leading source of power generation in the U.S. Its rise has reshaped electricity markets, leading to the closure of more than 200 coal plants, as well as a number of nuclear plants. The Trump administration's current proposal to subsidize coal and nuclear plants is an indirect result of fracking.

The impact on oil markets might be, if anything, more significant. U.S. oil production had fallen persistently for years, dropping below five million barrels a day. And then: fracking. This year, it hit a new all-time high, reaching 10.9 million barrels a day in June. It is now the world's largest producer of crude and other valuable petroleum liquids, ahead of Russia and Saudi Arabia.

It was such a novel idea that it spread slowly at first, as doubters couldn't believe that anyone could successfully tap the source rocks.

The surge has weakened the Organization of the Petroleum Exporting Countries. Facing a grow-



In early June, Nick Steinsberger, left, revisited the well where he spearheaded the first commercially successful frack. Above left, a modern operation in Midland, Texas.

as shown by its willingness to take a tough negotiating posture with Iran.

"The fracking boom was the biggest energy story around the world. But it was also the biggest geopolitical story and the biggest environmental story," said Michael Webber, deputy director of the Energy Institute at the University of Texas at Austin.

The proliferation of natural gas, displacing coal, helped the U.S. lower its overall greenhouse gas emissions by 13.4% the last decade, while growing its gross domestic product, according to BP PLC's Statistical Review of World Energy.

While fracking has produced environmental benefits at a global scale, it has created local problems. Dust, noise, truck traffic and emissions from diesel engines turned rural regions into industrial zones during

periods of peak development. The headlong rush to drill and frack meant that the industry raced out in front of state regulators. Concerns arose about fracking's impact on water and the impact of methane gases leakage on the climate. Eventually, federal and state regulators responded with increasingly sophisticated rules. And the industry adopted some voluntary measures as well.

Fracking has split the environmental movement. Some environmentalists opposed fracking entirely; others recognized its potential benefits and have worked to minimize its negative impacts.

Fred Krupp, president of the Environmental Defense Fund, praised natural gas for helping clean up local air pollution, lower greenhouse gas emissions and reduce electricity costs. "The abundance of natural gas has helped, but it is important to work to make it clean as can be," he said.

Meanwhile, fracking continues to evolve. Supersized fracks have become commonplace.

Fracking uses grains of sand to prop open the newly formed cracks to allow gas or oil to flow out. While Mr. Steinsberger's well required 229,000 pounds of sand, a large contemporary well might require 30 million pounds of sand. The amount of water needed has increased as well.

The S. H. Griffin well has continued to produce gas for two decades. Over the years, more than 2.6 billion cubic feet have flowed out, worth some \$8 million at today's prices. A new well with a supersized frack can produce as much in a day as the original could in two months.

The proliferation of large wells has kept gas below \$4 per million British thermal units since December 2016, after topping \$10 in 2008. Mr. Steinsberger, who still oversees eight to ten fracks a year, doesn't see that changing for a long time.

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## Tourism as Time Travel



inc. work with local historians and experts of a particular site to re-create scenes using photos and videos, if available, or computer-generated imagery or actors.

TimeLooper, founded in 2015, uses an app and sometimes a VR headset to let visitors explore historical moments at 12 sites around the world, including the fall of the Berlin Wall, the Great Fire of London in 1666 and immigrants' arrival at Ellis Island in the mid-1800s.

Owlized CEO Aaron Selverston hopes his company's use of tower viewers—the standing viewfinders common at piers and tourist sites—opens the technology to broader use. He's working on installing viewers in San Francisco for people to watch a two-minute virtual-reality video of the Gold Rush of mid-1800s.

At Zreality, CEO Alexander Fridhi is working on another method to convey virtual reality where passengers don goggles and take a 50-minute bus tour of Luxembourg as it was in 1867, when France and Prussia nearly went to war over the small country's political status. As passengers ride through Luxembourg City, they can see it as it used to be while a narrator describes the scene. The service is slated to launch later this year.

"Our wish is to really show people the past," Mr. Fridhi says. "That's the next stage of tourism. It's like time travel."

—Caitlin Ostroff

Official Sponsor of The Wall Street Journal's The Future of Everything

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## FINANCE

**R**eese and Kyle Rademacher weren't sure how they would afford a down payment to buy a home until their real-estate agent mentioned an offbeat idea: crowdfund the money from friends and family.

Ms. Rademacher, a 28-year-old construction technician, set up an online profile with a program called HomeFundMe to solicit donations. Her parents and a few others responded, and in March the Rademachers closed on a \$320,000 home in Cheyenne, Wyo.

HomeFundMe, a service launched by lender CMG Financial last year, is among a growing suite of services that help borrowers cobble together the funds to buy homes. These companies—startups and established players in the housing market alike—say they're offering options for borrowers who have good credit and income but are struggling to save.

**Helping borrowers could exacerbate the housing market's main problem: a dearth of new homes.**

Rising consumer debt and sky-high prices have made it tough for first-time buyers to save for a home. Nearly 40% of renters ages 25 to 34 said they were saving nothing each month for a down payment, according to a survey last year by rental-listing company Apartment List.

One startup will kick in up to \$50,000 for a down payment if the home buyer agrees to rent out a room on Airbnb and share the income. A few companies offer "shared equity" contracts, through which buyers get money for their down payments in exchange for pledging part of the home's future value to investors like pension funds or family offices. And some banks, including Bank of America Corp. and Morgan Stanley, have programs through which young adults can get a mortgage with nothing down if their parents pledge investment assets as collateral.

Yet some worry that helping borrowers get down payments could actually exacerbate the housing market's main problem: a dearth of new homes.

Economists caution that actions such as loosening credit standards or supplying borrowers with more down payment money worsen the problem by creating more demand in a supply-constrained market, leading to a further overheating of home prices. And if home prices later fall, borrowers with little of their own money invested are more likely to simply walk away, they say.

Jonathan Lawless, vice president for product development and affordable housing at mortgage-finance giant Fannie Mae, said the agency is currently focusing not just on making credit available but also on increasing housing supply. For example, Fannie is looking at ways to make it easier to get loans to fix up dilapidated homes and make it simpler to finance the purchase of mobile homes, among other things.

Borrowers for years have been able to take out mortgages with small down payments. They can



Reese Rademacher and her husband crowdfunded the down payment for their home in Cheyenne, Wyo. Now their friends want to give it a try.

LIZ OSBAN FOR THE WALL STREET JOURNAL

## Would-Be Home Buyers Are Told: No Savings? No Problem.

Lenders are coming up with novel ways for people to cobble together down payments

BY CHRISTINA REXRODE AND LAURA KUSISTO

get mortgages with down payments as low as 3.5% through the Federal Housing Administration, and Fannie and Freddie Mac back loans with down payments as low as 3%. But these loans tend to have high monthly costs: They usually require mortgage insurance, and the bulk of the first payments can go to interest, not principal.

Erik and Rafaela de los Reyes considered applying for an FHA loan to buy a home in Seattle but were put off by the mortgage insurance and other costs. They instead got \$28,000 from Loftium, the startup that offers funding in exchange for a cut of their Airbnb income. The couple have pledged to rent out their mother-in-law suite for three years.

"If you don't have the down payment, it's a great way to start," said Mrs. de los Reyes, a 29-year-old flight attendant. She and Mr. de los Reyes had never been Airbnb hosts before, so they were apprehensive. But as for their guests, Mrs. de los Reyes said, "we barely see them."

Yifan Zhang got the idea for Loftium after renting out a spare room in her Seattle home. One of her goals, she said, is to even the playing field between millennials whose parents can help them buy their first home and those who are trying to save on their own.

"If you're willing to kind of sacrifice and generate this extra income, then you should be able to have this leg up in homeownership," said Ms. Zhang, the com-

pany's CEO and co-founder.

These novel arrangements can be tricky to pull off. Fannie and Freddie buy loans made through some of these programs but can't always package and sell them in standard mortgage-backed securities. Only a handful of lenders are willing to make mortgages with such creative foundations. Most of the programs are still in the beginning stages, and Loftium is available only in the Seattle area.

About 400 borrowers have used HomeFundMe to help buy homes since the program launched in October. On average, they raise about \$2,500, though CMG also can kick in matching grants, and most borrowers have some of their own money saved as well, said chief marketing offi-

cer Paul Akinmade. Friends and family can also make their gifts conditional, meaning borrowers won't get the money unless they actually purchase the home.

Ms. Rademacher said she felt uncomfortable at first asking for help through HomeFundMe. But the Rademachers' budget was tight after paying for their wedding, and a credit union had already denied their mortgage application because they didn't have enough in savings.

"Whenever I emailed people the link, I would explain, 'This isn't fake, this is real,'" Ms. Rademacher said. Now, some of her friends are interested in following suit.

"It just worked out so well," Ms. Rademacher said, "that people were like, 'No way, I want that!'"

bundle several types of assets into one portfolio. Both approaches blunt the jagged fluctuations investors would suffer in less-diversified funds that focus on narrower market segments.

More financial advisers are seeking to keep their clients' portfolios aligned with target allocations to stocks, bonds and other assets, says Mr. Kinniry. That means they automatically sell some of whatever has recently risen in price, using the proceeds to buy some of whatever has dropped. That's a mechanical counterweight to the natural human tendency to buy high and sell low.

When Mr. Kinnel is asked whether these changes mean that investors and their advisers won't bail out at the bottom during the next crash, he sighs.

"No," he says after a long pause. "Advisers and individual investors still have an inclination to chase performance, to fight the last war, to panic a bit. People are still people. They're still going to be inclined to make the same mistakes."

And so they are. Spooked by recent poor performance, investors are pulling out of international and emerging-market stock funds, even though those markets are significantly cheaper than the U.S. Through June 26, investors have yanked \$12.4 billion out of global equity funds, according to TrimTabs Investment Research, putting June on track for the biggest monthly outflow since October 2008.

The more investors change, the more they stay the same.



ALEX NABAUM

makes you do worse: It feels great to buy more when an investment has been going up, and it hurts to buy more when an asset has gone down. So you tend to raise your exposure to assets that have gotten more expensive (with lower future returns) and to cut it—or at least not to buy more—when they are cheaper (with higher future returns).

When you chase outperformance, you catch underperformance.

Why, then, does the new Morningstar report find that investors' behavior seems to be improving?

The stock market itself, which has risen for most of the past decade with remarkable smoothness, deserves much of the credit.

"Extreme volatility triggers emotional responses that lead you

to screw up," says Russel Kinnel, author of the Morningstar report.

With so few stabs of panic in recent years, staying invested has felt unusually easy.

Fran Kinniry, an investment strategist at Vanguard Group, says investors have increasingly favored index funds, which hold big baskets of stocks or bonds, as well as so-called target-date funds that

## MARKETS DIGEST

## Dow Jones Industrial Average

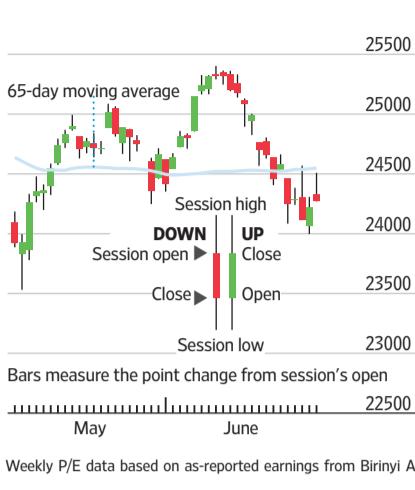
Last 24271.41  
Trailing P/E ratio 23.39  
P/E estimate \* 16.04  
Dividend yield 2.23  
or 0.23%  
All-time high 26616.71, 01/26/18

## S&amp;P 500 Index

Last 2718.37  
Trailing P/E ratio \* 23.98  
P/E estimate \* 17.18  
Dividend yield 1.91  
or 0.08%  
All-time high 2872.87, 01/26/18

## Nasdaq Composite Index

Last 7510.30  
Trailing P/E ratio \* 24.98  
P/E estimate \* 20.92  
Dividend yield 0.95  
or 0.09%  
All-time high 7781.51, 06/20/18



Weekly P/E data based on as-reported earnings from Birinyi Associates Inc.

## Major U.S. Stock-Market Indexes

	High	Low	Latest Close	Net chg	% chg	High	Low	% chg	YTD % chg	3-yr. ann.
Dow Jones										
Industrial Average	24509.52	24269.71	24271.41	55.36	0.23	26616.71	21320.04	13.7	-1.8	11.3
Transportation Avg	10467.92	10330.30	10344.99	37.43	0.36	11373.38	9021.12	8.2	-2.5	8.6
Utility Average	715.16	706.93	711.64	-0.46	-0.06	774.47	647.90	0.7	-1.6	8.8
Total Stock Market	28562.41	28313.77	28313.77	18.15	0.06	29630.47	24958.26	12.7	2.3	9.5
Barron's 400	744.43	738.39	738.39	0.93	0.13	760.51	629.56	14.3	3.9	9.3

## Nasdaq Stock Market

	High	Low	Latest Close	Net chg	% chg	High	Low	% chg	YTD % chg	3-yr. ann.
Nasdaq Composite	7573.59	7502.95	7510.30	6.62	0.09	7781.51	6089.46	22.3	8.8	14.8
Nasdaq 100	7101.83	7031.40	7040.80	9.20	0.13	7280.70	5596.96	24.7	10.1	17.1

## S&amp;P

	High	Low	Latest Close	Net chg	% chg	High	Low	% chg	YTD % chg	3-yr. ann.
500 Index	2743.26	2718.03	2718.37	2.06	0.08	2872.87	2409.75	12.2	1.7	9.7
MidCap 400	1968.04	1951.67	1951.67	1.30	0.07	2003.97	1691.67	11.7	2.7	9.2
SmallCap 600	1026.15	1017.38	1017.38	-2.84	-0.28	1052.40	817.25	18.9	8.7	12.4
Other Indexes										
Russell 2000	1656.05	1642.97	1643.07	-1.95	-0.12	1706.99	1356.90	16.1	7.0	9.6
NYSE Composite	12607.39	12504.25	12504.25	28.27	0.23	13637.02	11699.83	6.3	-2.4	5.0
Value Line	573.56	569.27	569.63	0.36	0.06	589.69	503.24	9.0	1.3	4.5
NYSE Arca Biotech	4806.77	4723.15	4751.88	90.27	1.94	5018.28	3787.17	23.1	12.5	5.2
NYSE Arca Pharma	532.52	527.47	527.47	2.05	0.39	593.12	514.66	-1.6	-3.2	-7.2
KBW Bank	106.28	103.89	103.89	-0.18	-0.17	116.52	89.71	8.7	-2.6	10.6
PHLX® Gold/Silver	82.03	80.28	81.59	1.77	2.21	93.26	76.42	1.0	-4.3	8.5
PHLX® Oil Service	156.92	154.79	154.87	0.06	0.04	170.18	117.79	18.4	3.6	-8.0
PHLX® Semiconductor	1329.62	1313.70	1313.70	2.06	0.16	1445.90	1020.51	26.9	4.8	24.7
Cboe Volatility	16.51	14.66	16.09	-0.76	-4.51	37.32	9.14	43.9	45.7	-5.1

\$Nasdaq PHLX

Sources: SIX Financial Information; WSJ Market Data Group

## Trading Diary

## Volume, Advancers, Decliners

NYSE NYSE Amer.

Total volume\* 978,113,887 18,863,735

Adv. volume\* 506,675,449 9,628,510

Decl. volume\* 456,194,433 9,160,982

Issues traded 3,094 318

Advances 1,725 176

Declines 1,237 124

Unchanged 132 18

New highs 53 6

New lows 62 8

Closing tick 483 73

Closing Arms† 1.27 1.30

Block trades\* 7,748 186

Nasdaq NYSE Arca

Total volume\* 2,144,762,490 288,567,758

Adv. volume\* 1,214,458,546 199,628,227

Decl. volume\* 890,202,024 62,150,818

Issues traded 3,138 1,346

Advances 1,628 959

Declines 1,371 360

Unchanged 139 27

New highs 63 11

New lows 66 32

Closing tick 395 81

Closing Arms† 0.87 0.98

Block trades\* 8,494 1,820

\*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 1 indicates selling pressure.

Sources: SIX Financial Information; Tullett Prebon (currencies), WSJ Market Data Group (bond ETFs, commodities).

## 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.

Stock Index	Currency, vs. U.S. dollar	Commodity, traded in U.S.	ETF
Nymex Crude	8.12%		
Nymex Rbob Gasoline	5.25		
Nymex ULSD	3.95		
Lean Hogs	3.82		
S&P GSCI GFI	3.39		
Sao Paulo Bovespa	3.00		
S&P 500 Utilities	2.25		
IPC All-Share	1.98		
Wheat	1.27		
S&P 500 Telecom Svcs	1.18		
S&P 500 Real Estate	1.06		
S&P 500 Energy	1.03		
Canada dollar	1.01		
iSh 20+ Treasury	0.99		
iShBoxx\$InvGrdCp	0.50		
Mexico peso	0.48		
iSh TIPS Bond	0.42		
iSh 7-10 Treasury	0.39		
VangdTotalBd	0.29		
Russian Ruble	0.24		
Euro area euro	0.23		
WSJ Dollar Index	0.23		
iShNatlMuniBd	0.12		
iSh 1-3 Treasury	0.07		
VangdTotIntlBd	-0.05		
S&P 500 Consumer Staples	-0.25		
South Korean Won	-0.27		
Swiss Franc	-0.28		
Australian dollar	-0.43		
UK pound	-0.44		
S&P/ASX 200	-0.49		
iShPMUSEmgBd	-0.59		
FTSE 100	-0.59		
Norwegian Krone	-0.63		
Japan yen	-0.66		
Nymex Natural Gas	-0.71		
S&P BSE Sensex	-0.75		
S&P 500 Materials	-0.80		

# MARKET DATA

## Futures Contracts

### Metal & Petroleum Futures

Contract Open High hilo Low Settle Chg interest

**Copper-High (CMX)**-25,000 lbs.; \$ per lb.

July 2,9510 2,9805 2,9425 2,9510 -0.025 8,925

Sept 2,9700 2,9970 2,9580 2,9660 -0.0055 138,857

**Gold (CMX)**-100 troy oz.; \$ per troy oz.

July 1250.30 1250.80 ▼ 1248.40 1251.30 3.50 218

Aug 1249.50 1257.10 ▼ 1246.90 1254.50 3.50 318,413

Oct 1254.80 1262.50 ▼ 1253.00 1260.20 3.50 15,598

Dec 1261.10 1268.70 1259.70 1266.30 3.50 102,906

Feb'19 1268.80 1273.10 1268.70 1272.40 3.70 16,810

June ... ... ... 1284.60 3.60 4,411

**Palladium (NYM)**-50 troy oz.; \$ per troy oz.

Sept 938.60 952.20 935.70 950.90 20.00 19,939

Dec 939.60 946.00 937.00 945.60 18.60 1,931

**Platinum (NYM)**-50 troy oz.; \$ per troy oz.

July 844.10 852.00 ▼ 844.10 852.40 2.10 955

Oct 853.10 858.00 ▼ 846.40 857.70 2.50 82,809

**Silver (CMX)**-5,000 troy oz.; \$ per troy oz.

July 15,965 16,115 15,910 16,104 0.153 5,189

Sept 16,050 16,170 ▼ 16,000 16,198 0.157 161,491

**Crude Oil, Light Sweet (NYM)**-1,000 bbls.; \$ per bbl.

July 15,965 16,115 15,910 16,104 0.153 5,189

Aug 17,167 17,280 ▲ 17,133 17,246 0.65 281,108

Oct 17,171 17,29 16,98 17,092 0.58 202,757

Dec 16,854 16,986 16,831 16,949 0.70 302,900

June'19 16,35 16,445 16,30 16,445 0.50 149,791

April 16,316 16,402 16,309 16,455 0.24 200,282

**Agriculture Futures**

**Corn (CBT)**-5,000 bu.; cents per bu.

July 345.75 355.50 345.50 350.25 5.25 18,445

Dec 367.00 376.75 366.50 371.25 5.25 752,880

**Oats (CBT)**-5,000 bu.; cents per bu.

July 249.00 249.00 249.00 250.50 7.50 220

Dec 238.25 248.25 237.00 245.00 7.50 3,053

**Soybeans (CBT)**-5,000 bu.; cents per bu.

July 861.25 876.50 857.50 858.50 -2.75 9,300

Nov 883.75 899.00 879.00 880.00 -3.50 404,953

**Soybean Meal (CBT)**-100 tons; \$ per ton.

July 331.80 336.70 331.40 332.80 1.40 6,820

Dec 331.70 335.00 328.70 329.90 -1.40 194,509

**Soybean Oil (CBT)**-60,000 lbs.; cents per lb.

July 28.95 29.38 28.89 29.12 .11 7,097

Dec 29.48 29.98 29.48 29.74 .06 225,483

**Rough Rice (CBT)**-2,000 cwt.; \$ per cwt.

July 114,100 115,000 112,000 116,100 19.00 690

Sept 113,300 114,400 111,000 112,250 .50 5,834

**Wheat (CBT)**-5,000 bu.; cents per bu.

July 479.50 504.00 479.50 470.75 17.50 1,818

Sept 484.50 509.00 483.25 501.25 17.75 193,773

**Wheat (KCC)**-5,000 bu.; cents per bu.

July 453.50 477.75 453.00 470.75 17.50 1,818

Sept 472.00 496.50 471.50 488.50 16.50 123,766

**Wheat (MPLS)**-5,000 bu.; cents per bu.

July 521.50 538.00 521.50 521.50 ... 1,029

Sept 537.50 559.00 ▼ 535.25 536.75 -.75 26,364

**Cattle-Feeder (CME)**-50,000 lbs.; cents per lb.

Aug 146,900 151,325 145,975 151,325 4.50 22,913

Sept 147,300 151,375 146,625 150,950 3.575 7,944

**Cattle-Live (CME)**-40,000 lbs.; cents per lb.

June 108,100 109,900 107,000 107,000 -1.200 297

Aug 103,700 106,725 103,200 106,725 3.000 136,429

**Corn (CBT)**-5,000 bu.; cents per bu.

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Dec 29.48 29.98 29.48 29.74 .06 225,483

**Rough Rice (CBT)**-2,000 cwt.; \$ per cwt.

# BIGGEST 1,000 STOCKS

## How to Read the Stock Tables

The following explanations apply to NYSE, NYSE Arca, NYSE American and Nasdaq Stock Market listed securities. Prices are composite quotations that include primary market trades as well as trades reported by Nasdaq BX (formerly Boston), Chicago Stock Exchange, Cboe, NYSE National and Nasdaq ISYE. The list comprises the 1,000 largest companies based on market capitalization. Underlined quotations are those stocks with large changes in volume compared with the issue's average trading volume. Boldfaced quotations highlight those issues whose price changed by 5% or more if their previous closing price was \$2 or higher.

### Footnotes:

- h-Does not meet continued listing standards
- v-Trading halted on primary market
- f-New 52-week high
- w-In bankruptcy or receivership or being reorganized under the Bankruptcy Code, or securities assumed by such companies.
- i-New 52-week low
- x-Late filing
- d-Temporary exemption from Nasdaq requirements.
- y-NYSE bankruptcy

Stock tables reflect composite regular trading as of 4 p.m. and changes in the closing prices from 4 p.m. the previous day.

Friday, June 29, 2018

YTD % Chg	52-Week			Ytd % Chg	52-Week			Ytd % Chg		
	Hi	Lo	Stock		Hi	Lo	Stock			
-18.83 28.67 21.22 ABBB	3.8 22	21.77	0.32	-86.47 68.75	16.96	CanadaGoose	GOOS	-87 58.85	0.65	
-13.02 6.93 ADT	1.6	8.65	0.23	-0.91 85.73	70.59	CanInt'lRwy	CIN	1.8 23 81.75	0.82	
23.82 13.55 9.87 AES	AES	3.9 58	13.10	-0.98 38.20	27.88	CapnaturRes	CNR	2.0 29 36.07	1.19	
-1.98 46.19 35.31 Aflac	AFL	2.4 7	43.02	-0.19	-12.09 50.50	32.20	CanCon	CGC	1.1 15 18.02	0.34
-7.92 21.94 17.84 AGNC Inv	AGNC	1.6 7	18.59	-0.27	-7.71 106.50	76.91	CapitalOne	CFO	1.7 20 91.90	-0.55
47.04 16.61 10.24 ANGUSomes	ANGI	... 40	15.38	-0.30	-4.70 119.21	9.09	CarHause	CSL	1.4 22 108.31	-0.20
18.02 18.49 11.92 Ansys	ANS	54 174	18.85	-0.27	-0.07 100.00	80.74	CIBC	CIM	4.8 10 86.92	-0.82
13.89 216.90 129.33 ASML	ASML	0.9 197	43.9	-0.27	-0.93 85.73	50.59	CanInt'lRwy	CNI	1.8 23 81.75	-0.82
-17.43 39.80 31.17 AT&T	T	6.2	32.11	-0.27	-13.05 72.70	56.79	CarMav	CIS	3.0 25 36.07	-0.27
6.87 64.60 47.83 AbbottLabs	ABT	1.87	60.99	-0.28	-13.02 72.29	56.76	CarMav	CLX	3.5 15 57.65	-0.43
-4.20 25.26 68.39 AbbVie	ABBV	4.1 29	92.65	-0.28	-17.07 45.21	17.27	Carvana	CVA	... 41 46.00	-0.06
11.26 28.65 93.95 Abromed	ABMD	1.60	105.09	-0.28	-1.39 170.24	105.11	Caterpillar	CAT	2.5 37 136.07	-0.36
6.88 165.58 129.03 Accenture	ACN	1.6 26	163.59	-0.91	-3.19 92.26	56.96	CardinalHealth	CAH	3.9 4 48.83	-0.03
20.52 79.93 58.84 ActionBldg	ABLD	0.4 17	106.39	-0.28	-16.47 134.84	91.00	CapGlobalMkt	CGL	1.2 20 110.90	-0.55
30.12 19.91 13.11 AdobeSystems	ADBE	... 56	243.81	-0.28	-3.72 100.00	80.74	CapnaturRes	CGR	7.9 12 142.11	-0.57
36.12 143.42 38.71 AdvancedAuto	AADE	0.2 20	130.70	-0.28	-12.04 147.17	74.12	CapRyder	CHE	5.1 2 21.30	-0.22
45.82 17.34 4.04 AdvMicroDevices	AMD	7.9 14	149.49	-0.32	-12.53 10.73	5.71	Camex	CIS	3.5 15 57.31	-0.37
6.03 7.48 5.00 Asagon	AEG	5.6 5	84.15	-0.13	-16.99 11.52	6.90	CanCon	CNC	1.1 21 123.21	-0.57
2.93 56.26 46.49 AerCap	AER	1.17	17.83	-0.50	-22.38 12.60	4.03	Academy	CAT	2.5 37 136.07	-0.36
1.72 19.40 14.69 Aetna	AET	1.1 17	183.50	-1.86	-2.29 30.45	24.81	CenterPointEner	CEN	4.0 7 27 27.75	-0.03
1.27 57.17 48.64 AffiliatedMtrs	AMG	0.8 12	148.67	-0.26	-11.75 24.37	13.16	CenturyLink	CETL	1.1 26 18.64	-0.06
-7.65 7.5 55.22 AffiliatedTechs	AAT	1.0 8	61.84	-0.26	-12.72 408.83	250.10	CharterComms	CHTR	8 292.1	-1.84
-0.76 51.86 37.35 AgricoreEagle	AGNC	1.0 51	45.83	-1.26	-5.73 119.20	93.76	CheckPoint	CHKP	20 97.68	-0.37
-5.09 17.17 14.81 ArivAeroProducts	APD	2.8 30	155.73	-0.27	-1.35 61.87	57.05	ChMax	CIS	1.5 25 21.30	-0.22
12.59 83.08 44.65 ArakamTech	AKAM	... 67	73.23	-0.75	-1.35 61.87	57.05	ChMax	CKM	19 72 117.30	-0.58
-17.85 95.75 57.53 AlaskAir	ALK	2.1 8	60.39	-0.27	-1.35 61.87	56.79	CanCon	CIS	3.5 15 57.31	-0.37
-26.24 144.99 86.75 Albermarle	ALB	1.4 22	94.33	-0.27	-12.09 21.70	22.99	6.76 CanMav	CIV	1.5 11 10.38	-0.34
-12.99 62.35 32.55 AlcoAero	AA	... 62	66.88	-0.41	-13.58 33.39	24.03	Academy	CNC	1.1 21 123.21	-0.57
-3.39 21.94 12.00 AlcoAero	ARE	2.9 49	128.67	-0.27	-1.35 61.87	56.79	CanCon	COP	6.1 31 35.95	-0.43
3.81 149.34 120.10 AlcoaPharm	ARCO	1.0 20	123.00	-0.27	-1.35 61.87	56.79	CanCon	COP	3.5 15 57.31	-0.37
-1.39 21.70 12.92 AlcoaPharm	ARCO	1.0 20	123.00	-0.27	-1.35 61.87	56.79	CanCon	COP	3.5 15 57.31	-0.37
5.59 27.15 44.33 AlconTech	ATHE	1.0 20	123.00	-0.27	-1.35 61.87	56.79	CanCon	COP	3.5 15 57.31	-0.37
-24.79 71.22 39.54 Alkermes	ALKS	... dd	41.16	-0.27	-1.35 61.87	56.79	CanCon	COP	3.5 15 57.31	-0.37
-3.54 63.42 52.10 Allegany	ALGN	... 86	57.47	-0.65	-23.72 10.72	34.70	ChCntry	COR	1.3 21 31.45	-0.03
-2.77 89.81 73.85 Allegion	ALLE	1.1 27	73.36	-0.27	-1.35 61.87	56.79	CanCon	COT	1.1 21 31.45	-0.03
1.92 256.80 142.81 Allergan	AGN	1.7 17	166.72	-1.86	-1.76 45.53	42.04	ChCntry	COT	1.1 21 31.45	-0.03
-8.00 27.83 19.20 AllstateData	ADS	1.0 23	20.26	-0.04	-10.07 80.70	64.89	ChCntry	COT	1.1 21 31.45	-0.03
-0.63 45.55 36.84 AllianzEnergy	ALW	3.2 20	42.32	-0.04	-1.35 49.22	46.44	ChCntry	COT	1.1 21 31.45	-0.03
-12.84 105.86 55.95 Allstate	ALW	2.0 19	121.07	-0.27	-1.35 39.33	33.10	ChCntry	COT	1.1 21 31.45	-0.03
-9.91 31.29 20.64 AllyFinancial	ALLY	2.0 12	26.27	-0.50	-1.35 26.99	21.07	ChCntry	COT	1.1 21 31.45	-0.03
-22.48 155.73 70.70 AlymPharm	ALNY	... dd	98.94	-0.03	-16.32 221.73	163.02	ChCntry	COT	1.1 21 31.45	-0.03
-6.62 118.89 49.87 Alphab	C	GOOG	4.7 115.65	-0.27	-16.61 130.16	82.45	ChCntry	COT	1.1 21 31.45	-0.03
-17.85 95.75 57.53 AlaskAir	ALK	2.1 8	60.39	-0.27	-1.35 28.19	18.93	ChCntry	COT	1.1 21 31.45	-0.03
-26.24 144.99 86.75 Albermarle	ALB	1.4 22	94.33	-0.27	-12.35 46.37	30.36	ChCntry	COT	1.1 21 31.45	-0.03
-12.99 62.35 32.55 AlcoAero	AA	... 62	66.88	-0.41	-1.35 19.43	12.66	ChCntry	COT	1.1 21 31.45	-0.03
-3.39 21.54 25.00 AlcoAero	ARE	2.9 49	128.67	-0.27	-1.35 19.43	12.66	ChCntry	COT	1.1 21 31.45	-0.03
5.45 26.16 9.97 AlcoAero	ARE	2.9 49	128.67	-0.27	-1.35 19.43	12.66	ChCntry	COT	1.1 21 31.45	-0.03
-1.01 19.91 14.69 AlcoAero	ARE	2.9 49	128.67	-0.27	-1.35 19.43	12.66	ChCntry	COT	1.1 21 31.45	-0.03
1.45 56.21 43.00 AlcoAero	ATHE	1.0 20	123.00	-0.27	-1.35 19.43	12.66	ChCntry	COT	1.1 21 31.45	-0.03
-1.32 22.28 14.00 AnteroResources	AR	1.9 19	23.35	-0.05	-1.35 19.43	12.66	ChCntry	COT	1.1 21 31.45	-0.03
-5.79 26.75 19.74 AntroEnergy	AR	1.9 19	23.35	-0						

## BANKING &amp; FINANCE NEWS

# London Bankers Keep Crown Despite Brexit

By MAX COLCHESTER  
AND PATRICIA KOWSMANN

Brexit was meant to be a crippling blow to London's position as the financial capital of Europe. With eight months to go before the U.K. is set to leave the European Union, the British capital's role remains mostly undiminished, and no single other European city is close to claiming its crown.

"The number of bank staff moves out of London so far has been much lower than expected by many," said Oliver Wagner, managing director of the Association of Foreign Banks in Germany, where Frankfurt was supposed to be a major beneficiary of Brexit.

A forecast of the number of British finance jobs set to disappear by March 2019, when the U.K. leaves the EU, was recently reduced to 5,000 from 10,000 by the Bank of England. That is about 1% of the people who work in financial services in London.

Global financial centers such as London, New York and Hong Kong, maintain their pre-eminence based on overwhelming concentrations of capital and skilled finance workers. Brexit presents an opportunity for other European capitals to pry some of that expertise away. So far, the impact on London has only been negligible.

This summer around a dozen of Goldman Sachs' French fixed-income sales team—who are based in London—will relocate to Paris to deal with clients from the French capital. Bank of Amer-

ica Corp. on Tuesday kicked off its Brexit reshuffle announcing that three senior bankers would move to Paris next year, where the bank is renovating an art deco post office to house its staff.

JP Morgan Chase & Co. had warned that a quarter of the 16,000 people it employs Britain could see their jobs go because of Brexit. Currently it plans to move between 300 and 400 jobs.

Given the uncertainty, banks aim to move as few jobs as possible and hope they can leave it at that.

That means relocating a handful of executives, trying to send London-based European salespeople back to home countries and hiring



Britain's looming exit from the European Union has had a negligible impact on London's financial hub.

zen out of the EU. That could create problems ranging from the invalidation of some contracts to increasing the cost of clearing trades. "Financial stability should not be put at risk because financial institutions are trying to avoid costs," the EBA said.

European regulators are also tightening the screws.

The EU is considering forcing big banks based in the U.K. to set up subsidiaries in the bloc. In the long term that might encourage international lenders to move headquarters out of London and into the EU for cost reasons. London may become the outpost of a bank's European hub.

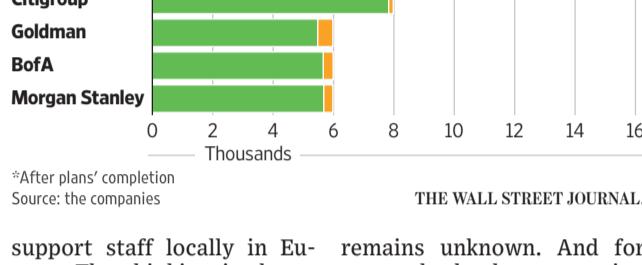
Investment banks are hoping that the European Central Bank allows them to continue to flip trades out of their EU hubs back into London, which would require less transfer of capital from the city to the continent. But ECB officials have been adamant they want subsidiaries in the EU that have enough capital and management in place to withstand shocks independently.

Banks also hope to outsource back-office work to their British subsidiaries. This is much cheaper than creating a big new stand-alone banking operation in the EU. ECB officials have said they are against the idea but bankers are betting on concessions in the short term.

"Much of this is still open for question," said John Liver, a partner at Ernst & Young.

## Brexit Sliver

The number of U.K. based banking jobs going to the EU is currently small.



THE WALL STREET JOURNAL.

support staff locally in Europe. The thinking is that a lot of operations staff can, for the moment, remain in the U.K.

Much about the U.K.'s future relationship with the EU

remains unknown. And for some, the banks are moving too slowly. The European Banking Authority has warned that banks aren't ready if the Brexit talks collapsed and the U.K. found itself suddenly fro-

## Index Looks Likely to Ax Deutsche

*Continued from page B1*  
particular by passive investors who would be expected to automatically sell the shares if it fell out the Euro Stoxx 50, the person said.

The most important indexes for Deutsche Bank are the DAX and MSCI, but losing the Euro Stoxx 50 would be unhelpful, the person said.

Index provider Stoxx Ltd. rebalances the Euro Stoxx 50 every September to remove companies whose market capitalization has shrunk below a certain size and to add those that have grown in the intervening year.

The index includes the 40 largest stocks drawn from 12

so-called supersectors. The remaining 10 stocks are filled from the stocks ranked from 41 to 60 by floating market capitalization, prioritizing companies that are already included in the index.

At the beginning of June, Deutsche Bank was ranked 62nd in that long list by Stoxx. Holding that position would result in the bank being removed from the index.

As of Friday, Deutsche Bank's free-floating market cap left it ranked 63rd of the companies on the Euro Stoxx 50 long list, according to FactSet data. Its market cap is around €2.6 billion below the stock in 60th place, the last company with a chance of inclusion in the index as it now stands.

When companies are dropped by indexes, the funds that track them must begin to sell those stocks and buy shares in the recently added companies.

In 2016, Deutsche Bank

## Parting Ways

Since the Euro Stoxx 50's last reshuffle in September, Deutsche Bank has underperformed this benchmark, pushing it to a potential exit from the index.



was removed from a less closely followed index, the Stoxx Europe 50, which also includes stocks from non-euro-zone nations such as Switzerland and the U.K.

A greater number of funds with more assets under management reference the Euro Stoxx 50, making it more important for companies to be included. Just €2.61 billion in exchange-traded funds track

the Stoxx Europe 50, according to Deutsche Börse AG, which owns Stoxx.

The impact of being dropped from an index can vary over time, according to some investment experts.

"What it does when you exit these indexes is it means Joe Average fund manager no longer has to look at you," said Dan Davies, a senior research adviser at Frontline Analysts and a former banking analyst.

"Having an investor base made up of sector specialists might not be a bad thing, given how often the bank runs into regulatory issues," he added.

The bank's new chief executive, Christian Sewing, and his team are asking investors for patience as the bank digs in to cut costs and stabilize profits, something it has repeatedly promised to do, only to miss targets.

The lender is slashing jobs and has said it will cut equity sales and trading head count by around 25%.

Mr. Sewing, a longtime bank insider, became CEO in April after the bank ousted his predecessor following three consecutive years of after-tax full-year losses.

## Rothschilds End Family-Name Feud

By NICK KOSTOV

PARIS—Two branches of the Rothschild family have buried the hatchet and ended a dispute over the rights to the family name.

In a joint statement Friday, Edmond de Rothschild Group, a Switzerland-based private bank that manages money on behalf of wealthy clients, and Franco-British investment bank Rothschild & Co. said they agreed to end litigation and would "work together to protect the family name in the banking sector."

The dispute centered on whether the investment bank was guilty of using the family name for branding, without adding a first name, initials or a suffix to make it clear that it didn't have sole claim to the prestigious name.

The Edmond de Rothschild Group, owned by a branch of the family largely based in Switzerland, claimed that using the name by itself violated centuries of oral tradition within the family. It filed a suit against Rothschild & Co. in Paris in 2015, arguing that it had broken competition law.

On Friday, the parties said they had agreed that, "neither group may use the name Rothschild & Co. on its own in any form whatsoever in the future."

Under terms of the agreement, however, Rothschild & Co. will continue to use the same brand. Its private-banking and asset-management activities in France, Belgium and Monaco will use the name Rothschild Martin Mauzel following a merger last year between Rothschild & Co.'s private bank in France and the Banque Martin Mauzel, a private bank based in Marseille.

Mayer Amschel Rothschild founded his bank in Frankfurt in the 18th century, and his five sons established banking businesses in the other big European financial centers of the time: London, Paris, Naples and Vienna.

*Under the agreement, none of them can use the Rothschild name by itself in the future.*

In 2012, David de Rothschild consolidated the French and U.K. investment-banking operations. A holding company adopted the name Rothschild & Co. Group three years later.

Ariane de Rothschild, who took the helm of Edmond de Rothschild in 2015, filed a lawsuit against Rothschild & Co. alleging unfair competition and brand infringements.

In April this year, Alexandre de Rothschild replaced his father, David, atop Rothschild & Co., passing it to the seventh generation of the family. Friday's resolution is among his first notable decisions.

## CFPB Decides Not to Fine Citi on Overcharges

By KIMBERLY CHIN

Citigroup Inc. won't pay a fine as part of a settlement it reached with the Consumer Financial Protection Bureau after the bank failed to re-evaluate and reduce interest rates for roughly 1.75 million credit-card holders as required by law.

Citi in February said it didn't lower interest rates for those consumer credit-card accounts between 2011 and 2017. Under the settlement announced Friday, the bank will pay \$335 million in refunds to the consumers affected by the credit-card overcharges, and agreed to correct its practices. The bank announced the plan to make refunds to customers in February.

"Citi is pleased to have resolved the matter with the Bureau, and we reiterate our sincere apologies to our customers for not correcting these issues sooner," the bank

said.

The federal Truth in Lending Act required the bank to periodically adjust its annual percentage rates for credit-card customers and provide and disclose written policies and procedures for how it conducts re-evaluations of rates, according to the CFPB.

Card issuers that increase rates are required to review those accounts every six months under federal law.

The bureau said it didn't impose any civil money penalties on Citi because the bank reported violations and proposed a remedy for the affected customers.

The lack of a fine underscores the bureau's more business-friendly stance taken under Mick Mulvaney, who was appointed as its acting chief by President Donald Trump in November.

—Yuka Hayashi contributed to this article.

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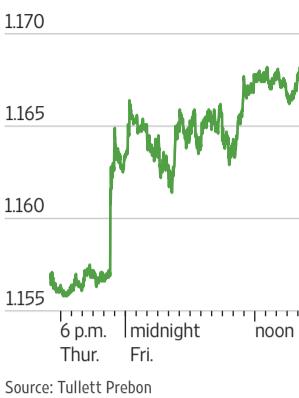
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## MARKETS NEWS

## Recovery

How many U.S. dollars one euro buys



Source: Tullett Prebon

THE WALL STREET JOURNAL.

## Euro Gets Lift From Deal on Migration

BY SAUMYA VAISHAMPAYAN

The euro surged against the dollar after European Union leaders reached a deal on migration, an issue that has divided the bloc since the Syrian refugee crisis

**CURRENCIES** accelerated three years ago.

The euro rose 1% to \$1.1683 in late Friday trading in New York, though it is down 2.7% against the dollar this year. While the euro also advanced against the Japanese yen and the British pound in Asian trading after EU leaders reached a deal to curb migration into the region, it was down against both currencies by late New York trading.

"The details are fairly thin at the moment...but it seems that most parties are content with the deal and it's averted a potential significant conflict

**Investors had soured on the euro amid signs of slowing growth.**

"in the EU," said Mitul Kotecha, senior emerging-markets strategist at TD Securities in Singapore. "That's why you've seen such a big reaction."

Before the meeting, German Chancellor Angela Merkel had warned that a failure to overcome divisions would threaten the future of the EU.

Investors have soured on the euro in recent months, after signs of slowing growth dented expectations for how quickly the European Central Bank would normalize policy. The Federal Reserve, meanwhile, has indicated that it would raise interest rates two more times this year, driven by signs of a strong U.S. economy.

Separately, the WSJ Dollar Index, which measures the U.S. currency against 16 others, fell 0.5% on Friday.

## Yuan Slid 3.4% Against Dollar in June

BY SAUMYA VAISHAMPAYAN

The Chinese yuan suffered one of its worst months on record, tumbling 3.4% against the dollar in June.

An escalation in global trade tensions and investors' growing conviction that U.S. interest rates will continue to rise combined to wallop many emerging-market currencies over the course of the month. The South Korean won and New Taiwan dollar, which are also sensitive to disruptions to global trade, lost about 3% and 1.4% against the dollar, respectively, by the end of Asian trading Friday. It was the won's biggest monthly decline since November 2016.

The yuan's swoon accelerated after a volley of tariff threats between the U.S. and China in the middle of the month and tumbled to a more than six-month low this past week. The currency was little changed at the end of Asian trading Friday, but its monthly decline was the worst since at least December 1998, based on data from Thomson Reuters. One dollar bought 6.6246 yuan as of Friday afternoon in China. Late in New York, one dollar bought 6.6225 yuan.

Declines were even more pronounced in Argentina, where authorities have been

## Xiaomi Prices IPO at Lower Range

By JULIE STEINBERG AND STELLA YIFAN XIE

HONG KONG—Chinese smartphone maker **Xiaomi** Corp. priced a \$4.7 billion initial public offering at the bottom of its target range, people familiar with the matter said, pulling off one of 2018's largest IPOs despite investor skepticism about its growth prospects.

On Thursday, the eight-year-old company priced its offering at 17 Hong Kong dollars (US\$2.17) per share, the people said, after last week setting a target range of HK\$17 to HK\$22. Xiaomi shares will begin trading in Hong Kong on July 9.

Beijing-based Xiaomi hoped to raise up to \$6.1 billion from its IPO before trading started. The pricing gives the company a market valuation of around \$54 billion. That is a sharp comedown from expectations earlier this year of a \$100 billion valuation and is also less than the \$65 billion to \$85 billion that several brokerage analysts had estimated Xiaomi to be worth.

The company encountered difficulties on the road to the IPO. Xiaomi's offering kicked off at a tumultuous time for Chinese



Smartphones are the company's largest revenue source but it also sells rice cookers and fitness bands.

stocks, which have weakened due to concerns about China's escalating trade conflict with the U.S. In addition, when it came to Xiaomi's business prospects, some analysts and potential investors never bought into the company's narrative that it is primarily an internet company.

Instead, some said they viewed Xiaomi as a hardware company, which generally command lower multiples.

Investors in the IPO include China-focused investment firm **Hillhouse Capital Group**, which put in about \$600 million, mutual-fund giant Capital Group

Cos. with about \$500 million and billionaire George Soros, a person familiar with the situation said. Goldman Sachs Group Inc., Morgan Stanley and CLSA led the stock sale.

U.S. chip giant Qualcomm Inc. and state-owned telecommunications company China Mobile

Ltd. committed earlier to buy some shares in the IPO. Cornerstone investors in Hong Kong are included to help strengthen demand for offerings, among other purposes.

Smartphones are Xiaomi's largest source of revenue, though the company also sells internet-connected devices like rice cookers and fitness bands. It also makes money from internet offerings like video streaming and financial services. The company is aiming to generate more profits from its connected devices and software.

In May, Xiaomi said its 2017 revenue grew 68% to 114.6 billion yuan. It reported a net loss of about 43.9 billion yuan, though excluding one-time charges its profit was about 5.4 billion yuan.

Dozens of Chinese technology unicorns—private companies with valuations in excess of \$1 billion—that are intent on going public in Hong Kong or New York are monitoring Xiaomi's IPO closely, people familiar with the matter said. Some of those companies could reconsider the timing of their listings, depending on how Xiaomi shares trade in the coming weeks, the people added.

## Stock Indexes Advance as Energy Shares Rise

By MICHAEL WURSTHORN AND RIVA GOLD

U.S. stocks edged higher Friday, as investors took advantage of a momentary pause in trade tensions to boost major indexes' gains for the second quarter.

**FRIDAY'S MARKETS** The Dow Jones Industrial Average rose as much as 293 points before paring its gain in the final hour of trading. Shares of energy companies rose alongside a jump in oil prices, while Nike pulled the S&P 500 and Dow higher. The athletic-apparel retailer reported its first sales gain in four quarters, sending shares to their highest close.

The developments offered a more stable footing for stocks after the Trump administration backed away from imposing new restrictions on Chinese investments in the U.S., helping to ease fears of an all-out trade war between two of the world's biggest economies.

All three major stock indexes notched a second consecutive session of gains Friday after several days when the S&P 500 and Dow switched between gains and losses. Equity funds suffered their second-largest ever outflow in the week through Wednesday, according to Bank of America Merrill Lynch.

"It's a nice snap back after a rough losing streak," said Jeff Kravetz, regional investment director at the Private Client Reserve at U.S. Bank Wealth Management. He added that mostly upbeat bank stress tests, plus the oil-



Petroleum-industry vessels. The energy sector led the S&amp;P 500 higher as oil prices got a boost from continued risks to supplies.

price gains, made bank and energy stocks attractive buys.

For investors, there is continued uncertainty around trade and a looming July 6 deadline for tariffs, Mr. Kravetz said. "Trade weighs on our view for the rest of the year," he said.

The Dow added 55.36 points, or 0.2%, to 24271.41. The S&P 500 rose 2.06, or less than 0.1%, to 2718.37, while the Nasdaq Composite gained

6.62, or 0.1%, to 7510.30.

The gains helped pare weekly losses for the indexes and pushed each further into positive territory for the second quarter. The Dow and S&P 500 rose 0.7% and 2.9%, respectively, to bounce back from losses in the first quarter.

The tech-heavy Nasdaq added 6.3%, its strongest three-month period of trading since the first quarter of 2017.

Energy stocks led the S&P

500 higher, as oil prices got a boost from continued risks to supplies in Libya, Iran and North America. Crude for August delivery rose 70 cents, or 1%, to \$74.15 a barrel.

Nike jumped \$7.98, or 11%, to \$79.68 after the company reported late Thursday that it grew sales in its core North American market after three straight quarters of declines.

Meanwhile, the Federal Reserve's preferred inflation

gauge, the price index for personal-consumption expenditures, rose 0.2% in May and 2.3% from a year earlier.

"The market feels fairly sanguine about [U.S.] inflation, but you have the roots of inflationary pressure that could build, between tariffs, a full labor market, and closing borders limiting the supply of labor," said Randy Brown, chief investment officer at Sun Life Financial Inc.

## Treasurys Mostly Flat Despite Inflation Data

By DANIEL KRUGER

U.S. government bond prices edged higher Friday after data showed inflation may be starting to gather momentum.

The yield on the benchmark 10-year Treasury note inched down to 2.847% from 2.849% Thursday.

The 10-year yield increased for a fourth consecutive quarter, from 2.741% on March 29.

The two-year Treasury yield rose to 2.528% from 2.522% on Thursday. It was 2.270% at the end of March. Yields rise as bond prices fall.

Treasury yields climbed briefly after the Commerce Department said the personal-consumption expenditures price index, a broad measure that serves as the Federal Reserve's preferred inflation yardstick, rose 2.3% in May from a year earlier, its biggest annual gain since March 2012.

The year-over-year increase in April was 2%.

The acceleration in inflation could help Fed officials make the case that they should raise interest rates at their September meeting, analysts said. Officials penciled in two more rate increases this year when

they met earlier in June to assess the path of monetary policy. At that meeting, the policy makers raised rates for a second time this year.

Federal-funds futures, which investors use to bet on the direction of interest-rate policy, late Friday showed a 46% probability that central-bank officials will raise rates at least two more times this year, up from 44% on Thursday, according to CME Group data.

"The markets may be underpricing the Fed's willingness to push ahead with further rate hikes," said Bill Merz, a director of fixed income at U.S. Bank Wealth Management.

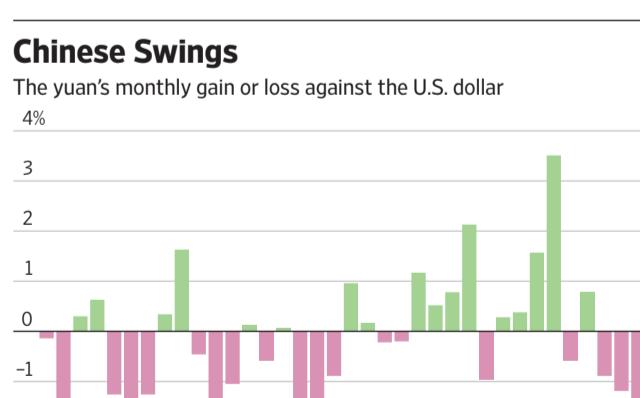
The market's tepid response to the inflation data is a "yellow flag," suggesting that investors may be looking ahead to slowing growth in what has been an almost nine-years-long economic expansion, Mr. Merz said.

The gap between yields on Treasury notes maturing in two and 10 years, known as the yield curve, flattened to 0.319 percentage point, the lowest since August 2007.

Investors look to the yield curve as an indicator of the direction of the economy. Steeper curves suggest faster future economic growth.

## Chinese Swings

The yuan's monthly gain or loss against the U.S. dollar



Sources: Thomson Reuters (through May); Wind Info (June figure)

THE WALL STREET JOURNAL.

struggling to arrest a slide in its currency and turned to the International Monetary Fund for financing. The Argentine peso slumped 11% against the greenback in June.

The South African rand dropped more than 7%, its most in a month since May 2016, while Brazil's real lost nearly 4%.

What was different in the recent bout of global emerging-market turmoil was the Chinese currency's weakness, analysts said. "China has now become front and center of

this EM stress," said Sameer Goel, head of Asia macro strategy at Deutsche Bank in Singapore. The idea that the yuan could depreciate further and amplify the volatility for emerging markets has added to investors' concerns, he added.

Some emerging markets came under pressure in April because of a rebound in the dollar. While the pain was initially concentrated in countries with large external financing needs, such as Turkey and Argentina, it started to

"We are cautious. Where we are invested, we're trying to be long volatility" he said, explaining that his firm holds options on stock indexes to protect its portfolio from losses if there are large market swings.

## EXCHANGE

## HEARD ON THE STREET

FINANCIAL ANALYSIS &amp; COMMENTARY

## Wall Street's Sucker's Bets

Investors keep putting money into funds that keep losing. Is it investing or gambling?

By SPENCER JAKAB

People who compare Wall Street to a casino are usually just bitter about a bad experience. When it comes to some wildly popular products, though, the description fits.

Owning stocks is mostly a winner's game. Since 1928, the stock market has risen on 54% of days, 58% of months and 73% of years. Over that time a \$10,000 investment in U.S. stocks in 1928 would have grown to \$40 million. Take the same money into a casino and bet on a roulette wheel coming up red and your odds of winning are 47%. Stick around for a few hours and your bankroll will almost certainly be gone.

**The distinction between an investment and a gamble lies in the odds of success.**

So what do you call funds that trade on the stock market but have odds resembling a casino game, occasional jackpots included? A popular one, the Direxion Daily Financial Bear 3X Shares fund, has lost money on 54% of days and every calendar year since its launch in late 2008. The fund produces three times the inverse of an index of financial companies, so it posted some spectacular gains during the financial crisis. They faded quickly. For example, the fund doubled in four

sessions in January 2009 but gave up those gains in the next six. The following month it doubled again in seven days but lost 60% in the next four and then another 50% in the following seven sessions—quite a ride.

"One of the open secrets of the financial-services world is that we're also in the entertainment and gaming industry," says James Angel, a finance professor at Georgetown University.

The savings-destroying combination of volatility and daily compounding is what makes these leveraged inverse funds losing propositions. A \$10,000 investment in the Daily Financial Bear 3X fund made in 2008 is now worth about \$2. Such funds rarely fade away, though, because investors who think they can beat the odds keep pouring in fresh capital. In fact, far more money has poured into leveraged inverse funds than their current roughly \$15 billion market value, according to figures from ETFGI, while holding periods are typically days or hours.

On June 25, a volatile day for stocks, 10 similar funds had greater share turnover than blue chips **Walt Disney**, **Amazon.com** or **Delta Airlines**.

Those in the industry point out that not all leveraged products are duds. Some, such as those that add leverage to long positions, have performed marvelously during the nine-year bull market. Sylvia Jablonski, head of capital markets and institutional strategy at asset manager Direxion, which of-



## Triple Whammy

Markets tend to be choppy when retreating, harming the returns of funds that seek to profit from falling prices

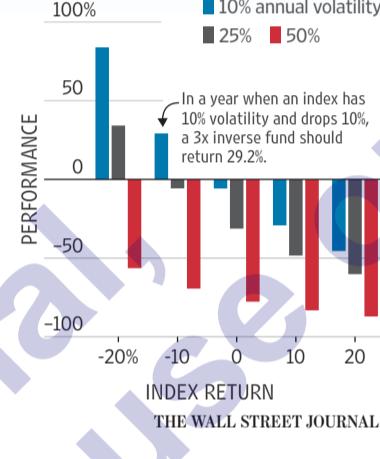
## Annual return of Direxion Daily Financial Bear 3X Shares Fund



fers 76 inverse or leveraged ETFs, points out that typical holding periods are short for such products.

"We consider it a trading tool,"

## Expected performance of a 3x inverse fund in a year



she says. "We're very clear with clients that these are products that aren't meant to be held."

There is pretty much one scenario

where a long-term shareholder would make money in a fund like the financial-bear one—a year of bad performance of the index amid low volatility. That hasn't happened yet.

The distinction between an investment and a gamble lies in the odds of success. On average gamblers lose over time. So why does the Securities and Exchange

Commission allow anyone with a brokerage account to put their nest egg into something that typically loses money?

A spokeswoman declined to comment. Defenders of these funds point out that, unlike games of chance, some people believe that they have a unique insight into which way the market might move tomorrow. Others use inverse funds to hedge their shareholdings. Unlike complicated stock options, they "democratize leverage," in Ms. Jablonski's words.

Mr. Angel sees the funds mostly as gambles, yet he doesn't object to their existence since authorities also allow individuals to make even more dangerous bets such as stock options, penny stocks, or for that matter, to play the lottery.

Some speculators make wild gains. Keeping them is another matter. Take the experience of "TheSkepticizer," a commenter on social-investing message board StockTwits. He claims he profited on June 25 trading SQQQ, which produces three times the inverse of the Nasdaq 100. The index plunged that day on trade fears and the ETF gained 6.4%.

"Made some money here today, but sold on the dip. Hmmm, probably shouldn't have...maybe can buy back in tomorrow."

He claims to have done so the next morning. An hour later the fund was already down 2% and he was eyeing a 3x long semiconductor ETF to make up for a 10% drop that day in a triple inverse oil fund he owned.

TheSkepticizer might not have done much better in Las Vegas, but at least there would have been free drinks.

JOHN KUCZALA

## The Hard Lessons of Xiaomi's Deflated IPO

'China' and 'tech' are no longer bonanza buzzwords

By JACKY WONG

Life coaches always suggest aiming high. Sometimes that merely creates more room to fall. Such has been the case with Chinese smartphone maker Xiaomi and its hapless initial public offering in Hong Kong.

An IPO valuing Xiaomi at \$54 billion doesn't sound too shabby, but perspective is vital. A few months back the talk was of a \$100 billion flotation that would herald a slew of blockbuster Chinese tech IPOs. Instead, Xiaomi has ended up pricing its offer at the bottom end of the indicative range, raising \$4.7 billion—well below the \$10 billion it initially planned.

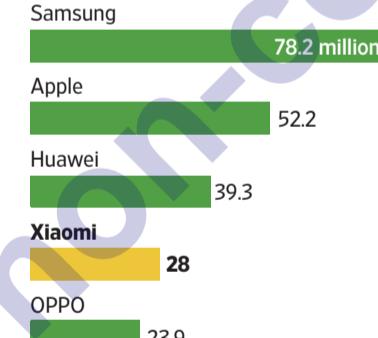
So what, as those life coaches might ask, have we all learned?

First, a \$100 billion price tag—valuing Xiaomi at more than 100 times trailing earnings—was always way too high, given the company's business still consists mainly of selling low-margin handsets into a fickle market. Xiaomi's attempts to spin itself as an internet stock that could make money from advertising and other services largely failed.

A bungled effort to raise at least half of the IPO proceeds in mainland China, by becoming the first company to issue depositary receipts there, also harmed Xiaomi. Pure bad luck played a part. Chinese stocks listed in Hong Kong have just entered a bear market:

## Dial Up

Global smartphone shipments, quarter ended March, 2018



Even investor darling Tencent is down 20% this year.

What's most clear is that the words "China" and "tech" no longer guarantee a bonanza for companies and their advisers. Next in the IPO pipeline is Meituan Dianping, which runs a hugely popular food delivery app—it hopes investors will value it at \$60 billion. Still looming is Ant Financial, the Alibaba affiliate which dominates payments in China and which is currently reckoned to be worth \$150 billion.

Both those companies are very different beasts from Xiaomi. But they will surely have learned that investors are currently in no mood to swallow any old hype.



RICHARD DREW/AP (ABOVE); FRED DUFOUR/AP/GETTY IMAGES

Xiaomi has tried to spin itself as more than just a maker of smartphones.



## OVERHEARD

It turns out that trading ahead of changes to the Dow Jones Industrial Average isn't as easy as it looks.

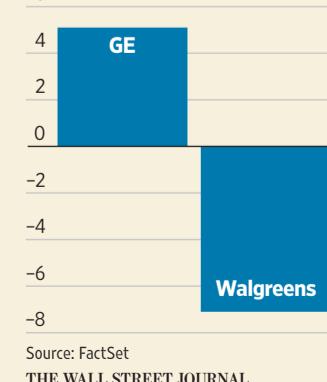
Shares of Walgreens Boots Alliance rose more than 5% on June 20 after news that the pharmacy chain would replace blue chip General Electric in the index.

Those who bought the stock that day to celebrate its inclusion in the venerable benchmark haven't done so well. Walgreens shares are down 11.5% since then through Friday. News that Amazon bought online pharmacy Pill-Pack sparked a sharp sell-off in Walgreens as well as in other pharmacy stocks.

GE, for its part, has fared much better. The company's managers announced earlier this week that they would break it up, which pleased investors. The stock is up 5.1% since the announcement.

Membership doesn't always have its privileges.

## Performance since DJIA decision



## Inflation Is Back, Now: How to Cool It

The case is building for the Fed to start leaning against the economy

By JUSTIN LAHART

The question of whether inflation will get to the Federal Reserve's 2% target has been answered: yes. Now the question is what the Fed is going to do about it.

The Commerce Department on Friday reported that its measure of consumer prices rose 0.2% in May from April, putting it 2.3% above its year-earlier level. More important, core prices, which the Fed follows closely, were up 2% on the year. That marked the first time core inflation, which excludes food and energy to better capture inflation's trend, reached 2% since April 2012.

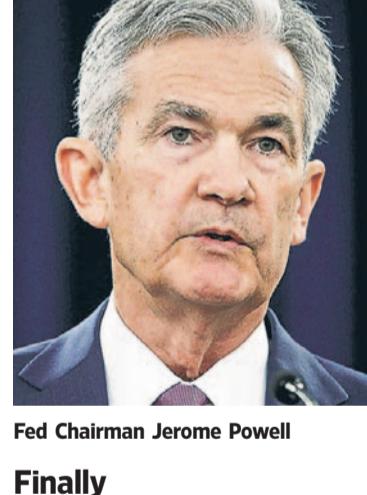
So, after years of frustration over doggedly low inflation, mission accomplished for the Fed.

With that goal met, the statement earlier in June by Fed Chairman Jerome Powell takes on more significance. At the news conference following the Fed's rate increase, Mr. Powell said the Fed would move to cool things off "if inflation were to persistently run above" 2%, effectively quashing speculation that the bank would allow the economy to run a bit hot.

The risk is building that inflation will do just that. A strong economy should keep core inflation at at least 2%. Throw in recent fuel-price increases that could feed into prices for non-energy items and tariffs that could lift import costs, and core inflation could go higher still.

Perhaps the biggest worry for the Fed is the unemployment rate. At 3.8% (and probably headed lower), it is well below the 4.5% level that Fed policy makers see as sustainable. So in the Fed's view, the case is building for it to start leaning against the economy.

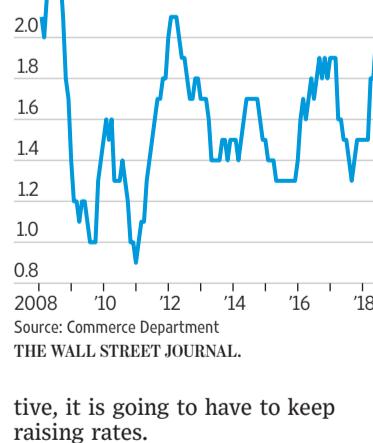
Despite multiple rate increases, the Fed believes it is leaning with the economy. In the statement it released following its June meeting, the Fed said that its policy stance was "accommodative." If it is going to go from that to restrictive



JACQUELYN MARTIN/AP

## Finally

Change in consumer prices, excluding food and energy



tive, it is going to have to keep raising rates.

The most important question for investors right now is how much rates have to go up for the Fed to believe that monetary policy has gone from accommodative to restrictive.

Right now the Fed expects to raise rates two more times this year, and three times next. That means policy, by the Fed's own measure, wouldn't turn restrictive until the end of 2019.

If the Fed needs to move faster than that, markets would be in for a surprise.



**'Beepocalypse' Battle**  
How scientists, farmers and a whole village are helping besieged hives **C3**

# REVIEW

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A celebration of Britain's Royal Air Force, the first name in air power **Books C7**



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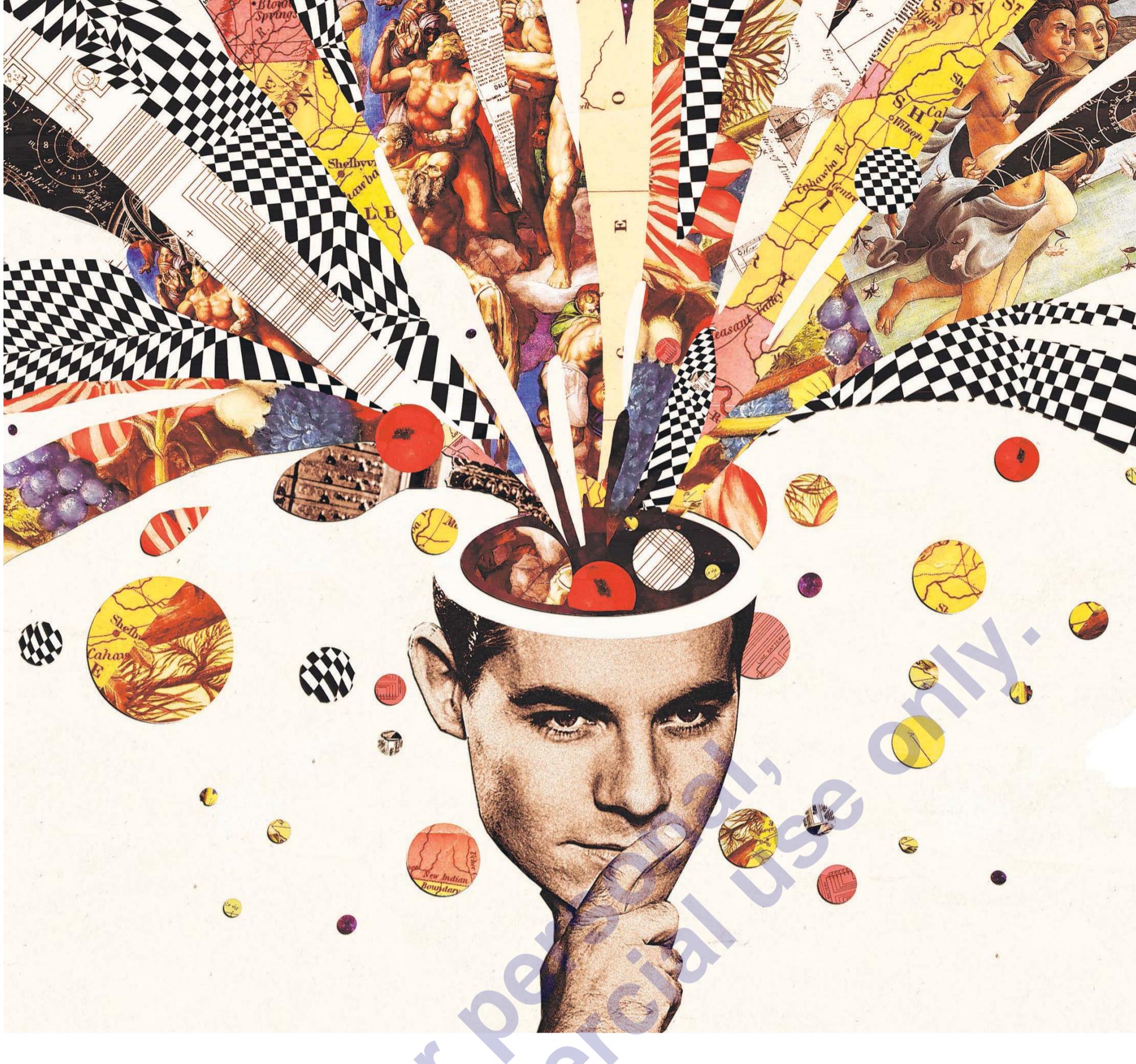


PHOTO ILLUSTRATION BY LINCOLN AGNEW; AUSTIN HARGRAVE FOR THE WALL STREET JOURNAL (WEEKEND CONFIDENTIAL)

## Lessons From STRANGE

# BRAINS

BY HELEN THOMSON

As scientists work to unravel the mysteries of the mind, people with unusual conditions—from hyper-empathy to perfect memory—are helping add to our understanding.

**S**haron remembers the first day it happened, in 1952. She was 5 years old and blindfolded while her friends ran around her, laughing, trying not to be caught in a game of blindman's bluff. But when she whipped off the scarf, panic set in. The house, the street, even the mountains were in the wrong place. She was totally disoriented. \* She told her mother that everything around her looked different. Her mother pointed a finger at her. "Don't ever tell anybody about this," she said. "Because they'll say you're a witch and burn you." \* Sharon, who lives in Denver, didn't know it at the time, but she had lost the ability to create a mental map of her environment. Her disorientation began to occur more frequently until it became a constant presence throughout her day. She became almost permanently lost. \* Yet she didn't mention her problem to anyone. Instead, she hid it for 25 years, using her sense of humor and intelligence to complete her education, make friends and even get married without anyone ever knowing her secret. At home, she followed the cries of her children to find their bedroom at night. Her saving grace was a trick she had learned early on—spinning around seemed to temporarily correct her mental map. "My Wonder Woman impression," she calls it. \* She eventually learned she had an unusual condition called developmental topographical disorientation disorder, or DTD. (She thinks her mother had it, too—the condition has a genetic link.)

Throughout history, unfortunate accidents, maverick surgeries, disease and genetic mutations have helped scientists learn how different parts of the brain work. Phineas Gage, who turned from jovial and kind to aggressive and rude after a metal rod shot through his head in 1848, showed us that our personalities are intimately tied up in the front regions of the brains. Savants like Alonzo Clemons—who sadly suffered a traumatic head injury as a toddler, leaving him with learning difficulties and a low IQ but an incredible ability to sculpt—have helped propel our understanding of creativity.

We are by no means close to understanding the mind in its entirety. None of what we call our "higher" functions—memories, decision-making, creativity, consciousness—are close to having a satisfying explanation.

What is clear is that the unusual brain provides a unique window into the mysteries of the so-called normal one. It reveals some of the extraordinary talents locked

Please turn to the next page

"  
I don't have  
to mourn  
people...  
my memory  
of them is  
so clear."

This essay is adapted from Ms. Thomson's new book "Unthinkable: An Extraordinary Journey Through the World's Strangest Brains," published by Ecco, an imprint of HarperCollins (which, like The Wall Street Journal, is owned by News Corp).

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Through the fire:  
Chaka Khan on big  
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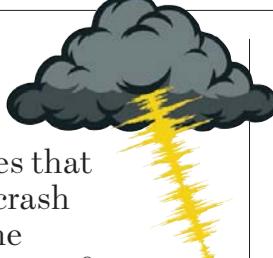


## Safe Havens

America's process of granting asylum has grown ever more daunting in recent decades. **C4**

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## RELIGION

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Catholic identity is at the core of new debate over who can share Communion. **C5**



## REVIEW

# Lessons From Strange Brains

*Continued from the prior page*

up inside us all, waiting to be unleashed. It shows us that our perceptions of the world aren't always the same. It even forces us to question whether our own brain is as normal as it would have us believe.

For two years, I traveled around the world to meet people with extraordinary brains. They have all been tested, scanned and analyzed by multiple doctors and researchers. Through their stories I uncovered the mysterious manner in which the brain can shape our lives in unexpected—and, in some cases, brilliant or alarming—ways. They also taught me some of the secrets of my own mind.

Take Sharon. We only began to understand how we navigate in the 1960s, when neuroscientist John O'Keefe, at University College London, placed a set of electrodes into the hippocampus of rats, to record the spikes of electricity that occur in this brain region as the animals explored their environment. In doing so, he discovered "place cells"—cells that only fire when a rat is in a specific location. The combination of their activity forms a kind of electrical map inside the brain.

But place cells can't do this job alone. Later research showed that they communicate with many other cells, those that process which way our head is turned and where walls and boundaries are, together with an important brain region called the retrosplenial cortex, responsible for incorporating permanent landmarks into our mental map.

It wasn't until 2009, however, that it was discovered that this map could go terribly wrong. Giuseppe Iaria, then at the University of British Columbia, was investigating why some people are better navigators than others. In the process, he met a patient who, like Sharon, was permanently lost. He called the condition DTD and later published a paper in *Neuropsychologia* stating that the problem resulted from a lack of communication between all the regions of the brain involved in creating a mental map.

For anyone who has a bad sense of direction, Dr. Iaria says it's never too late to improve your navigational skills. "If you're in a new area, you should return to one point often, as this will help you build a better mental map," he says. Paying attention to specific landmarks and their orientation to one another can also assist your retrosplenial cortex in building these into your mental map and help you find your way home.

Not all brain disorders are as detrimental as DTD. Bob, a TV producer from Los Angeles, remembers every day of his life as if it happened yesterday. His perfect memory is a gift, he says: "I don't have to mourn people after they've passed away because my memory of them is so clear."

The condition was discovered by James McGaugh at the University of California, Irvine, in 2001, after he received a peculiar email from a woman named Jill. "Since I was 11 I have had this unbelievable ability to recall my past," she said. "When I see a date...I go back to that day and remember where I was, what I was doing, what day it fell on and on and on."

The exact nature of memory is hotly debated, but the general consensus is that memories are stored at synapses—gaps between brain cells called neurons. As one neuron sends signals to another, the connection between these two cells strengthens, gluing different aspects of a memory together.

Dr. McGaugh wondered whether Jill's unprecedented memory came down to the way she stored memories. But he soon discovered that Jill wasn't great at other memory tasks, like remembering strings of numbers. In



2006, he published a paper naming the condition Highly Superior Autobiographical Memory (HSAM).

A decade later, Dr. McGaugh had a group of around 50 people with HSAM. By scanning their brains while they carried out memory tasks, he discovered that they had an enlarged caudate nucleus and putamen—two areas implicated in obsessive compulsive disorder. Dr. McGaugh concluded that their extraordinary powers of memory are rooted not in their ability to form memories, but in an unconscious rehearsal of their past. They accidentally strengthen their memories by habitually recalling and reflecting upon them—"a unique form of OCD," he says.

While we may not be able to remember as much as Bob or Jill, there are tricks we can learn to forge more permanent memories. Studies by Eleanor Maguire at University College London and her colleagues helped demonstrate that the brain prefers to store memories as images in an orderly location. They did this by comparing the brain activity of world memory champions with a control group, while they memorized lists of items.

Results showed the only difference was that the champions preferentially used parts of the brain responsible for navigation and spatial awareness during the tasks. It turned out that they had better memories purely because they were placing items they needed to remember as images around a "mind palace." A mind palace is a location you know well, like your walk to work—and anyone can use it. Simply place items you want to remember along this route and you'll be able to recall them easily by mentally retracing your steps and picking them up.

Joel, a doctor at Massachusetts General Hospital in Boston, has a unique condition that has both benefits and drawbacks. It is called mirror-touch synesthesia, and it's the ability to feel other people's touch, pain and emotions as if they are happening to your own body. A scratch of the head, a frown, a punch on the arm—if Joel sees it, he feels it. In other words, he is hyper-empathetic.

We all experience others' worlds to some extent. For that we can thank our mirror neurons—brain cells that act in the same way whether I make a movement or see someone else make that same movement. Most of us receive veto signals from other cells that damp our mirror neuron activity and allow us to distinguish between what's happening to us and what's happening to those around us. When Michael Banissy at Goldsmiths, University of London, scanned the brains of 16 mirror-touch synesthetes, he discovered that they lack these veto signals and have less brain tissue in an area that helps us distinguish the self from other.

When Joel injects a person, he feels the sensation of a needle entering his own skin; upon seeing an amputated arm, his own arm feels as though it has been ripped apart. He feels other people's emotions, too, which he says helps him to connect with patients. "If someone looks nervous, then my brain will feel those movements as if they are happening to my own face and say, 'You're nervous.' It helps me understand what they're really feeling."

This tallies with the work of neuroscientist Antonio Damasio of the University of Southern California, who states that feelings only occur after our brain senses physical changes in our body and attaches value to them. You can test this theory now. Pull the corners of your mouth up, squeeze your cheeks and crinkle your eyes—there, you're smiling. Stay like that. Do you feel better? Several studies have shown that the physical act of smiling makes you feel instantly happier.

While the mind can't be fooled into a permanent state of bliss, the idea that our feelings are a result of the things that happen to our body can help us in other ways. Our ability to sense the physical state of our body—a rumbling stomach, a sense of thirst—is called interoception, and it constantly guides our thoughts and behavior.

For some people, this system goes awry in a condition called depersonalization. Louise, a teacher from the U.K., was 8 years old when it first happened to her. "I

woke up that morning and suddenly felt like I'd been dropped into my body," she says. "It's really hard to describe, but it was like I was just born. Everything around me felt new."

Like many people with depersonalization, Louise has great difficulty describing her state of mind. "When you're in this state, everything around you feels like it is screaming at you to get noticed. But at the same time your whole world seems like it's happening to someone else, someone you're not in control of. It's like walking through tar. It's exhausting," she says.

The region that integrates all this interoceptive information is the insula, a fold in the center of the brain. The front of the insula "is the area of the brain that forms a default setting of 'This is me here and now,'" says Nick Medford, a consciousness expert at Brighton and Sussex Medical School. Dr. Medford spends much of his time placing people in brain scanners and showing them pictures of grotesque surgery, filthy bathrooms and cockroaches—images designed to elicit aversive reactions. When we look at these kinds of highly evocative stimuli, the insula lights up with activity. When Dr. Medford showed 14 people with depersonalization these images, however, he found a startling lack of activity.

You can check your own interoceptive abilities now, simply by counting your heartbeat without touching your chest. Studies have found that people who are better at this task are also more empathetic, better at dividing their attention and make better decisions. It suggests that our gut feelings, on which we often base decisions, may rely on an awareness of subconscious body signals.

There could be one way to improve interoception. Vivien Ainley and her colleagues at Royal Holloway, University of London, showed that people are more accurate at counting their heartbeats while staring at a picture of themselves. It's thought that this helps shift the brain's attention from the outside world to the internal world, via the insula. Whether this could eventually lead to persistent levels of increased interoception is under investigation. In a world full of brain-training apps and drugs that promise a shortcut to a brighter brain, I like the idea that we might be able to improve ourselves simply by looking in the mirror.

It goes without saying that we should relish the lives that our brains create—particularly those that aren't "normal." In fact, as we unravel the mysteries of the mind, it is becoming clearer that all our perceptions of the world may be unique. We all possess a remarkable feat of neural engineering. Let's celebrate its differences.



TONI KROOS of Germany scored a big goal in last Saturday's game.

**WORD ON THE STREET**

**BEN ZIMMER**

**Spanish Gives a Bit Of Pasión To a Soccer Standby**

**SOCER FANS** around the world have their eyes on Russia, as 16 teams advance to the knockout stage of the World Cup. It's a quadrennial display of just how much international appeal the sport has. That goes for soccer's terminology

"*Golazo*" has a globe-trotting history particularly appropriate for the World Cup. The word's origins lie in the English word "goal," which comes from a medieval word meaning "boundary." As early as the 16th century, precursors to the modern game of soccer (or football, if you'd prefer to be more international) used the word "goal" to refer to the target for scoring as well as the act of a player scoring.

In Latin American Spanish, "goal" was borrowed into the sport of fútbol as "gol." (The Royal Spanish Academy, which looks down on such English loan-words, reckons that the proper Spanish word is

"meta.") "Gol" then picked up the suffix "-azo," which works as an augmentative, turning a goal into a great goal—one could translate it as "a heck of a goal." (A little goal would be a "golito," using the diminutive suffix "-ito.")

Pablo Ramírez, a longtime soccer commentator for Univision, did much to popularize the word. He's famous for his ebullient call of "Golazo, golazo, azo, azo, azo!" Mr. Ramírez told me that he first came up with his "golazo" call around 1990, when he was beginning his broad-

casting career at a Mexican TV station. Among Mexican fans, "a lot of people screamed like that," he said.

A decade later, when Mr. Ramírez moved to Univision, "golazo" became his trademark call, and the word received great exposure in his play-by-play commentary for World Cup matches starting in 2002. (Telemundo has taken over from its rival Univision in broadcasting this year's World Cup in Spanish.)

"Golazo" then worked its way into English soccer lingo, thanks to the popularity of

Spanish-language broadcasts. In 2002, a columnist for the Pittsburgh Post-Gazette wrote about picking up Spanish expressions from watching the World Cup on Univision: "A striker who sends the pelota [ball] on a rocket-like trajectory toward the goal has fired a pelotazo; if the sphere finds the net, it's not just a gol—it's a golazo."

In Spanish-language media, the impact of "golazo" might be a bit diluted these days, because the word seems to get used for any goal with some importance, regardless of the artistry or skill of the play. In English, however, "golazo" is just starting to take off.

English has plenty of native terms for impressive goals—British announcers in particular exult in a panoply of descriptions like "cracker," "screamer," "thunderbolt" or "wondergoal."

But there remains something special about "golazo": "It's not just the best way to describe an extremely awesome and important goal," Deadspin senior editor David Roth told me, "but effectively the only way."

# [Golazo]

too, which often crosses linguistic borders.

Consider "golazo," often shouted by Spanish-language television commentators in celebration of a sensational,

## REVIEW



# The Plight of the Humble Bee

Stung by the 'beepocalypse,' farmers and scientists are struggling to replenish fallen colonies, as bee rustlers swipe hives and food crops suffer

BY THOR HANSON

**T**HE WORLD'S BEES are in decline, driving up the price of pollination so high it has spurred a black market of bee rustlers dealing in stolen hives. The almond growers of California's central valley, who need 1.8 million hives each year, have seen the price to rent them grow over the past decade from \$50 to as much as \$200—valuable enough for thieves to spirit thousands away each season in the dead of night, to be rebranded and pawned off to different growers. Last year, police uncovered one cache of contraband bees worth close to \$1 million.

Farmers, beekeepers and biologists have a name for the problem: the "beepocalypse." It started mysteriously in 2006, when hives began failing en masse across North America, and next spread to Europe. Healthy-seeming bees would simply fly away and never come back, leaving behind combs full of honey and a dying, unintended queen. Scientists at the time dubbed the phenomenon "colony collapse disorder" and launched a massive research effort, yet no clear cause of the malady has ever emerged. Stranger still, honeybees continue dying even though colony collapse disorder peaked quickly and has been on the wane. Those classic empty-hive symptoms now appear in less than 5% of failed hives, yet beekeepers continue losing between 30% and 40% of their stock every season.

People badly need bees. Biologists chalk up every third bite of food in the human diet to bee pollination, and in terms of the most popular and nutritious food crops the

ratio is even higher; bees visit more than 75% of them.

Bees also provide much of the flavor in the human diet, nutritious or not. Take a McDonald's Big Mac: The bun comes from wind-pollinated grains and the beef from a grass-and-grain-fed cow. But then there's the special sauce, which requires at least five different bee-dependent ingredients, including paprika (from a bee-pollinated pepper), turmeric (the root of a bee-pollinated ginger), and canola oil (from the seeds of a bee-pollinated mustard). The pickle slices come from bee-pollinated cucumbers, and onions require bee pollination to produce seeds. Even the American cheese involves coloring from bee-pollinated annatto, milk from dairy cows that eat bee-pollinated alfalfa, and an emulsifier made from soybeans, which can self-pollinate, but produce higher yields if bees are present.

Now, bees need people, too. To replenish their stocks, California almond growers are working with pollinator specialists to add bee-friendly hedgerows and cover crops of native wildflowers to more than 10,000 acres, aiming to triple local bee diversity and reduce the need for rented hives shipped in from around the country. Some major corporations including General Mills have begun requiring such bee-friendly practices throughout their supply chains. Nearly 200,000 volunteers have signed up to monitor bees in their yards for the Great Sunflower Project, started by a biology professor at San Francisco State University in 2008. She asked participants to plant sunflowers and record bee visits, a valuable source of data to track broad trends. It's now the largest citizen

A HONEYBEE in an almond flower. California almond growers are adding other bee-friendly plants, aiming to triple local bee diversity.

The price to rent a hive has grown to as much as \$200.

science effort on record.

Experts believe that multiple factors must be at play in the bees' plight. The main suspects are referred to as the four Ps: parasites, poor nutrition, pathogens and pesticides. The parasites include tiny Varroa mites that feed on bees' body fluids. The Asia natives have spread through international trade in bees and beekeeping equipment, and now afflict hives in every beekeeping country outside Australia, which has held them off through strict controls. Poor nutrition reflects a widespread loss of flowers in rural landscapes because of the rise of industrial farming practices over the past 60 years; varied farms have given way to vast monocultures that are efficient for growing crops but only provide bee-sustaining flowers for a few weeks a year.

The list of pathogens carried by bees includes fungal infections and wing-deforming viruses, many of which get moved around with international trade. Pesticides have gotten the most attention of the four Ps, and the European Union cited bee concerns in their recent ban of a popular class known as neonicotinoids—but with hundreds of chemicals on the market, it's nearly impossible to tease out individual effects. Products that pass "bee safe" tests in a laboratory can become unsafe when mixed with the fungicides or herbicides often sprayed on the same fields.

This complexity means that the causes of bee declines probably vary in different places, and that the overarching problem boils down to bee health. When bees are weakened by any one of the four Ps, they become more susceptible to the others. And when enough individuals get sick, the whole colony fails.

The beepocalypse does have a silver lining. Never before have scientists known so much about the threats to bees—not just honeybees, but all the world's 20,000 varieties. And while many questions remain unanswered, we have learned enough to take action.

Remedies for bee decline can be as simple as planting flowers and reducing pesticide use, but the results are often transformational. With the right mix of flowers and nesting habitat, nearly any patch of ground can be turned into a bee garden and provide everything small bees need to forage, nest and reproduce over the course of a season. For larger, farther-ranging bee species, such gardens are important flower and nectar resources, like pit-stops scattered across the landscape.

For a glimpse of what is possible on a larger scale, bee campaigners everywhere look to a small community in rural Washington state. For three generations, alfalfa farmers in the Touchet Valley have been raising more than a valuable seed crop. Scattered across their blooming fields are wide, barren plots of salted earth, specially tended and irrigated to mimic the nesting habitat of a tiny burrowing bee. Honeybees don't like alfalfa, but the native alkali bees thrive on it, and with the farmers' help their numbers have skyrocketed. As the local saying goes, "You get more flowers, you get more bees." And every bee brings increased yields and profits.

The valley's alkali bee population has reached an estimated 18 million to 25 million nesting females, with at least that number of males—the largest native pollinator population ever measured. During a recent drought, people skipped showers and let their lawns die to keep water flowing to the bee beds. Even the local highway department pitches in, putting up 20 m.p.h. bee-safe speed zones alongside every teeming field. With the world's bees depending on us as much as we do on them, those signs have good advice for everyone: Slow down, smell the flowers, and listen to the buzz.

*This essay is adapted from Mr. Hanson's book "Buzz: The Nature and Necessity of Bees," to be published by Basic Books on July 10.*

## What We Don't Know Can Hurt Us

BY RUTH W. GRANT

**T**HANKS TO Stormy Daniels, Harvey Weinstein and #MeToo, most of us are now familiar with agreements where one party purchases the other's silence. But such nondisclosure agreements, also known as NDAs, aren't limited to allegations of sexual misconduct, and often they involve public money. The agreements regularly undermine the accountability of the powerful and protection for the public.

Nondisclosure agreements are more prevalent than you may think. More than one-third of U.S. employees are bound by NDAs of some kind, according to the findings of a 2014 national survey of 11,500 labor-force participants by researchers at the universities of Michigan and Maryland. That means there's a good chance your own employee contract may forbid you from disclosing certain kinds of information about your employer.



**NONDISCLOSURE** agreements like the one signed by Stormy Daniels have become common. Some lawmakers are now rethinking them.

tails of the case are concealed by a confidentiality agreement.

New Jersey officials reject his accusations, but the state's lower house has since passed legislation now under consideration in its senate to curtail the use of NDAs in cases involving public officials.

In North Carolina, a 2016 settlement that included an NDA helped shield law-enforcement officials from scrutiny after a Harnett County prison inmate named Brandon Bethea died after being

stunned repeatedly with a Taser by a detention officer. Bethea's family received \$350,000 of public funds and agreed not to speak of the case. A video of his death that later leaked to a local newspaper showed that prison officials had misrepresented the incident, though county officials say they still consider the matter resolved.

Even in cases involving private companies, rejecting NDAs can unveil issues that affect the public interest. In exchange for confidentiality, Enterprise Rent-A-Car offered \$3 million to the parents of two California sisters who died in a crash, the parents' attorney told reporters, because of the company's failure to repair a recalled PT Cruiser. The parents refused the offer, won a \$15 million court judgment in 2010, and then went on to help get a federal law passed in 2016—the Houck Act—banning rentals of cars with manufacturers' recalls in effect until repairs are done.

Of course, secrecy is sometimes justified. Victims of sexual abuse

or harassment understandably may value confidentiality. Companies have good reasons to protect trade secrets. Many argue that parties to a voluntary contract ought to be able to reach whatever agreement suits them, so long as there is no public harm.

Accountability requires transparency, as more policymakers are realizing—and there is public harm in allowing defective products to stay on the market, masking sexual predators or restraining whistleblowers. Congress has passed legislation in recent months to restrict the use of taxpayer money and nondisclosure in settling sexual harassment cases, though the bill has yet to be sent to the president for his signature. Lawmakers in California and Pennsylvania, in addition to New Jersey, are exploring changes. Several other states, including Florida, Washington and Louisiana, already have laws prohibiting NDAs if they conceal "public hazards," such as dangers to general health or safety.

These are promising developments that point to the same conclusion: It is time to rethink the balance between private interests in secrecy and the public's right to know.

*Dr. Grant is a professor of political science and a fellow at the Kenan Institute for Ethics at Duke University.*

## REVIEW

## EVERYDAY PHYSICS

HELEN CZERSKI

A Crash Course  
in Summer  
Thunderstorms

## THE THUNDERSTORMS

of July are just around the corner. The first flash of lightning may offer the dazzle and the peril, but the thunder announces the scale of this atmospheric drama: a gigantic boom that fills the sky and your ears. I find the thunder far more interesting than the lightning. The richness of that sound has quite a story to tell.

As a thundercloud begins to darken and swell, its chilly innards host a churning jumble of ice particles. Fountains of air surge upward inside the growing thundercloud and push the tiniest ice crystals upward, but the larger ice pellets continue to fall, so there are constant collisions.

The consequence of the collisions is that electrons get knocked off the crystals and join the pellets, and so the negative electric charge that all electrons carry starts to accumulate at the bottom of the cloud. This charge eventually finds a path to the ground: a narrow channel of conductive air extending downward from the cloud that meets other delicate electrical tendrils snaking up from the ground.

At the instant of connection, a vast electrical current can flow, dumping so much heat in the channel that air is converted to a plasma. The temperature soars to an astonishing 52,000 degrees Fahrenheit within a few millionths of a second. The hot plasma blazes white, and we see it for the tiniest fraction of a second: a lightning bolt.

If you're standing a mile away, that light reaches you five millionths of a second later, and then it's gone. But in the air around the channel, things are just getting started. The hot tube of plasma expands rapidly, shoving into the air around it so hard that it creates a sonic boom. Sound travels far more slowly than light, so if you're a mile from the base of the lightning bolt you'll have to wait a whole five seconds before the first sharp crack finally reaches you.

But the thunder doesn't stop. The lightning bolt probably extends a couple of miles upward, and the sound from higher up takes longer to reach you. As the thunder rolls on, you're hearing the same plasma explosion, but it's traveled from farther away. That lets you pick out what the air itself is doing to the sound: filtering out the highest notes. The pitch drops as time passes, because the lower notes are the only ones left after a longer trip through the air.

Listen to the rumble: You're hearing the shape of the lightning bolt. Lightning doesn't travel in a perfectly straight line. Instead, it looks more like straight sections that are linked at different angles. It can zigzag all over the place on its way to the ground, and lightning scientists have a great word for the amount of zig-zagging: tortuosity. The rumble comes and goes because it's the sum of the sound from all of those sections, frequently overlapping as they reach you. Then you'll also start to hear echoes as the sound reflects off



CENTRAL AMERICANS seeking admission to the U.S. lined up for a meal at the Red Cross shelter in March 1989 in Brownsville, Texas.

BY MARIA CRISTINA GARCIA

**T**HE PUBLIC outcry was immediate. After Attorney General Jeff Sessions announced the administration's new "zero tolerance" policy to discourage illegal immigration across the U.S.-Mexico border in April, photos and audiotapes of children separated from their parents at the border and crying in cage-like quarters soon appeared in the news.

President Donald Trump has since signed an executive order halting family separations, although more than 2,000 children remain in the care of the Department of Health and Human Services. The new policy is only meant to be temporary, however. A long-term solution on immigration is still needed—and any discussion has to start with a deeper understanding of the country's history on the issues, as well as the circumstances of those seeking to enter the U.S.

Obscured in the government statistics are asylum seekers from Central America. Unlike refugees, who are referred to the U.S. Refugee Admissions Program for resettlement in the U.S., asylum seekers make their way to the U.S. to plead their case.

The exact number of asylum seekers is unknown. Some have been prevented from stepping on U.S. soil to request asylum. Others, at the initial interview, have been told that they don't have a case and have been placed in expedited removal—a fast-track process of expelling people from the U.S. without the usual hearing before a judge. Still others have been told that their children will be returned to them only if they agree to leave the U.S. Both refugee and asylum admissions aren't high: 59,000 refugees and 24,500 asylees were admitted each year, on average, between 2004 and 2016. In 2016 alone, 180,000 people officially filed for asylum.

The policy makers who crafted the 1980 Refugee Act never imagined that within a generation the U.S. would have a vast asylum bureaucracy. In passing the 1980 law, Congress sought to create a separate immigration track for the politically persecuted, many of whom from communist countries, who were identified abroad for resettlement in the U.S. Legislators concerned themselves less with the comparatively smaller number of asylum seekers who requested protection at airports and other ports of entry.

From 1973 to 1979, for example, only 22,722 persons requested asylum. Only the defection of Russian ballet dancers, Eastern European athletes or Chinese scientists generated media attention. Those requesting asylum were usually released on their own recognition while they waited for a resolution of their case.

A decade later, petitions for asylum increased drastically due to the political turmoil in Haiti and the civil wars in Central America. More than 400,000 people requested asylum from 1980 to 1990, with Central Americans filing roughly half of all applications.

Many more migrants bypassed the asylum system altogether and remained undocumented in the U.S. Despite the brutal conditions



## Shifts in the Search for Asylum

The policy makers behind the 1980 Refugee Act never imagined today's flood of requests for safe haven

tions they fled, fewer than 5% of Salvadoran and Guatemalan applicants received asylum in the 1980s, so most opted to stay off the government's radar until conditions in their countries of origin improved and they could safely return home.

This growing migration from Central America and Haiti—as well as from Mexico, China and other parts of the world—suggested to Americans that the U.S. had lost the ability to control its borders. Congress responded with a number of immigration bills to expand the policing of ports of entry and impose more severe penalties on unlawful entry.

Deterrence, detention and deportation became key features in the immigration platforms of Republican and Democratic politicians. This further discouraged immigrants from pursuing

asylum. A negative ruling meant deportation and, for some, certain death, so many chose to file their asylum claims only after immigration authorities detained them, as a last-ditch effort to stay in the U.S.

In the wake of 9/11, the asylum bureaucracy has become even more complex and daunting. Those who file "defensive asylum claims" to prevent deportation face an especially high burden of proof. The majority of asylum seekers make their case without the benefit of legal counsel or even a professional interpreter. In the criminal courts, one is presumed innocent until proven guilty, but in immigration hearings, asylum seekers are presumed to be lying until they can show they are telling the truth.

Like refugees, asylum seekers must prove that they have been singled out for persecu-

tion because of race, religion, nationality, membership in a particular social group or political opinion. They must prove that their government failed to protect them; that they could not find safety elsewhere in their country; and that they face imminent danger if forced to return. They also must prove that they have not inflicted harm on others, committed certain types of crimes or become a national security threat.

Even if they meet all these conditions, there is no guarantee of asylum. Decisions are made on a case-by-case basis, and near-identical cases can receive completely different rulings. While they wait for their cases to make their ways through the backlog, asylum seekers often wait in immigration-detention facilities for years. By March 2018, the backlog in U.S. immigration courts had reached 690,000 cases.

Immigrating lawfully is a remote option. U.S. immigration law gives priority to those with financial means, education and skills necessary to the U.S. economy, and to those with familial ties to citizens and permanent residents.

Facing few opportunities for lawful entry, many Central Americans risk their savings, safety and futures to enter the U.S. Most are coming from Central America's Northern Triangle—Honduras, Guatemala and El Salvador, three of the poorest, most violent and most di-

saster-struck countries in the Americas. These countries have among the highest homicide rates per capita in the world, much of it driven by drug trafficking and easy access to arms.

Central Americans who flee their communities, then, are escaping a range of problems, so it becomes impossible to distinguish the persecuted from those in search of economic opportunities. More often than not, they are both.

Parents often send children unaccompanied to the U.S. to be reunited with family members and friends, and to save them from forced recruitment into gangs, extrajudicial reprisals, human trafficking and lives of poverty. Unaccompanied minors are among the fastest-growing populations of asylum seekers in the post-Cold War period. The U.S. Customs and Border Protection apprehended close to 200,000 unaccompanied children between October 2012 and March 2016. Two-thirds of them came from the Northern Triangle.

Escaping criminal and political violence is not enough to receive asylum, however, and Hondurans, Salvadorans and Guatemalans have among the highest asylum denial rates in the country. In June, Mr. Sessions announced that the Justice Department would overturn any court precedents that might allow victims of domestic and gang violence to receive asylum—further diminishing their chances.

American policy makers, immigrant advocates and asylum officials and judges face difficult choices in the years ahead. Who will we admit, and in what numbers? The number of refugees, asylum seekers and displaced persons worldwide—currently 68.5 million, according to the UNHCR, the United Nations refugee agency—shows no sign of slowing.

Dr. Garcia is a professor of history at Cornell University and author of "The Refugee Challenge in Post-Cold War America," published by Oxford University Press.



nearby buildings, walls and hills, extending the rumble for even longer.

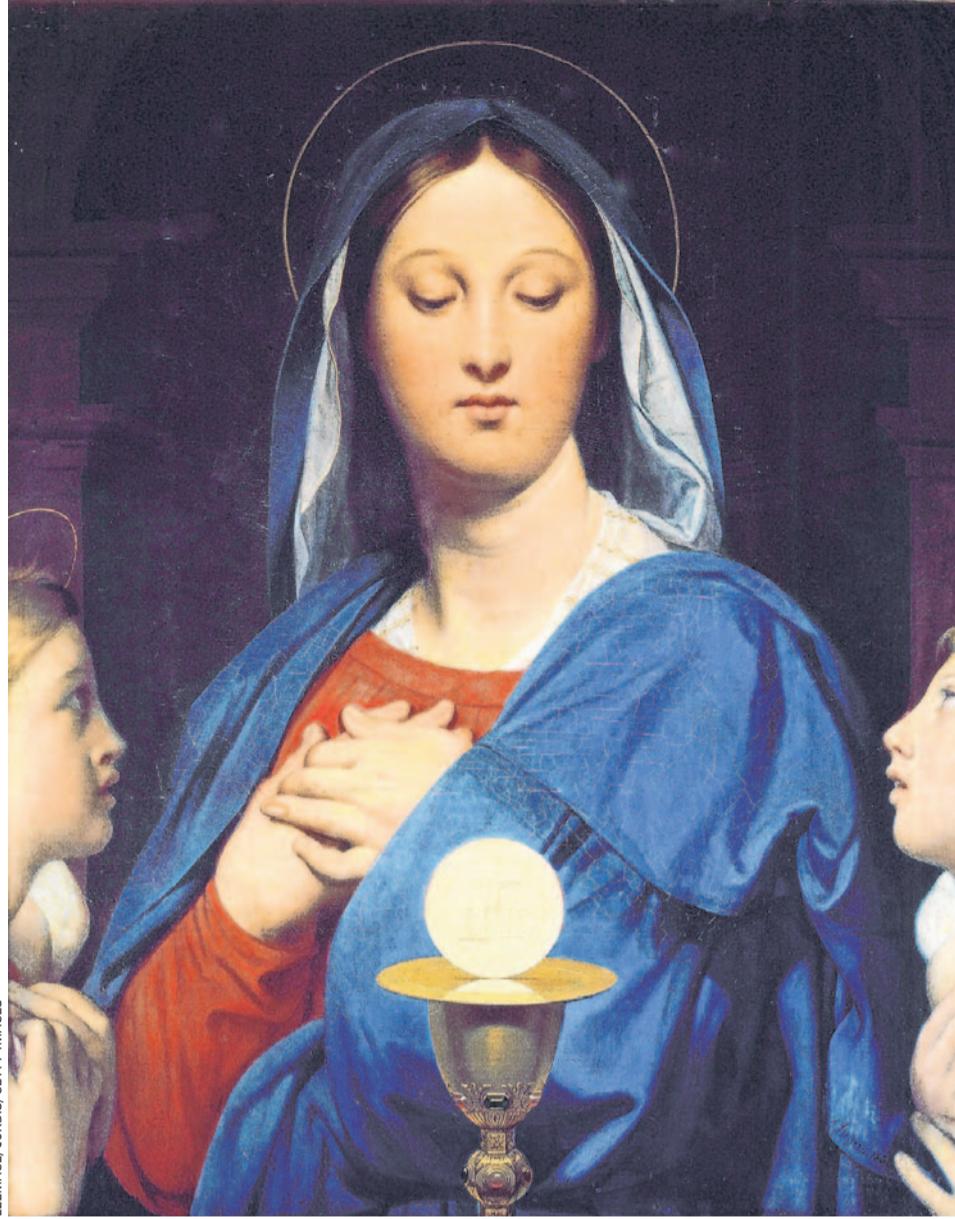
But if you're more than about 16 miles from the lightning strike, all of this acoustical complexity may never reach you at all. Air temperature usually drops as you go higher up, and sound travels more slowly in colder air. If sound is traveling horizontally, that means the sound closer to the ground will be going faster than the sound higher up, and so the rumble bends away from the ground. If you're too far away, it will pass over your head, never reaching your ears.

So the sound from each lightning strike carries with it the imprint of the atmosphere around the lightning bolt. I'll be looking forward to the summer's thunderstorms, and as I hear the thunder I'll be watching the sky, imagining the dance of the sound waves creating this fabulous symphony.

## REVIEW

# The Controversy Over Communion

A push to widen who can share the sacred rite rekindles a centuries-long debate about Catholic tradition



BY FRANCIS X. ROCCA

**S**HOULD CATHOLICS be allowed to share Communion, one of their church's most sacred rites, with their Protestant spouses? That question, now the center of a debate roiling German Catholics, is also echoing a broader global controversy about how to define a religious community's core beliefs and collective identity.

Germany's Catholic bishops voted in February to publish guidelines for sharing Communion with Protestant spouses upon the approval of a parish priest. But a conservative minority of German bishops objected, noting that church law lets Protestants receive Catholic Communion only in cases of "danger of death" or "some other grave necessity." The conservatives appealed to the Vatican for a ruling.

At first Pope Francis seemed open to the proposed policy, but then he blocked its publication until further study could be made. Last week, he said that such decisions should be up to individual local bishops. On Wednesday, the German bishops' leaders published the guidelines anyway, announcing that they were "on an ecumenical quest to achieve a more profound understanding and even greater unity among Christians" and thus "obliged to stride forward in this matter courageously."

**THE VIRGIN**  
Mary adoring  
the Eucharist,  
painted by  
Jean-Auguste-  
Dominique  
Ingres in 1866.

Other fights have divided Catholics in recent years over who should receive Communion and under what circumstances—including those who have been divorced and remarried, Catholic politicians who support abortion rights or euthanasia, and most recently Catholics enforcing U.S. immigration rules separating families at the border. These debates reflect profound differences over how Catholics understand what they call the Most Blessed Sacrament. Where some see a move to inclusiveness, others see sacrilege.

Catholics believe that Jesus instituted Communion, also known as the Eucharist, at the Last Supper, when he offered his apostles his body and blood in the forms of bread and wine. The redemptive sacrifice of his death on the cross is renewed every time an ordained priest consecrates bread and wine at Mass. The church also teaches that the Mass is a "sacred banquet of communion" that affirms and strengthens the unity of gathered believers.

Starting in the Middle Ages, the idea of sacrifice began to prevail over the banquet. "The celebration of this sacrament is an image representing Christ's Passion, which is His true sacrifice," wrote the 13th-century theologian St.

Thomas Aquinas. "By this sacrament, we are made partakers of the fruit of our Lord's Passion." In this period, the popular attitude toward the Eucharist was overwhelmingly one of awe, which discouraged frequent reception of Communion by lay people.

Protestant reformers of the 16th century rejected Eucharistic sacrifice as a vain and unnecessary attempt to repeat Jesus' redemption of humanity, which had been accomplished once and for all on the cross. Martin Luther taught that Christ was present in the consecrated bread and wine, but only temporarily, while other reformers entirely rejected the doctrine of the "real presence." Protestant churches accordingly did away with the tabernacle that housed the Eucharist in Catholic churches.

In response, Rome reaffirmed the Eucharist's centrality, underlining the point by making the tabernacle the visual focus of Baroque churches, raised up and illuminated by natural light from large windows. The emphasis on the Mass' sacrificial character continued until the Second Vatican Council in 1962-5, which sought to restore the sense of banquet as well. Today, the priest usually faces worshipers at Mass and the tabernacle is often relegated to the side-lines, no longer the center of attention.

Over the past half-century, influential theological currents have embraced the idea of the Mass as essentially a welcoming meal, often linking it with Gospel accounts of Jesus' willingness to eat with outcasts and sinners.

The late Rev. Eugene A. LaVerdiere, a prominent American scripture scholar, wrote in 1994: "Jesus, his disciples, all who follow later, and the church itself are a people on a journey, a people of hospitality, both offered and received. The Eucharist is the supreme expression of this hospitality, sustaining them on their journey to the kingdom of God."

In such a context, it can be hard for Catholics and Protestants, especially if they are members of the same family, to understand why they may not share the sacrament. But doctrinal conservatives on both sides warn that so-called intercommunion threatens to obscure important differences of belief between them, not least about the nature of the sacrament itself.

Catholic conservatives also stress the traditional requirement of moral worthiness to receive Communion, invoking one of the earliest Christian texts, St. Paul's First Letter to the Corinthians. Hence the objections to Pope Francis' policy of encouraging Communion for divorced Catholics who remarry without an annulment of their first marriage, a situation that church teaching defines as adultery.

In the 20th century, the Vatican forbade giving Communion to Freemasons and members of the Communist Party on the grounds that their organizations' values conflict with Catholicism. Some U.S. bishops have called for denying Communion to Catholic politicians who support legalized abortion or euthanasia, an issue that took on special importance during the 2004 presidential campaign, when the Democratic candidate was Sen. John Kerry, a Catholic who supported abortion rights.

That question took on a new twist earlier this month, when Bishop Edward Weisenburger of Tucson, Ariz., raised the possibility of imposing "canonical penalties" on immigration officers taking part in the separation of immigrant children from their parents under a Trump administration policy that the president of the U.S. bishops' conference denounced as immoral. Bishop Weisenburger did not specify what penalties he had in mind, but many assumed they might include denying Communion.

That policy would be consistent with Pope Francis' statement in April that the plight of migrants and the poor is as morally urgent as bioethical questions such as abortion. Yet penalizing people by denying them Communion would clash with the pope's best-known statement about the sacrament, which seems to stress the value of hospitality over worthiness. "The Eucharist," Pope Francis wrote in 2013, "is not a prize for the perfect but a powerful medicine and nourishment for the weak."

## HISTORICALLY SPEAKING

AMANDA FOREMAN

## At Fifty, a Time Of Second Acts



I TURNED 50 this week, and like many people I experienced a full-blown midlife crisis in the lead-up to the Big Day. The famous F. Scott Fitzgerald quotation, "There are no second acts in American lives," dominated my thoughts. I wondered now that my first act was over—would my life no longer be about opportunities and instead consist largely of consequences?

Fitzgerald, who left the line among his notes for "The Last Tycoon," had ample reason for pessimism. He had hoped the novel would lead to his own second act after failing to make it in Hollywood, but he died at 44, broken and disappointed, leaving the book unfinished. Yet the truth about his grim line is more complicated. Several years earlier, Fitzgerald had used it to make an almost opposite point, in the essay "My Lost City": "I once thought that there were no second acts in American lives, but there was certainly to be a second act to New York's boom days."

The one comfort we should take from countless examples in history is the power of reinvention. The Victorian poet William Ernest Henley was right when he wrote, "I am the master of my fate/ I am the captain of my soul."

The point is to seize the moment. The disabled Roman Emperor Claudius, (10 B.C.-A.D. 54) spent most of his life being victimized by his awful family. Claudius was 50 when his nephew, Caligula, met his end at the hands of some of his own household security, the Praetorian Guards. The historian Suetonius writes that a soldier discovered Claudius, who had tried to hide, trembling in the pal-



ace. The guards decided to make Claudius their puppet emperor. It was a grave miscalculation. Claudius grabbed his chance, shed his bumbling persona and became a forceful and innovative ruler of Rome.

In Russia many centuries later, the general Mikhail Kutuzov was in his 60s when his moment came. In 1805, Czar Alexander I had unfairly blamed Kutuzov for the army's defeat at the Battle of Austerlitz and relegated him to desk duties. Russian society cruelly treated the general, who looked far from heroic—a character in Tolstoy's "War and Peace" notes the corpulent Kutuzov's war scars, especially his "bleached eyeball." But when the country needed a savior in 1812, Kutuzov, the "has-been," drove Napoleon and his Grande Armée out of Russia.

Winston Churchill had a similar apotheosis in World War II when he was in his 60s. Until then, his political career had been a catalog of failures, the most famous being the Gallipoli Campaign of 1916 that left Britain and its allies with more than 100,000 casualties.

As for writers and artists, they often find middle age extremely liberating. They cease being afraid to take risks in life. Another Fitzgerald—the Man Booker Prize-winning novelist Penelope—lived on the brink of homelessness, struggling as a tutor and teacher (she later recalled "the stuffy and inky boredom of the classroom") until she published her first book at 58.

Anna Mary Robertson Moses, better known as Grandma Moses, may be the greatest example of self-reinvention. After many decades of farm life, around age 75 she began a new career, becoming one of America's best known folk painters.

Perhaps I'll be inspired to master Greek when I am 80, as some say the Roman statesman Cato the Elder did. But what I've learned, while coming to terms with turning 50, is that time spent worrying about "what you might have been" is better passed with friends and family—celebrating the here and now.

## EXHIBIT

## Minute Masters

**THE NEW BOOK** "Watchmakers: The Masters of Art Horology" (ACC Art Books, \$85) celebrates the art of timepieces, with examples by 13 independent, contemporary craftsman. Watches can have hundreds of parts, such as the \$99,000 De Bethune Skybridge (top right), designed by Denis Flageollet—who made the color on the face deep blue, like a starry night, by setting a flame to blue titanium. Mr. Flageollet (bottom right) comes from a long line of watchmakers; his father, grandfather and great-grandfather were all in the business. Watchmaker Kari Voutilainen, originally from Finland and now working in Switzerland, created the Vingt-8 (left), a model that starts at \$72,000.

Claudio Proietti, a watch collector and curator of Maxima Gallery in Rome, who put together the book, wanted to especially focus on the human touch.

"...like to think that behind my watch there has been a lot of human work and passion rather than a well-programmed automated machine," he says.

—Alexandra Wolfe



## REVIEW



AUSTIN HARGRAVE FOR THE WALL STREET JOURNAL

## WEEKEND CONFIDENTIAL

# Chaka Khan

## The voice of 'Every Woman' is back

BY RAY A. SMITH

**O**N A RECENT MONDAY afternoon at her Los Angeles home, Chaka Khan, the legendary rhythm and blues singer known for her iconic big voice, was fussing over her just-as-iconic big hair.

"I started out with orange and stuff like that in the '80s and I've settled into this beautiful rich red," she explains. "But now I can't go anywhere and not see my red on somebody's head! So now what do I do? I'm gonna do something different."

The 10-time Grammy winner, who turned 65 in March, is embarking on another new adventure this year as she releases her first solo studio album in 11 years. In June, she put out its first single, "Like Sugar," a sensual, funk-toned bop. "I play drums on it too," she volunteers excitedly.

The song's chorus encourages listeners to "get up on your feet" and the album shares that vibe. "It's the first time in my career I've ever purposely gone into a studio to make a dance-music album," Ms. Khan says. "I live in the real world and these kids want to dance, so I wanted to give them something to dance to."

People have been dancing to Ms. Khan's music since she burst on the scene in the early 1970s, as the lead singer in the pioneering multiracial funk band Rufus. She gained a following for her impassioned vocals that soared into open-throated wails, her exuberant stage presence, and her sexton-meets-hippie-chick style.

The group's hits included "Sweet Thing," and the Grammy-winning single "Tell Me Something Good," written for her by Stevie Wonder. Ms. Khan went on to record solo hits including the anthem "I'm Every Woman" in 1978 and, in 1984, a lively cover of Prince's "I Feel For You," featuring Mr. Wonder on harmonica. The latter's opening repetition of "Chaka Khan, Chaka Khan," a recording room slip-up purposefully left in by the producer, remains a pop-culture catchphrase.

The singer-songwriter's 22 albums span funk, soul, pop, rock and jazz. She has worked with such luminaries as Miles Davis, Dizzy Gillespie, Quincy Jones, Ashford & Simpson, Babyface and Chick Corea.

Born Yvette Marie Stevens in Great Lakes, Ill., in 1953, Ms. Khan grew up in a working-class neighborhood in Chicago. Her mother was an administrator at a University of Chicago research center, and her father was a freelance photographer; they split when Ms. Khan was

“

As a child, she earned the nickname Little Aretha in talent competitions.

about 10. Music played a big role in her childhood, from singing on Saturdays while cleaning the house to performing for her mother's friends at parties. In talent competitions, she earned the nickname "Little Aretha."

She ventured into Afrocentrism in her teens, joining an African culture band called Shades of Black and being christened "Chaka" by a West African high priest. She joined the Black Panther Party. She also immersed herself in the Chicago music scene, singing in different bands and picking up the last name she still uses from her brief first marriage, to musician Hassan Khan.

In 1972, she became the lead singer of a hot local rhythm and blues band then called Ask Rufus. A record producer caught their act, and pitched the group to a friend at ABC/Dunhill Records, which offered the group a contract. The group became known as Rufus featuring Chaka Khan.

As her band's star was on the rise, Ms. Khan struggled with drugs. Constantly on the road touring, she left her infant daughter behind with her mother in Chicago, she recounts in her 2003 autobiography, "Chaka! Through The Fire." She took drugs to numb guilt and anger she felt, she writes, and got high when she felt lonely, or doubted whether men liked her for herself or her fame.

A turning point came in the 1990s. While trying to resist doing more drugs after a night of "binge drugging and drinking," she writes, she thought back to a time when she showed up high to an art program for kids. The memory helped motivate her to enter rehab.

In 2016, shortly after the death of Prince, who had become a good friend, Ms. Khan again entered rehab for addiction to prescription drugs. She was back on the road a month after completing her treatment.

She has also recalled trouble with overspending,

writing that she and her second husband "ran through money as if it really did grow on trees," splurging on two Mercedes convertibles, a Jeep, one of the last original-style Volkswagen Beetles, pricey original artwork and exotic animals.

Today, Ms. Khan has a new online series on YouTube called "The KHAN Knows." The show includes her talking about her career and life, conversations with friends and celebrities, and question-and-answer sessions with fans. "I've acquired a fair amount of life experience and I want to share with some of the younger people," she says.

When she isn't working, Ms. Khan says she is "a real book fiend. I love the feel, the smell—I have a visceral connection with books." She was recently reading Rhys Bowen's "The Tuscan Child" and was excited about a recent TV adaptation of Caleb Carr's "The Alienist." Ms. Khan has been fond of saying "TV is my boyfriend" in recent years, adding that her bed is her husband. She declines to give any details about current relationships beyond noting that "things have changed since then, and that's all I will say."

With her current album, the singer-songwriter had to come around to today's dance genre. "I've done a few gigs where I have DJs and remixers open for me and I was wowed," she says. "There was a time when my thinking was old school. I was jazz-oriented. I just was not open to it." DJs today, she adds, "are making this music attractive to all age groups."

Ms. Khan continues to perform live, on tours, in festivals and for specials world-wide. Her distinctive voice, which Miles Davis likened to his horn playing, remains in good shape: She sings songs like "I'm Every Woman" live in the same key as the original. "It's a gift God has granted me," she says. "It's what I have to give from my heart. It's a blessing."

Still, after a bout with acid reflux, she has cut down on touring to half as much as last year and now takes two nights off for every two nights she sings. She credits good sleep with helping preserve her voice.

She knows that there are some songs her fans always want to hear. "I have to perform 'I'm Every Woman' and 'Ain't Nobody,'" she says. If there's a song she's tired of performing, Ms. Khan wouldn't say. "I still enjoy some of them, but it all makes up for it when you see how much enjoyment the people are getting out of it," she says. "That's everything."



sense if you know who Adam is. If you didn't cut your teeth in this culture, and are not up to speed with the Good Book, it may throw you for a loop.

I hate to see such colorful expressions fall by the wayside, but this may be a case of having waited until the horse has already left the barn. Call me a stickler for detail, but five'll get you 10 that the reason Old Paint high-tailed it out of there in the first place is because Katy—a ding-dong if there ever was one—forgot to bar the door. The long and the short of it is: "For the love of Mike!" would never have gotten sent to the sidelines if it had morphed into something catchier and more up-to-date, like "For the love of Tyler" or "Oh, for Madison's sake."

Similarly, it seems weirdly anachronistic to refer to men consorting with ladies of the night as "Johns." Today they should be known as "Jareds."

As in, "That guy's Jared-on-the-spot." Many other expressions using names from by-gone eras can be lumped into the same general category.

"Every Tom, Dick and Harry," going great guns in days of yore, is now kaput. Something along the lines of "Every Jackson, Ryan and Skyler" would ring truer today.

For the same reason, We should also deep-six moldy-oldies like "He's an average Joe." How about "Pour me a cup of Joel, would ya?" Or "What does Joel six-pack think?"

This same rule applies to song titles. It should be Morgan who gets egged on to row the boat ashore, not Michael, who is as old as the hills. Other possible upgrades include "Proud Maya," "Sydney is a Punk Rocker" and "Lexi in the Sky with Diamonds." And no, I am not being coy here. Heavens to Betsy, no!

Well, heavens to Bettina.

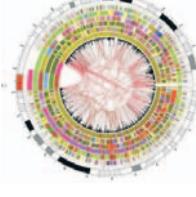


## MOVING TARGETS

JOE

QUEENAN

The names used in many old phrases may sound alien to young ears.



What Is 'Heredity'?  
New genetic technology  
suggests we're no longer  
stuck with our genes C9

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# BOOKS

THE WALL STREET JOURNAL.

'Their Kind of Person':  
The Beatles' press  
agent, Derek Taylor,  
remembers the '60s C12



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SATURDAY/SUNDAY, JUNE 30 - JULY 1, 2018 | C7

## Masters of the Skies

Armies and navies had decided battles for all human history, but World War I taught the primacy of air power

### RAF: The Birth of the World's First Air Force

By Richard Overy  
Norton, 150 pages, \$22.95

### The Imperial Aircraft Flotilla

By Margaret Hall  
ibidem, 397 pages, \$50

### The Royal Flying Corps, the Western Front and the Control of the Air

By James Pugh  
Routledge, 190 pages, \$150

BY PAUL KENNEDY

**A**ND THE DAY may not be far off when aerial operations, with their devastation of enemy lands . . . may become the principal operations of war, to which the older forms of naval and military operations may become secondary and subordinate." Thus read the famous sentence from the so-called Smuts Report of August 1917, which historians identify as having provided the operational justification for an independent Royal Air Force in the following year, and indeed the intellectual and strategic basis for the future of air power itself.

This was a true watershed in military history, although the cause in Britain was an immediate, urgent one. As Germany's very frightening aircraft and zeppelins raided British cities that summer, Lloyd George's government hastily summoned Jan Christiaan Smuts, an influential South African general (and pal of Winston Churchill) to assess both the immediate and the larger implications of the raids and to come up with policy recommendations. The response, as the broad-minded Smuts suggested, should not be limited to improving homeland defenses against further attacks, necessary though those were. Within the space of a single decade, a new form of warfare had emerged to take its place alongside the struggles of armies and navies and, quite possibly, to replace them. Nothing like this had occurred in all of history.

One hundred years later, the reader still remains struck by the pace of change among air forces during World War I, and by the huge implications this shift had throughout the 20th century and into the present day. As the U.S. Air Force's long-range bombers cruise the skies over the western Pacific, and President Trump occasionally threatens Kim Jong Un's North Korea with heavy destruction should it undertake any aggressive act, one can clearly trace the historical thread back to these beginnings of air power itself.

When it came to the 1914-18 conflict, Britain's early air forces occupy center stage. (The Americans truly enter the scene a bit later, with Billy Mitchell in the 1920s and the nascent Army air force in the 1930s.) It is true that there had already been significant advances made through the German deployment of zeppelin bombers and



**HELP FROM ABOVE** A pair of RAF pilots fly above Iraq in a Westland Wapiti, ca. 1930, from Michael Napier's glossy photographic essay 'The Royal Air Force: A Centenary of Operations' (Osprey, 339 pages, \$40). The book traces the service from its World War I origins to the present. Besides celebrating technological wonders and forgotten heroes, the book brings home the fact that so many theaters of war—the Middle East, Afghanistan, Korea—not only recur but remain relevant today.

in the French air campaign over the Western Front. There had even been aerial fighting during the Russian and Italian campaigns. But these were rather more in the form of forays and improvisations. They were undertaken because the new technology had become available, but were not guided by an overall strategy.

By contrast, the key players in the emergence of the concept and practice of independent air power were the British. And this is in part why, during this centenary of the establishment of the Royal Air Force, several books have been published exploring different aspects of the story.

Richard Overy's slim book "RAF: The Birth of the World's First Air Force" is the most important of these, although it is also somewhat less significant than it might have been. Mr. Overy, a professor of history at Exeter University and the author of many important historical works ("Why the Allies Won," "The Dictators," "The Battle of Britain") has written this anniversary book at the behest of the RAF Museum at Hendon, where he chairs the research board. Using a wealth of official and private sources, he discusses how two separate operations—the Army's Royal Flying Corps and the Navy's Royal Naval Air Service—developed in parallel in the cauldron of war. Only the crisis of the German air raids, and the power of

Smuts's ideas, compelled Lloyd George's government to plump for a single, unified service, and then to set it up (as many people noticed) on April Fools' Day, 1918.

Growing swiftly month by month, challenged by multiple calls upon its squadrons, riven by internal personnel issues and resented by most Army generals and all Navy admirals, the fledgling service was still trying to establish itself when the war was suddenly over. The giant four-engine Handley Page bombers, destined to reduce German industry to rubble, had scarcely been rolled onto the tarmac when the Armistice was declared.

So, among the many things that the British government had to deal with during the confused period between 1918 and 1920 was whether this young aerial organization should remain independent, or be returned to its two original parts, as jealous traditionalists in the Army and Navy sought. The RAF survived, but only just; Mr. Overy reports that, as late as November 1919, Hugh Trenchard, the service's head, was pleading to Adm. David Beatty for support against "the large number of Naval and Army officers . . . who consider that the Air Force should be broken up."

The author's account is fine on this institutional-political story, but thin on so much else, especially on how air

power had entered the British public imagination, positively and negatively, by 1919. Airplanes were now—well, a big thing. And their expansion, and the statistical record of aerial activities within those few four years of fighting, is simply staggering. When the RAF was set up in April 1918, it consisted of 25,000 officers and 140,000 men (although only 8% actually flew). By the time of the ceasefire, the new service possessed more than 22,600 aircraft.

### German zeppelins raining destruction on Britain throughout 1917 finally prompted a strategic response.

In light of those figures, the history of a publicly supported plan to pay for more planes through individual contributions seems incidental and rather slight. But the existence of such a scheme, from 1915 onward, says a lot about the British public's patriotic mood as well as the place of the empire in this war.

Margaret Hall's shrewd and wry book "The Imperial Aircraft Flotilla," which she subtitled "The Worldwide Fundraising Campaign for the British Flying Ser-

vices in the First World War," traces the eccentric yet successful movement by British patriots to encourage countries, localities and individuals throughout the Empire to pay for the production costs of a fighting aircraft—and have the plane named after their very selves. Any plane that crashed, or was shot down by the enemy, contributors were assured, would be replaced and renamed at no extra charge.

Ms. Hall, who has worked as a civil servant in Britain's Foreign Office, has chosen a slightly dotty story—contributions came in from West African tribal chiefs and the very richest Chinese Hong Kong bankers, and five planes were bought by British expats in Argentina—but she narrates it with a nice eye for detail. (In the West African crown colony of the Gold Coast [Ghana], rival Ashanti chiefs each found it politic to cough up £1,000 to have an aircraft named after their district!) Eccentric or not, this unique fundraising effort had funded slightly more than 600 aircraft by the end of the war. Never mind that the RAF was losing that number every fortnight.

If "The Imperial Aircraft Flotilla" is not about air power itself, the book remains an intriguing insight into the manifestations (and manipulations) of British popular imperialism when the Empire was at its height.

Please turn to page C8

## The Face of Real News

Neal Lipschutz and the standards team hold the WSJ newsroom to the highest principles of journalism, even in the face of adversity. In 2015, he helped fight a court order barring the Journal from running a story about the controversial arrest of a stock analyst in India. Story updates meant giving the subject another chance to respond—and seek another injunction. But it was worth the risk to be accurate and fair.

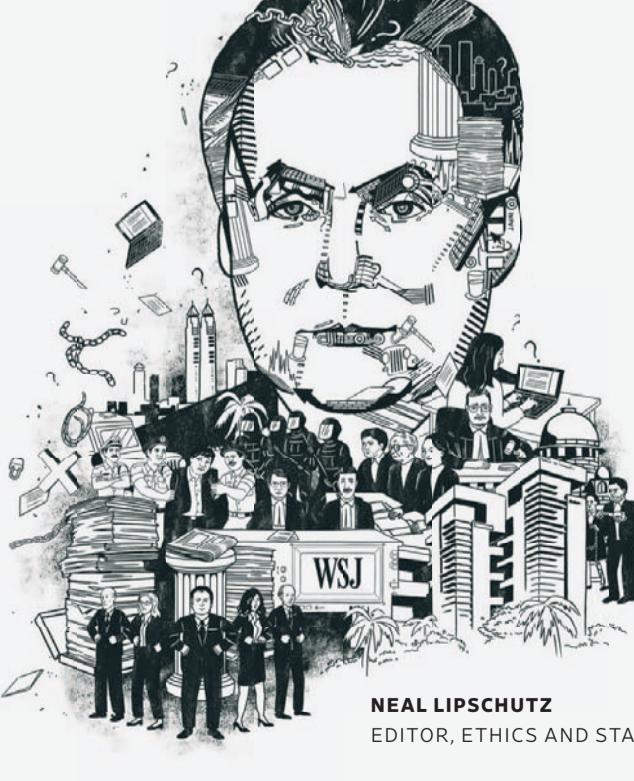
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## BOOKS

'Treason doth never prosper: what's the reason? / Why, if it prosper, none dare call it treason.' —JOHN HARRINGTON

# The Royal Air Force & the Birth Of Air Power

*Continued from page C7*

Whatever this public enthusiasm about the novelty and the seemingly endless possibilities of airplanes, though, the fact remains that throughout World War I the military and air force leaders struggled with the coldly practical tasks of creating a fighting air force to help win the conflict in France. These were not easy, as James Pugh shows in his study "The Royal Flying Corps, the Western Front and the Control of the Air, 1914-1918," which describes the painfully slow efforts of the Army's aerial service to gain command over the Western Front. Since the Flying Corps was an organ of the British Army, it showed the same tendency as Gen. Douglas Haig's ground forces did toward battering, frontal assaults, whether in direct support of the infantry or in dogfights over the trenches. Little wonder that so many planes (35,000 in all theaters) had been lost by the conflict's end.

British air power could never be deployed as precisely as the generals in France wanted it to be, and thus the military leadership there felt that they never had enough aircraft. There were also constant calls for ever more squadrons to defend the British homeland against German air raids. In addition, as the war went on, there was a rapid surge in aerial warfare against the Turks and various tribal unrests across the Middle East and India. One might also mention here the increasing need for anti-submarine patrols (that was the Royal Naval Air Service's job), plus the schemes for the strategic long-range bombing of Germany. In effect, almost all the components of the air-power story of World War II—apart from carrier warfare—were already being discussed and planned for when the conflict ended with the armistice of November 1918. Then the scissors-wielding economists at the Treasury moved in to decimate, if not demolish, all military forces as swiftly as possible.

Despite those cutbacks, and also the relentless efforts by the generals and the Admiralty to wipe it out, the new RAF hung on. It helped, as Mr. Overy shows, that the exuberant Churchill, now Colonial Secretary, was mesmerized by the (erroneous) notion that a small number of aerial squadrons could keep the peace across Jordan and Mesopotamia. It also helped that King George V had the proud title of Chief of the Royal Air Force. Even so, the internal bureaucratic attacks continued until, at last, in 1926, prime minister Stanley Baldwin had had enough: Defense of Britain and its realm, he told the House of Commons, was to be based upon "three co-equal services." And so it has been ever since.

*Mr. Kennedy is Dilworth Professor of History at Yale University, and the author or editor of 19 books, including "Engineers of Victory."*



## FIVE BEST BOOKS ON TREASON

# Joyce Lee Malcolm

The author, most recently, of 'The Tragedy of Benedict Arnold'

### Turncoats, Traitors and Heroes: Espionage in the American Revolution

By John Bakeless (1959)

**1** Fought in the villages and farmlands of America, the Revolution offered numerous opportunities for espionage. A surprisingly clear record of clandestine behavior survives, as is evident in John Bakeless's history, packed with lively accounts of the actors and their deeds. Shoemaker Enoch Crosby repeatedly joined loyalist regiments, then slipped away to divulge all to the patriots; he was shot at by both sides but survived to rejoin George Washington's army. Continental army physician Benjamin Church treated wounded patriots, though he was all the while working for the British. Spies scribbled in invisible ink, devised codes, spread misinformation. Washington drafted false plans to be leaked to Tory spies. The most compelling case of all is the heart-rendingly detailed one that Bakeless tells of Nathan Hale, who spied for the patriots in British-led territory and whose harsh treatment by his British captors can still summon rage in a reader.

### The Treason Trial of Aaron Burr

By R. Kent Newmyer (2012)

**2** R. Kent Newmyer deftly sets the stage for the riveting confrontation between President Thomas Jefferson, Chief Justice John Marshall and Aaron Burr. On Jan. 22, 1807, Jefferson informed Congress that Burr, his former vice president and hated rival, best known for shooting Alexander Hamilton in a duel, had plotted to create an independent country in the West. Assuming a prosecutorial role, Jefferson elicited damaging testimony against Burr on the promise of pardons. He ordered Burr tried for treason and for organizing a military expedition in Mexico and, when Burr was acquitted of each, tried a third time for other alleged crimes.

YALE UNIVERSITY ART GALLERY

ONE LIFE 'The Last Words of Nathan Hale' (1858 or 1881) by F.O.C. Darley.

Marshall, a staunch Federalist and Jefferson's bitter opponent, heard the cases. Gen. James Wilkinson—chief witness, twice ousted from the Army, a spy for Spain and Burr's fellow plotter—altered key evidence to exonerate himself and damn Burr. Mr. Newmyer delivers all the facts and motives in his superb unraveling of the case, which ended with a jury verdict of not guilty.

### The Killer Angels

By Michael Shaara (1974)

**3** In his powerful retelling of the Battle of Gettysburg, Michael Shaara shifts from side to side with vignettes of the combatants facing one another. We meet Lewis Armistead and Winfield Hancock, dear friends and generals who wept before leaving for their opposing armies. Each had been forced to decide where his loyalty lay—whether to the Union or to the rebelling states. At Gettysburg, they would face each other as enemies. Robert E. Lee confided in a letter: "With all my devotion to the

Union and the feeling of loyalty and duty of an American citizen, I have not been able to raise my hand against my relatives, my children, my home." Shaara renders Lee as tired and stubborn, an old man who needlessly sacrifices thousands of "his boys." Chosen to accept the Southern surrender at Appomattox, Maine's Joshua Chamberlain had his troops salute the defeated South. Believing "the issue" had been settled by combat, "that God has passed judgment," Lee asked his men to lay down their arms. He would later ask Congress for a pardon for fighting against the Union.

Believing "the issue" had been settled by combat, "that God has passed judgment," Lee asked his men to lay down their arms. He would later ask Congress for a pardon for fighting against the Union.

### Betrayal: The Story of Aldrich Ames, an American Spy

By Tim Weiner, David Johnston & Neil A. Lewis (1995)

**4** Here is a damning tale of treason that succeeded largely thanks to bureaucratic ineptitude. The reader knows from the start that Aldrich Ames is the mole at the CIA's Soviet counter-

intelligence desk—the source responsible, from the mid-1980s to the early 1990s, for betraying the identities of the agency's Soviet agents, dooming them. He was able to operate untouched for so long, the authors make clear, because the CIA refused to believe that one of its own could be the culprit. It looked elsewhere, ignoring signs like his lavish spending and huge bank deposits. Stymied in its search, the agency nonetheless refused to collaborate with the FBI—helping Ames and his KGB handlers escape detection despite the surprisingly simple tradecraft they used. As the authors write, Ames's "lamentable chronicle of mediocrity" didn't prevent his being promoted. A fraudulent tip from a KGB double agent further sent the CIA on a wild goose chase, leaving it up to FBI agents to track down "one of the sloppiest, most brazen, and least savvy spies imaginable."

### This War Without an Enemy: A History of the English Civil Wars

By Richard Ollard (1976)

**5** Great issues were at stake in England's clash between its proud, aloof king, Charles I, and his cankerous Parliament. Was it treason to oppose a monarch who threatened the rights and religion of his subjects? Or had Charles forfeited his right to obedience? As the country slipped into war, his subjects either chose sides or remained passive out of well-justified fear. Richard Ollard paints a vivid portrait of the times. In this concise history, which addresses both the constitutional and religious problems involved, he brings to life the fate of people plunged into a "war without an enemy." Parliament's supporters ultimately won, but, doubtful that they could trust the king, they went further—to the shockingly unprecedented act of bringing Charles to trial for treason against his people, turning the traditional notion of treason on its head.



DRAMA The remains of Pompey's theater in Rome, Italy.

# The City That Survived

## Rome

By Matthew Kneale

Simon & Schuster, 417 pages, \$30

BY GREG WOOLF

**R**OME IS ONE of the oldest continually inhabited cities in the world. Three thousand years or so of history take us down beneath the modern streets, past Mussolini's imperial city, on through the capital of Risorgimento Italy, past Baroque palazzos and churches, through the castles of medieval militias, and on to the Romes of Constantine, Trajan, Augustus, Caesar and their republican predecessors. Deepest of all is the archaic age, where mythology locates Romulus and Remus and their Trojan ancestor Aeneas, and archaeology finds clusters of wooden huts on hilltops around the boggy forum.

Notoriously the modern city preserves traces of nearly all these ancient Romes, often incongruously juxtaposed. An ATM pokes out of a wall right next to the columns of an ancient temple opposite a Baroque church. A trattoria shelters in the substructures of Pompey's theater. Christian basilicas cannibalize the column capitals from pagan temples; gardens planted in the 16th century spread among the ruins of imperial palaces. The manhole covers in the streets read SPQR, a Latin abbreviation for "Senate and People of Rome," echoing

ancient coins. Freud used the city of Rome as a metaphor for the human mind, an accumulation of material from all ages still in some sense accessible if we just refocus our gaze.

Rome makes concrete our sense of a deeply layered past, but not one formed by gentle sedimentation. The city's geological stratigraphy has been repeatedly convulsed, metamorphosed under spectacular pressures. It is an accumulation of urban wreckage, some put to new uses, the rest a sober reminder that no city can become eternal except through constant demolition and reconstruction.

In "Rome: A History in Seven Sackings," Matthew Kneale, a British novelist whose works reveal a deep understanding of the tangled human life of cities, has had the good idea of writing the biography of Rome not as a study in longevity but as a tale of disaster. Disaster after disaster, in fact, as the city faced invasions of Gauls and Goths, Byzantines and Normans, Catholic and Protestant armies in the wars of religion, Napoleon and the Nazis, and somehow survived each trauma. The effect is rather like that of a biologist telling the story of life on earth in terms of mass extinctions. The sacks of Rome were nowhere near as traumatic. Before gunpowder it was not that easy for armies to do serious damage to cities built of stone and brick, but invaders could steal treasures, commit rape and murder, terrify residents and generally make them doubt the power of their gods or god.

The sacks of Rome provide punctuation marks in a long story. Typically Mr. Kneale uses an impending disaster to grab our attention, then surveys how Rome had fared since the last crisis, before concluding each chapter with a racy narrative of the sack and its immediate aftermath. Now and then he interrupts the narrative with a time traveler's sidelong view or whisk us away to some distant place touched by the successive tragedies of Rome.

My favorite was the vignette of Heinrich Himmler in Cosenza, deep in the south of Italy, gathering local worthies at dawn in 1937 to witness his search for the grave of Alaric the Goth and the plunder from his fifth-century sack of Rome: Himmler "began to lecture the Cosenzan officials on ways in which the river might be diverted from its course so its bed could be drained." Most of Mr. Kneale's story, however, is staged within the walls of the city he evokes with casual brilliance.

Perhaps inevitably, the most exciting passages relate the sacks themselves, from motley barbarian armies appearing below the walls (several times in fact) to the horror of Allied bombing raids on a city that had no adequate air force or antiaircraft artillery to defend it. The fall of Mussolini is a splendid read.

There are many other gripping vignettes. The cutting off of the aqueducts in the sixth century during the Gothic Wars meant that the carrying capacity of the city was dramatically reduced. For generations Romans lived in a largely abandoned city. Areas that had been densely populated became part of the *disabitato*, areas of vineyards and gardens within the ancient wall circuit. The loss of the aqueducts and changing mores, Mr. Kneale notes, also meant the end

of Rome's hundreds of public baths: "In Christian eyes water was for drinking, not bathing, while it was certainly not for pleasure bathing, which smacked of licentiousness."

By the 16th century cardinals and other antiquarians began to take an interest in the sculpture that occasionally turned up in these plots of land. That first harvest of classical art would be largely pillaged by Napoleonic armies, but as Rome regenerated more of its past has resurfaced in fields turned back into suburbs. Another story line tracks public health and cleanliness, from the spectacular public baths to the grim conditions of lower-class housing in the 20th century's interwar years. This is not a tale of decline and fall so much as a slow roller-coaster ride through the fortunes of a place deeply entangled in its past.

Seven sackings is, as Mr. Kneale frankly admits, an arbitrary total. Arguably Rome has been sacked on many more occasions. His story is of constant external threats and repeated recoveries. An alternative narrative might have explored the violence that Romans did to their own city, and each other, over the millennia. That was a theme that would have appealed to the historians and poets of classical Rome who found in the story of Romulus's

killing of his brother Remus the archetype of multiple acts of civil violence. The republican general Sulla, when his lucrative command was threatened by political enemies, turned his army around and marched on the city. Coriolanus in myth had nearly done the same. Constantine seized the city from his rivals after a battle at the Milvian Bridge. A bitter rivalry between the papacy and the liberal state dominated the history of the city from Italy's unification in 1871 until the 1930s. What Mussolini did to the medieval city to make space for his grandiose triumphal Road of the Imperial Forums was a different kind of civil sack.

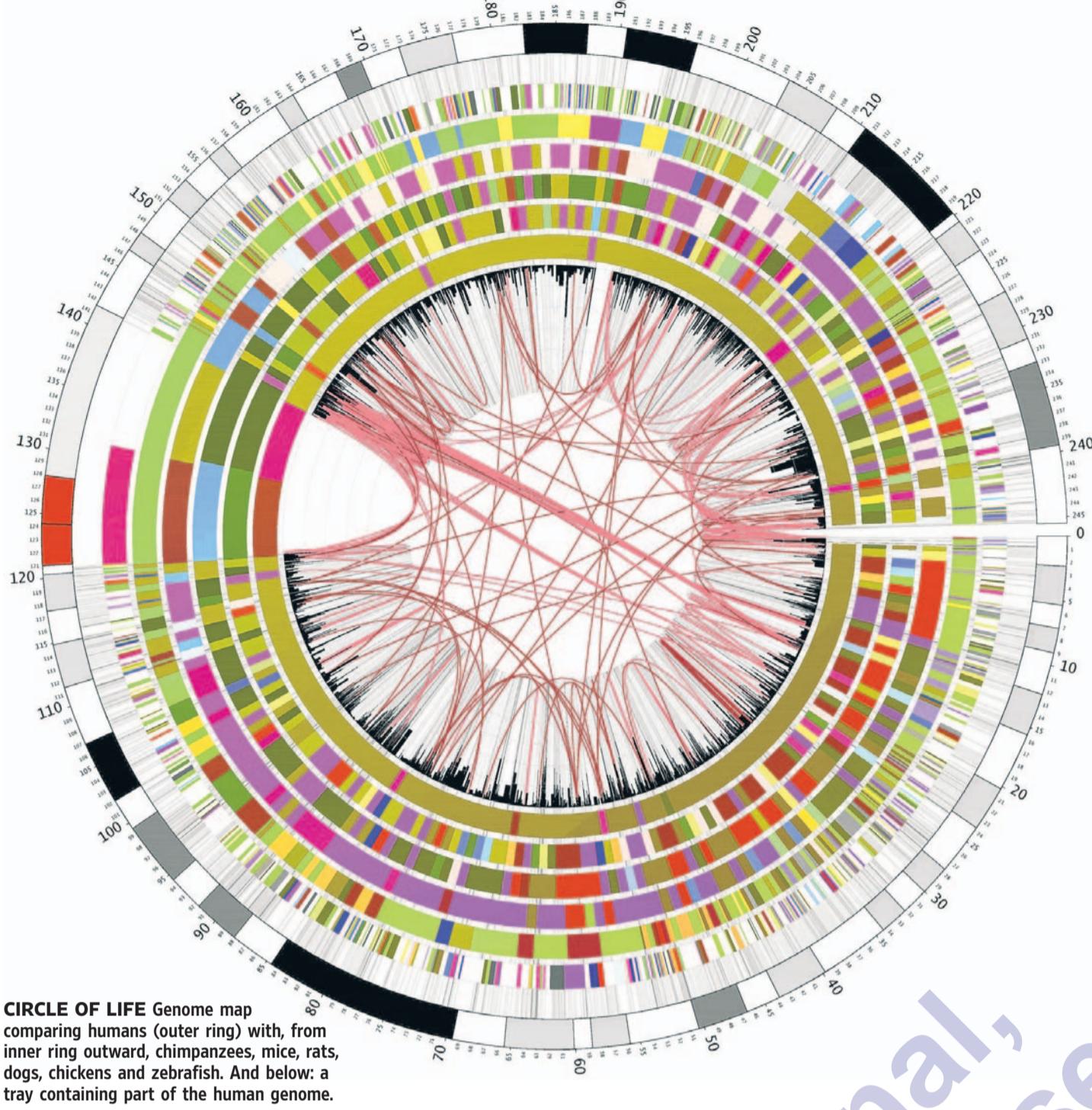
A powerful strand of this story is the sad story of the Jewish ghetto. Centuries of prejudice seemed to have ended in the mid-19th century, and Rome's Jews supplied prime ministers, generals and even leading fascists to the newly united Italian state until the ghastly consequences of Mussolini's alliance with Hitler brought about their disaster. Rome has been fought over by a hundred generations of its inhabitants. Enemy invasions have been an occasional distraction from domestic violence.

Yet Rome has survived, a beautiful jumbled collection of ruins and stories. Marx wrote that "the tradition of all dead generations weighs like a nightmare on the brains of the living." Romans today seem to enjoy an altogether more tranquil relationship with their past, somehow making antiquities part of the furniture of a civilized life lived largely outdoors. At least by day, it is now difficult for the visitor to conjure up many ghosts. Mr. Kneale's achievement is to remind us of the past upheavals that lie only a few inches beneath the cobbled streets of the eternal city.

*Mr. Woolf, the director of the Institute of Classical Studies at the University of London, is the author of "Rome: An Empire's Story."*

## BOOKS

'I am the family face; / Flesh perishes, I live on, / Projecting trait and trace / Through time to times anon . . .' —THOMAS HARDY



**CIRCLE OF LIFE** Genome map comparing humans (outer ring) with, from inner ring outward, chimpanzees, mice, rats, dogs, chickens and zebrafish. And below: a tray containing part of the human genome.

## Biology's Strange New World

### She Has Her Mother's Laugh

By Carl Zimmer  
Dutton, 656 pages, \$30

By WILLIAM SALETAN

**A** MAN LOVES a woman, a sperm meets an egg, and a baby begins. Her DNA unfolds in a perfect symphony, forming a unique individual. Germs attack, but her cells unite to repel them. The earth grows food for her. That's the story we tell children, and, basically, we believe it. Bad things happen—aging, disease, death—but everything follows the laws of nature.

It's a nice story, but it's not quite true. Nature's laws are violated all the time, and the cardinal violator is nature itself. This is the paradox that Carl Zimmer explores in "She Has Her Mother's Laugh: The Powers, Perversions, and Potential of Heredity." Mr. Zimmer, a New York Times science columnist and author, is careful

parts customized for your body. It also creates new ways of making babies. By returning skin cells to the embryonic stage, we can convert them to eggs or sperm. This means that fertility doctors won't have to harvest your eggs, much less clone you. They can generate hundreds of embryos, each with a different combination of your genes, and let you choose. Two men can make a baby. Four people can pair up, create two embryos and combine gametes from those embryos to make a baby that has four parents.

Another breakthrough is gene editing. Through a process called Crispr, which tags DNA segments for deletion, we're learning how to program cells to make specific changes to their genomes. We're also learning how to program organisms to pass down these editing instructions to their progeny. Experiments have shown that this technology could, at some point, cure hereditary diseases such as cystic fibrosis. In addition,

scientists think it could wipe out destructive rodents and malaria-carrying mosquitoes. But self-proliferating genetic software—what experts call a "mutagenic chain reaction"—carries the risk of runaway unintended consequences.

In the face of such technologies, it's sensible to worry about tampering with nature. But we've been tampering for a long time. Carrots, tomatoes

and horses are the distorted products of breeding. Corn is a perversion of what used to be a weed. We've modified ourselves, too. By cultivating cheese, we have favored the spread of human genes for lactose tolerance. Through medicine and prosperity, we're thwarting natural selection. Genes that would have killed people long ago, Mr. Zimmer notes, "are accumulating in our DNA as we find more ways to shield ourselves from suffering and death."

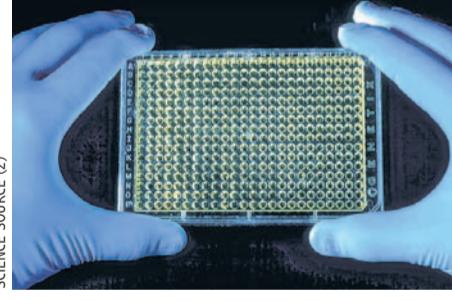
All of these "perversions" are man-made, and, like all deviants, we prefer to think that our perversions are original. But they're not. Nature is far more twisted. It has invented viruses, which replicate themselves by using the contents of other organisms. It has invented corals and sponges, which release parts of themselves to float away and become new bodies. It has invented certain genes, known as gene drives, that hijack procreation even in higher animals—producing toxins, for example, that kill sperm carrying alternative genes.

The bigger breakthroughs are more fundamental. One is the development of induced pluripotent stem cells. By adding four proteins to adult cells, scientists have learned how to make them embryonic—"turning back developmental time," as Mr. Zimmer puts it. This is a big step toward regenerative medicine, which can grow spare

Nature invented us, too. And our bodies are full of perversions. You probably think that all your cells have the same DNA. They don't. Like other animals, we acquire mutations that show up in some cells but not in others. We notice this in obvious cases, such as cancer or multicolored skin. But internal mutations are pervasive. In an embryo's first few days, Mr. Zimmer reports, "over half of its cells end up with the wrong number of chromosomes."

We're designed to overcome these errors, but some of the errors persist. One study found that in people who had died of something other than liver disease, one-quarter to one-half of their liver cells had the wrong number of chromosomes. A study of 247 women found that each subject had about 160 mutations in her immune cells.

You may also think that you're just one person. But are you? Mr. Zimmer describes a girl created by fused embryos. He tells the



story of a woman who got her white blood cells from the dead brother with whom she had shared a womb. Another woman had an abortion only to find that DNA related to her boyfriend had—presumably through the fetus—populated an entire lobe of her liver. And in low doses, DNA exchanges are normal. In 21% of fraternal triplet pregnancies, each kid gets some of the others' DNA. Roughly 42% of children end up with cells from their mothers. Most moms get cells from their fetuses. In a study of women who had died while they were pregnant with sons or died within a month of giving birth, each had brain and lung tissue made from her son's DNA. An analysis of women who had died in their 70s found that 63% had Y chromosomes in some of their brain cells.

Did I mention that you're part microbe? We rely on bacteria that live in us and have evolved with us. Within families, we inherit similar bacteria as surely as we inherit similar genes. In some species, bac-

teria pass themselves down by migrating to eggs. In other species, including ours, bacteria have become mitochondria, the micro-organs that power our cells. Mitochondria have their own genes, and they replicate in us each time our cells replicate. In essence, says Mr. Zimmer, they've "merged into our heredity."

Not all mergers are benign. Some are horror stories. In clams, there's a cancer that spreads through expulsion in water. In Tasmanian devils, there's one that spreads through facial bites. In dogs, there's one that spreads through sex. These cancers, in Mr. Zimmer's words, gain "immortality by sending forth their tumors to burrow into new hosts for thousands of years." Along the way, they acquire advantageous mutations. Eight contagious cancers have been identified in the world so far, and the number is expected to rise. "After all," says Mr. Zimmer, referring to the leukemia cells that float among clams, "now we know they can swim."

It's a wonder that such monsters haven't conquered the planet. But it's also heartening. Maybe nature is strong enough to withstand its pervers. Viruses, gene drives and contagious cancers have been around for eons. Some species evolved to endure or defeat them. Other species died out, taking their killers with them.

We're just another pervert. A smart one, but a copycat. We study viruses to learn how to hack cells. We study bacteria to learn how to edit chromosomes. We study gene drives to understand how to rig organisms to pass down the traits we want. Maybe we'll learn to do these things more powerfully than our predecessors did. But nature has seen such tricks before.

Mr. Zimmer ends the book with a story: Scientists have programmed mosquitoes to pass down genetic software. The software makes the mosquitoes' descendants edit their own DNA to spread a gene. The gene inhibits malaria. It's a clever, multi-layered scheme, but it's running into a problem. Apparently, a chromosomal repair program deep in mosquito DNA is counter-editing what the scientists have done. Nature wins again.

*Mr. Saletan is Slate's national correspondent and the author of "Bearing Right: How Conservatives Won the Abortion War."*

## An Examination Of the Life Worth Living

### The Darker the Night, the Brighter the Stars

By Paul Broks  
Crown, 319 pages, \$27

By EMILY BOBROW

**I**'LL TELL YOU something," Paul Broks's wife, Kate, said to him on her deathbed, as an oxygen machine sighed in the background. "You don't know how precious life is. You think you do, but you don't." Theirs was a loving marriage, and they strove to drink up as much life together as possible before she died of cancer in her late 50s. But for Mr. Broks, his wife's pointed words left a mark. Did he, in fact, understand the value of life? What, he wondered, does it mean to live well?

These are just some of the heady questions swirling around "The Darker the Night, the Brighter the Stars," Mr. Broks's dazzling book about life, death and the profound mysteries of consciousness. Trained as a neuropsychologist, the author studied the relationship between the brain—the "1,200 cubic centimeters of gloop that fills our skulls"—and the mind, that repository of subjective thoughts, feelings and sensations that gives rise to our sense of self in the world. But his explorations have yielded few clear answers. Is there, he asks, such thing as a "self," or what some might call a soul? Are we, as René Descartes suggested, physical machines guided by a nonmaterial spirit? Or is the very concept of a soul an adaptive illusion that humans have evolved so that we see individual life as something precious and worth preserving?

It is a credit to Mr. Broks's considerable gifts as a writer that readers will willingly follow him in and out of these rabbit holes. He is a trustworthy guide, as adept at evoking the nuances of grief as he is at explaining the findings of brain scans or the views of the philosopher Arthur Schopenhauer, who saw life as a sliver of consciousness between slabs of eternal nothingness. "My heart rebels against it," Mr. Broks writes of Schopenhauer's bleak theory, "but better to confront a harsh truth than swallow a consoling lie."

Such discursiveness makes this often poetic book difficult to classify, as it blends fact and fiction, philosophy and psychology, mythology and memoir. Stories of vengeful gods stewing in Hades sit beside essays dedicated to the struggle to define consciousness. Mr. Broks suggests that readers feel free to skip and roam among the chapters, which defy chronology and are often as short and impressionistic as vignettes. But he writes with such clarity and sensitivity that it is hard to imagine anything haphazard in the way he arranged the book, which offers a meaningful journey when read straight through.

The relationship between brain, mind and self is a confusing one, which Mr. Broks illustrates with anecdotes about neurological patients who "inhabit the twilight zones of the mind." One woman in her early 40s experienced a sudden case of amnesia; when her father died a few months later, she didn't know him well enough to cry. Jeff, once a loving father and husband, became unrecognizably angry and abusive after a nasty car crash; his wife continued to dote on him, guided by the belief that "deep down, at the magical, essential core we all imagine inside others and ourselves, it is really Jeff." But who are we without our memories, personality or a continuous identity? What do malfunctions in the brain do to our sense of self?

Mr. Broks has an admirable willingness to hover in a realm of uncertainty. As an atheist who has spent decades immersed in the rationalism of clinical neuroscience, he claims not to believe in immaterial souls or an afterlife. Yet he admits to a moment, upon discovering his wife's long-lost wedding ring, when he wondered whether Kate was trying to contact him from beyond the grave. There are times, it seems, when "you simply can't help but read something magical, something supernatural, into a coincidence." He empathizes with Carl Sagan's irrational yearning to communicate with his dead parents, his desire to believe that something of them still exists. "He knew, and I accept, that nothing remains, and yet the sense that something does never goes away."

If death yields eternal nothingness, then it is all the more important to live well. For guidance, Mr. Broks consults the Stoics, who understood that time is life's most precious commodity. Seneca observed that too many people live wastefully, as if they were destined to live forever, when they should be appreciating the present. Mr. Broks recommended that his wife read the Stoics, to which she responded with "a weary smile." This was a woman, after all, who did not need to consult Marcus Aurelius to know that "the last dregs" of life "were to be savored." Even on the brink of death, with her lungs failing and her legs and hips swollen with lymphedema, she was already determined to have one last swim in the sea.

*Ms. Bobrow, a former editor for the Economist, is a journalist based in New York.*

## BOOKS

'People see everything through the lens of their obsessions.' —FRANCINE PROSE

# Essential Reading . . . and Less

**What to Read and Why**

By Francine Prose

Harper, 314 pages, \$23.99

By BROOKE ALLEN

**T**HE TITLE of Francine Prose's new essay collection is a bit dishonest. Or let's say, perhaps, that it doesn't quite constitute truth in advertising. When I picked up the book I optimistically assumed that it would be Ms. Prose's personal manifesto: a simple account of which books she loves most, and why. But soon enough it proved to be just another critic's collection of previously published articles, reviews, and introductions to reprints of classics, yoked together in a slightly artificial manner for publication in book form. For a careful critic (who is, by definition, poorly paid) wastes nothing.

**When passionate about a book, Francine Prose can be an exciting critic. In her latest collection of essays, alas, she is passionate too seldom.**

Being myself the author of a couple of such tomes, I can't censure the practice, but this one's "through-line" struck me as particularly arbitrary. Had Ms. Prose started from scratch and produced a volume about what she really thought we should read and why, surely it would prove rather different. And, in fact, she has already produced such a list, in her 2006 collection "Reading Like a Writer." Some of the authors on that list of favorites reappear in "What to Read and Why"—Babel, Dickens, Balzac, Nabokov, Austen, Alice Munro, Mavis Gallant, Edward St. Aubyn—but by no means all. Other pieces in "What to Read and Why" seem to have been included as one might throw odd scraps into a stew. Why else would reviews of books of Diane Arbus and Helen Levitt photographs be incorporated?

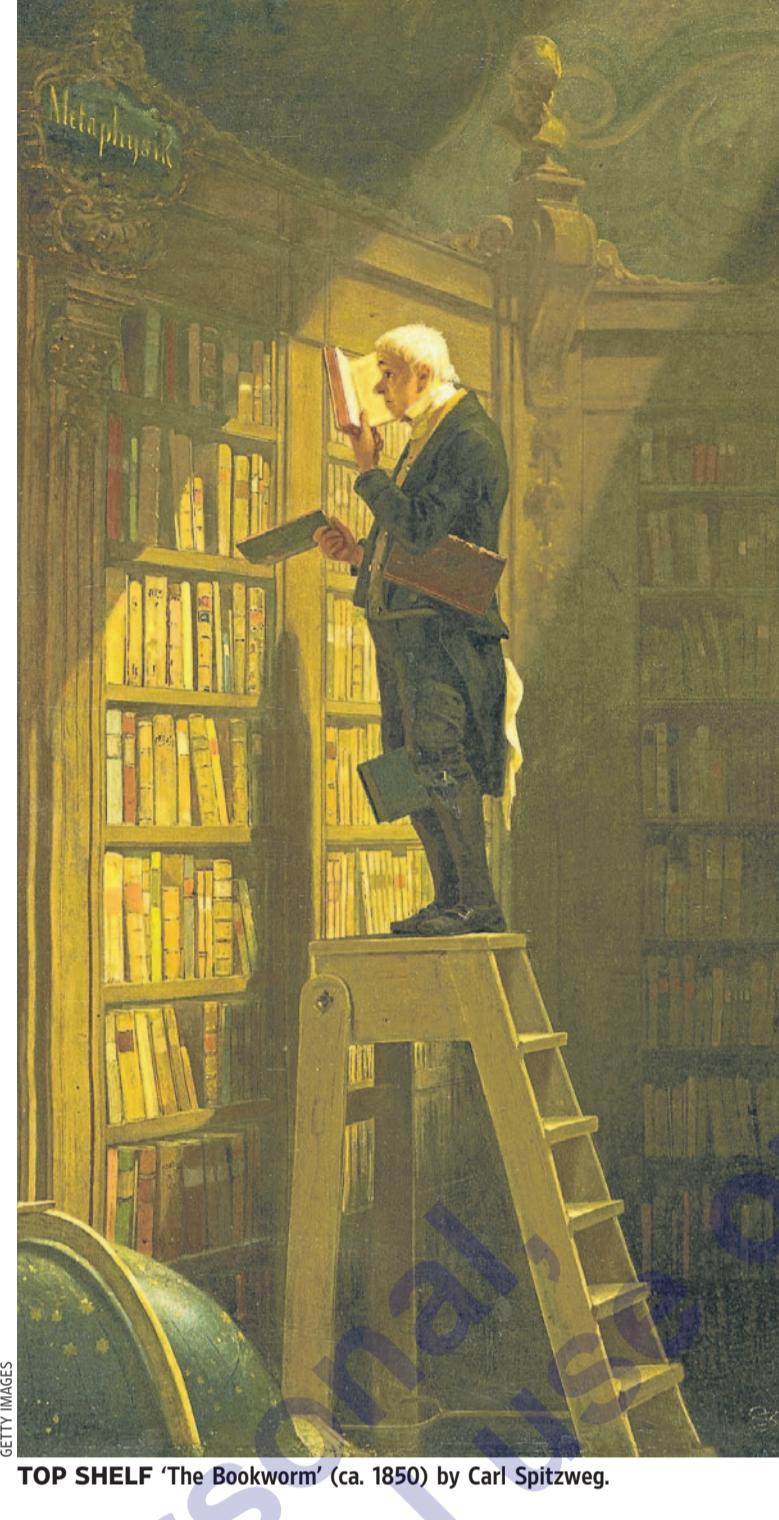
Ms. Prose writes pleasantly if not very excitingly about icons like Louisa May Alcott, George Eliot, Jane Austen, her tone that of a chatty, approachable educator. But her writing sharpens, focuses and occasionally even thrills when she writes of the authors who move her

most deeply. These essays on their own make the book worth reading and buying; they made me buy a couple of the books she most passionately endorses.

George Gissing's "New Grub Street," for example, that marvelous fictional exposé of London literary life in the 1880s: "Even as the novel chills us with its still recognizable portrayal of the crass and vulgar world of literary endeavor, its very existence provides eloquent, encouraging proof of the fact that a powerful, honest writer can transcend the constraints of commerce, can speak louder than the clamor of the marketplace." The milieu Gissing wrote about, as Ms. Prose cleverly illustrates in her essay, is still with us, more or less unchanged; so is the greed-driven universe of Balzac's "Cousin Bette." But the way readers interact with such fiction has changed, a fact of which Ms. Prose, who teaches literature at Bard College and elsewhere, is well aware. Contemporary readers, as she points out, seem to think it's the author's duty to provide "relatable" characters and to uphold appropriate standards of social justice—Ms. Prose's graduate students "were offended by . . . an author who tacitly condoned a hero who would deceive an oppressed female sex worker." Hence the onus heaped upon the late, indubitably great Philip Roth by many Gen X and Y readers, who brand him with "toxic masculinity"—one of the current deadly sins. Balzac, as Ms. Prose points out, also shows us—"us" meaning not just men but women, too—exactly who and what we are, in less-than-flattering colors:

So much of what Balzac tells us has by now become much more difficult, indeed practically impossible (or impermissible), for us to admit to ourselves, or to say: the fact that the poor and the ugly might envy the beautiful and the rich, that our craving for sex and money is so powerful and so anarchic that it can defeat, with hardly a struggle, our better instincts and good judgment. Balzac, who knew about all these things from personal experience, continues to remind us . . . what we humans are capable of—that is to say, what we are.

This message is so inimical to 21st-century idealism that one wonders whether Balzac will continue to be read in this country, insofar as he is



TOP SHELF 'The Bookworm' (ca. 1850) by Carl Spitzweg.

still read here at all. It made me want to immediately pick up "Cousin Bette," which I have not read since college. *Vive Balzac!*

Subtlety and ambiguity rather than moral certainty are what make much great art great, a fact Ms. Prose confirms repeatedly. Writing of contemporary authors like Denis Johnson, Michael Jeffrey Lee and George Saunders, she notes the "kind of freedom and exhilaration involved in finding the language that so clearly

sets a character outside the parameters of 'normal' or 'ordinary'—or what we've agreed to call normal and ordinary—interior chatter." Nevertheless, she goes on, "it's a different sort of challenge to find the language in which to portray the interior life of a character who is even better trained than we are to monitor and control the fragments of self that break loose and rise to the surface." A perfect example of such a character is the narrator of John Cheever's tricky

story "Goodbye, My Brother," one of Ms. Prose's favorite pieces of fiction to teach (and mine too) because of the engrossing challenge in puzzling out just what the pathologically repressed narrator is trying so hard to conceal.

Ms. Prose's favorite writer, I am guessing, is Mavis Gallant, the prolific Canadian author of novels, plays and, above all, magnificent short stories. When she writes of Gallant it is clearly from true love rather than dutiful admiration. "Line by line, word by word, no one writes more compactly, more densely, with more compression. Great short stories are sometimes said to be as rich as novels. Gallant's are like encyclopedias—of her characters' psyches and lives." Gallant, who died in 2014, was indeed a writer's writer, and no doubt Ms. Prose's experiences as a teacher have made her doubly appreciative of the economy with which Gallant achieves her sharp effects. "She builds her fictions with moments and incidents so revealing and resonant that another writer might have made each one a separate story. . . . Her trademarks: the specificity, the density of detail and incident, the control of language and tone, and her gift for creating a deceptively comfortable distance between the characters and the reader, then suddenly and without warning narrowing that distance . . ." A far cry from Roberto Bolaño, whom Ms. Prose praises in a less convincing manner, with his "encyclopedic impulse, a drive to include everything that can be known about a subject, as proof that nothing can ultimately be known about that subject, if that subject happens to be the mystery of evil."

There are enough heartfelt pieces in "What to Read and Why" to make it worth perusing, and most of Ms. Prose's readers will be lucky enough to discover a new favorite in its pages or rediscover an old one. And, of course, that in itself is the best reason to read a collection like this one. But I couldn't help wishing that Ms. Prose had stuck to the mandate of her title—had trimmed the fat, excluded the authors who meant less to her, and focused exclusively on her true favorites and what makes them so essential.

*Ms. Allen teaches literature at Bennington College. Her literary essays and reviews are collected in "Twentieth-Century Attitudes" and "Artistic License."*

# The Ungraspable 'Miracle' of Machado de Assis



FICTION

SAM SACKS

The rich, varied, ironic short fiction of Brazil's greatest writer.

The new volume, the first in English to bring together all seven of Machado's story collections, illustrates both the refined pleasures and the somewhat ungraspable nature of his art. Given a fresh translation by the accomplished duo of Margaret Jull Costa and Robin Patterson, these 76 stories move among a bewildering range of traditions. Some validate Machado's reputation as a missing link in the lineage of comic experimentalists running from Laurence Sterne to John Barth. Others foreshadow the metafictional techniques that Jorge Luis Borges would immortalize. Still others display the light-

fingered, open-ended realism of Chekhov or Turgenev. Faced with such diversity, critics have tended to throw up their hands. Both Mr. Bloom and the Mexican novelist Carlos Fuentes call Machado a "miracle," as though only providence can explain him and submission before the inexplicable is required to appreciate him.

Of course, as this collection shows, even miracles have growing pains. Machado's stories before 1881—or the first third of the book—are largely undistinguished tales of courtship and marriage involving Rio de Janeiro's landed gentry. Flashes of brilliance stand out—don't skip "Luís Duarte's Wedding," a boisterously satirical tableau of an aristocratic Rio wedding party—but mostly the love stories feel dated.

Machado was epileptic and some have speculated that a health scare when he was around 40 provoked the sea change in his style. Whatever the case, the sublime "Dona Benedita" gives a sense of the deeper currents he had entered. On the surface, this is another tale of upper-class matchmaking. But the focus has shifted to the character of the scatterbrained matriarch, and amid the bustle of dressing and socializing Machado captures moments of illuminating forgetfulness: "Dona Benedita turned [a] slipper over and over, passing it from one hand to the other, lovingly at first, then mechanically, until her hands stopped moving completely, and the slipper fell into her lap, and Dona Benedita sat

staring into space." What emerges is a subtle and tenderly comic portrait of a childlike woman who thinks she is running her household but in fact is being carefully managed by everybody in it.

From the same period comes "The Alienist," one of Machado's masterpieces.

**THIS WEEK'S BOOKS****The Collected Stories of Machado de Assis**

Translated by Margaret Jull Costa &amp; Robin Patterson

**My German Brother**

By Chico Buarque

Framed as a straight-faced historical chronicle, it tells of a Brazilian psychiatrist who finds the region's first insane asylum and then begins locking up everyone he encounters. His reign of terror is brought to an end only when he concludes that "mental disequilibrium" is the natural state of humanity. As the city's lone sane man, he lets his patients go and commits himself.

Madness becomes the new normal in Machado's tales, which start to invert and parody, rather than simply imitate, European storytelling conventions. The Western canon is his playground. "In the Ark" produces "unpublished" Bible chapters that show Noah's sons in a violent property dispute mere minutes after the Lord has cleansed wickedness from the Earth. "The Devil's Church" is a scathing parable about the Devil's efforts to found a

religion centered on sin. (It's successful but the Devil is enraged that people keep backsliding into virtue.)

A streak of morbidity comes to the fore, striking for its juxtaposition with Machado's decorous prose. "Final Chapter" is the suicide note of a man who, chivalrous to the end, wants to ensure that someone else enjoys his leather boots. In "Posthumous Picture Gallery," a man who hopes to publish the journals of a deceased, highly respected elder statesman is shocked to find it filled with insulting, and mercilessly perceptive, sketches of his friends and himself.

"You must never use irony—that mysterious little twitch at the corner of the mouth," a father counsels his son in the supremely ironic "How to Be a Bigwig." That little twitch—Machado's Mona Lisa smile—is the hallmark of this watershed collection and the source of its inexhaustible interest and puzzlement.

Brazil's vexed family ties with Europe provide the subject of Chico Buarque's latest book, "My German Brother" (Farrar, Straus & Giroux, 199 pages, \$25), translated with great flair by Alison Entrekin. Mr. Buarque is a legendary samba singer, but he's the genuine article as a novelist as well. I loved "Spilt Milk" (2009), which recounted the decline and fall of a once-mighty Brazilian clan through the meandering monologue of a sardonic centenarian.

"My German Brother" has the same energy, wit and feel for the past. It begins when

Ciccio, a teenager in the 1960s, finds a letter hidden inside the family copy of "The Golden Bough" that suggests that his father sired a child while living in Berlin in the 1930s. Ciccio's father, an eccentric who spends his days entombed inside "the largest private library in São Paulo," is impervious to questioning, so Ciccio's search for this long-lost half-brother becomes a lifelong obsession, bringing him into contact with Brazil's sprawling community of German expats and summoning the manifold horrors of the war years.

Meanwhile, Brazil is generating its own horrors. Ciccio's full brother, Mimmo, a louche ladies' man but hardly a dissident, falls in with the wrong crowd and is "disappeared" by the military government. The twin absences blend together, forming a void that Ciccio fills with books, music, women and increasingly lunging efforts to discover the fates of his missing siblings. He even contemplates hiring a shaman to inspect the house for poltergeists: "I repeat that I have never believed in witches, but, as Sancho Panza and everyone knows, there's no denying they're real."

Late in "My German Brother" Ciccio identifies W.G. Sebald's "Austerlitz" as the inspiration for his account, and here too Mr. Buarque combines documentary records with imaginative leaps into the unlabeled recesses of history. Just as ghosts mingle with their survivors, fact bleeds into fiction to create a book of potent emotional force.

## BOOKS

'When I write, I make my memories tangible, and in this way I can get rid of them.' —JORGE SEMPRÚN

# A Man of Many Lives

**Exile, Writer, Soldier, Spy**

By Soledad Fox Maura

Arcade, 299 pages, \$25.99

BY TOBIAS GREY

**A**S A SUBJECT for biography, Jorge Semprún is as hard to pin down as the Scarlet Pimpernel. He was a man of many facets: a Spanish Republican, a Resistance fighter in occupied France, a Buchenwald survivor, a Communist undercover agent in Franco-era Spain, a garlanded author, an Oscar-nominated screenwriter ("The War Is Over" and "Z") and a Spanish culture minister. One can only sympathize with author Soledad Fox Maura for wondering whether she was going to "spend the rest of [her] life writing this book."

Ms. Fox Maura, a professor of Spanish and literature at Williams College, has been teaching Semprún's work for over 15 years. She is distantly related to her subject, who died in 2011, age 87. It is debatable whether this first English-language biography, which grapples dauntingly with Semprún's "poetic license" as a memoiristic writer, will awaken American interest in an author whose fame was, and still is, far greater in Europe.

"What was exceptional about Semprún's life is not that it coincided with so many of the historical convulsions that defined his era," writes Ms. Fox Maura, "but that he involved himself so assiduously in all of them." To begin with, Semprún grew up in the lap of Spanish luxury. His maternal grandfather, Antonio Maura (1853-1925), was a five-time Spanish prime minister whose political reforms helped to entrench the country's constitutional monarchy.

Semprún's privileged childhood was turned upside-down at age 9, when his mother died, and again four years later, when the Spanish Civil War erupted. Like many Spanish Republicans opposed to Franco, Semprún's diplomat father and his strictly authoritarian new wife gathered their family and fled to France. The hand-to-mouth life



MULTI-FACETED Jorge Semprún in 1998.

they led there did not preclude Semprún's attending one of Paris's elite high schools. It was at the lycée that he mastered French, the language in which he would write most of his books.

In 1940, while Semprún was studying for the baccalauréat, the Germans occupied Paris. This led him to join the communist French Resistance group Jean-Marie Action, for which he collected arms dropped by parachute at night. According to Semprún's later boss Felipe González, who was Spain's longest-serving prime minister (from 1982 to 1996): "The sole reason" that Semprún joined the Communist Party was because it was "the most committed group willing to fight in the Resistance movement."

Semprún's work for the Resistance ended when he was arrested by the Gestapo in October 1943. His subsequent deportation to Buchenwald, where he remained until its liberation at the end of the war, became the defining event of his life and the inspiration for much of his work. It is here that Ms. Fox Maura's sleuthing really comes into its own. Many who have read Semprún's Bu-

chenwald books, including "The Long Voyage" (1963), "What a Beautiful Sunday!" (1980) and the best-selling "Literature or Life" (1994), will have wondered whether these are works of testimony or if they contain elements of fiction.

From her years of research, Ms. Fox Maura is convinced of the latter: "Semprún has been misclassified as a testimonial author, when what he in fact writes is a sophisticated autobiographical fiction most akin to the picaresque." It is not as though Semprún made a secret of his technique. He himself said that "the only way to make horror palpable is to construct a fictional body of work." But what he does not provide his readers with is any kind of road map demarking where testimony ends and fiction begins.

Semprún's first book, "The Long Voyage," which was published 18 years after his liberation from Buchenwald, paints a very muddy picture. Ms. Fox Maura calls Semprún out here for "co-opting the most well-known representations of the Holocaust." For a start he describes Buchenwald as a "death camp," which it patently was not.

Despite thousands of people dying there, no gas chambers were ever built on the site. Semprún also writes lyrically about the significance of the sign above the Buchenwald entrance gates. The only problem: The sign he describes, with the motto "Arbeit Macht Frei" (Work Sets You Free), was used at Auschwitz and elsewhere but not at Buchenwald.

In one of the novel's most moving scenes, Semprún, who was not Jewish, recalls a Jew singing the Kaddish in Yiddish. Ms. Fox Maura notes that this was yet another example of "poetic license," as the Kaddish was habitually recited in Aramaic. Far more damning was Semprún's depiction of Ilse Koch, the sadistic wife of Buchenwald's commandant Karl-Otto Koch, whom he luridly imagines collecting the tattooed skins of inked inmates to cover the lampshades of her living room. Not only was Ilse Koch gone by the time Semprún arrived in Buchenwald, but the scene is pure kitsch.

None of this escaped the attention of the Hungarian Nobel laureate Imre Kertész, a fellow Holocaust survivor who criticized Semprún for choosing "the wrong technique, narrating only the most spectacular of events and mangling temporality in the process." While there is no doubt that Semprún was a deeply cultivated writer, one has to wonder at his motivations.

His champions celebrate him for having kept the flame of Holocaust memory alive in both his literature and his numerous public pronouncements. But there is something jarring about how Semprún frames himself in his work. "His camp narratives, in general, avoid any kind of self-portrayal as a victim," Ms. Fox Maura writes. "On the contrary, he retains an unusually healthy sense of vanity, humor, irony, and a kind of literary showmanship that other survivors have found disquieting." What, she asks, was this seducer's "personal relationships to trauma, memory, and forgetting?" The mystery remains.

Mr. Grey is a writer and critic living in Paris.

**SCIENCE FICTION**

TOM SHIPPEY

## A Fantasy Novel Destined To Be a Classic



**WORLDS WHERE** magic works have been a common theme in sci-fi ever since Robert Heinlein wrote "Magic, Inc." in 1940. What Hannu Rajaniemi has given us in "**Summerland**" (Tor, 302 pages, \$25.99) is a world where Spiritualism works—the whole nine yards, ectoplasm, spirit mediums and all. The difference is that its odd and uncertain phenomena have been codified and turned into science by a consortium of the radio scientists Oliver Lodge and Guglielmo Marconi, and Eusapia Palladino, a famous medium.

It's the 1930s, and Britain has a National Death Service, not a National Health Service. For those who have a Ticket, death is no longer to be feared. You can hold your mother's hand as she dies, and 10 minutes later get a call from her on the ectophone from the Other Side, from Summerland.

No more fear, grief, bereavement! What could go wrong? Well, a loss of authority for the Church, which has led to a socialist utopia in Spain and an immediate backlash from a certain Gen. Franco. Just as in our world, Britain and the Soviet Union are fighting a proxy war in Spain—and, just as in our world, the British war effort is hampered by Communist traitors.

Mr. Rajaniemi's heroine is trying to unmask them, but she is fighting a war on two fronts, in the Winter Court of London, and the Summer Court on the Other Side, neither

**THIS WEEK'S BOOKS****Summerland**

By Hannu Rajaniemi

**The Grey Bastards**

By Jonathan French

of them to be trusted. The end of death, moreover, has led to fears beyond death. Those who die without the meritocratic Ticket cross over, but then

they do what ghosts normally do—they Fade, becoming the chittering, powerless spooks of folklore.

In any case, there is something wrong on the Other Side: not enough people. Where are all the cavemen, ancient Egyptians, Romans and Native Americans who appeared so often as spirit guides for pre-scientific mediums? Some of the few surviving Old Dead fear that they have been culled by some non-human force. The only hope is to form a Presence, an overmind of the dead, for truly eternal life. But there's a Soviet overmind as well, probably directed by Lenin.

A story like this depends on constant twists, threats, opportunities and developments. Ectotanks for warfare, Faraday cages and spirit-crowns to ward off thought-transfer, charter-bodies to enable the dead to return physically and by contrast female phantasms made out of ectoplasm to seduce the living—Mr. Rajaniemi keeps pulling new ideas out of his hat, each one making you think, with a shudder, "Of course—but who would have thought of that?"

Mr. Rajaniemi is already the crowned king of cyberfiction and nanofiction, with his "Jean le Flambeur" trilogy. This stand-alone novel makes him the all-time great of unintended consequences as well. "Summerland" is a masterpiece, set to be a classic—but not by any means a comfortable one.

One cliché of epic fantasy is that any connection, let alone intermarriage, between orcs and goblins on one side and human beings on the other is utterly unthinkable. Jonathan French has set out to challenge that convention, and the moral simplifications that go with it. In his "**The Grey Bastards**" (Crown, 424 pages, \$27) we have a human empire pitted against an always-threatening world of orcs: frails against thicks, to use their own terms.

Patrolling the badlands in the middle, however, are groups of half-orcs, mounted on their giant war-hogs, including the Grey Bastards, the Orc Stains, the Tusked Tide, the Sons of Perdition. Like street gangs, they have their own code of honor, their own complex alliances.

Jackal, Mr. French's central character—it's hard to describe him as a hero—is mainly engaged in two things: trying to overthrow the current leader of the Grey Bastards, and, with unexpected chivalry, trying to keep safe an elf girl he has rescued. She, as one might expect given all the cross-species interaction going on, is pregnant by an orc, an event so rare as to make her valuable, with consequences we can't even guess at.

It's refreshing to see the old tropes undermined, but the Grey Bastards live up to their name in all respects. Their code of honor allows what most people would call treachery, they're in it for themselves alone, and they are incurably foul-mouthed. As for a contest between Good and Evil, nobody in Mr. French's universe would know where to start looking for either. There's non-stop action, though not for faint hearts, and never an unassuming hobbit or fatherly ent by way of relief.

# Galactic Adventures

**CHILDREN'S BOOKS**

MEGHAN COX GURDON

**ROMY SILVERS** is 16 years old, haunted by memories and utterly alone. In Lauren James's gripping romantic sci-fi thriller "**The Loneliest Girl in the Universe**" (HarperTeen, 303 pages, \$17.99), she's the sole surviving passenger—and now commander—of a spacecraft hurtling toward a remote, habitable planet with the mission of founding a colony.

Born on the ship, Romy has no experience of other people than what she remembers of her parents and what she can see of life on Earth from movies and TV shows stored in the ship's computer. A tech genius, Romy is also surprisingly normal: She writes fan fiction starring characters from her favorite TV series and corresponds at great intervals (because of her distance from Earth) with her therapist. When Romy learns that another ship is coming, one with superior technology that will allow it to overhaul her before she reaches the planet, she's thrilled and relieved: She won't have to settle Earth II on her own. Better still, the commander of the approaching vessel, "J," is young, charming, communicative—and lonely too. As news comes of catastrophic war on Earth and NASA severs contact with Romy, she finds herself drawn yet more deeply into a relationship of trust and love (and momentary lust) with a compelling stranger who seems to have an uncanny feel for her deeper thoughts and desires.

Warning sirens may not yet be going off in Romy's spaceship, but they will be blaring in the minds of readers age 13 and older, and rightly so. As a psychological drama, "**The Loneliest Girl in the Universe**" is a good read with several shocking twists. It's even sharper as an extended metaphor for certain risky realities of modern adolescence. Teens who feel isolated are often tempted to seek sol-

ace in online relationships; they are wise to remember that a stranger who seems warm and genuine may have dark motives and ominous intent.

A dreaded interstellar warrior gets a hilarious comeuppance in "**Are You Scared, Darth Vader?**" (Lucasfilm Press, 42 pages, \$17.99), a meta picture book by Adam Rex that starts being funny even before the first page. (The

dedication reads: "For Henry . . . I am your father. -A.R.")

On a series of tenebrous paintings, ragged yellow lettering enlists the young reader in a taunting dialogue with the famous Star Wars villain, asking repeatedly: "Are you scared, Darth Vader?" In his mask and shroud, Darth Vader stands impassive and unimpressed as first a "wolfman" and then a "vampire" and a "witch" jump out at him. As the provocations increase, Darth Vader becomes "most displeased" but insists: "I am not scared. I will never be scared. Who could possibly scare Lord Vader?" As it happens, there is such a person, as readers ages 4-8 will be delighted to realize.

Is it better to stand out or fit in? Two stories explore this vexed question. In the pages of the first, "**Twig**" (Simon & Schuster, 32 pages, \$17.99), readers ages 4-8 meet a girl named Heidi who feels invisible at her new school. And it's true, she is, because Heidi is a stick insect, "tall and long like the twig of a tree," with camouflage that makes her blend in with the background to such a degree that the other students at Bug School—the honeybees, fire ants and praying mantises, among others—overlook her.

Aura Parker's quirky, delicate pictures (see left) of the school and its pupils are full of seek-and-find interest, especially her jolly scenes of a crowded playground. Eventually Heidi's teacher gets the class to devise a colorful solution for the new girl that gives her visibility whenever she wants it.

In a second picture book, a maladapted



chameleon is stuck in a predicament that brings to mind Raymond Chandler's brilliant line about a fellow looking "about as inconspicuous as a tarantula on a slice of angel food cake."

For the protagonist of "**Neon Leon**" (Nosy Crow, 22 pages, \$14.99), the problem is color. In Britta Teckentrup's bold illustrations, Leon stands out in electric orange against the gen-

tler greens, grays and blues of the world. "Oh dear," writes Jane Clarke in this chatty tale for 2- to 5-year-olds, "Leon's so bright, he's keeping all the other chameleons awake! What a lot of grumpy chameleons!" Will Leon find his place in the world? (Well, yes, but where?)

Thick obsidian lines run through vivid, jostling colors in the aboriginal Australian artwork to be found in Bronwyn Bancroft's "**Shapes of Australia**" (Little Hare, 24 pages, \$17.99). Each richly ornamented

**THIS WEEK'S BOOKS****The Loneliest Girl in the Universe**

By Lauren James

**Are You Scared, Darth Vader?**

By Adam Rex

**Twig**

By Aura Parker

**Neon Leon**

By Jane Clarke

Illustrated by Britta Teckentrup

**Shapes of Australia**

By Bronwyn Bancroft



page in this picture book for the smallest children evokes objects such as boulders, creeks and honeycombs. "Grasslands create a quilt of nature's comfort," we read as serpentine lines of green traverse bright square blocks of meadow. Teardrop shapes crammed with acrylic dots and circles are "termite nests settle[d] comfortably by a doomed tree." Tucked into the riot of color is a slender black-and-white sapling, its life gone already.

## BOOKS

'There are places I'll remember / All my life, though some have changed / Some forever not for better / Some have gone and some remain . . .' —LENNON-MCCARTNEY

# What It Was Really Like

## As Time Goes By

By Derek Taylor

Faber & Faber, 228 pages, \$14.95

By D.J. TAYLOR

**I**T TOOK ONLY a few moments' exposure to this reissue of Derek Taylor's four-and-a-half-decades-old memoir, "As Time Goes By," for me to be transported to a scene from Eric Idle's cinematic Beatles spoof, "The Rutles" (1978). Outside a building clearly doubling as the London HQ of the Fab Four's ill-fated Apple Corps, a journalist can be found interrogating a hapless employee identified as "Eric Manchester." Behind them, shoals of light-fingered visitors tote pilfered TV sets and office equipment through the unguarded front door.

The interviewer is played by a gamely self-satirizing George Harrison; Manchester (represented by Mr. Idle's Monty Python colleague Michael Palin) pastiches Derek Taylor's patter as the Beatles' press officer. Shortly afterward, John Belushi, in the guise of money-man "Ron Decline," will begin his remorseless tramp around the corridors as accountants run screaming from their cubbyholes and secretaries shrink paralyzed from his touch.

In the 49 years—the exact date was Aug. 20, 1969—since John Lennon, Paul McCartney, George Harrison and Ringo Starr last sat in a studio together, there have been several plausible candidates for the co-starring role of "Fifth Beatle." To

Pete Best, the founding drummer kicked out of the band at the instigation of producer George Martin, can be added Sir George himself, whose technical pizazz turned the band into something bigger than a mere pop group. Brian Epstein, the group's manager until his untimely death in 1967, and Neil Aspinall, the long-serving aide-de-camp who went on to manage Apple Corps, have champions. And yet, of all the smaller fry who fizzed in the Beatles' effervescent slipstream, Taylor (1932-1997) seems to be have been the one whose madness—to reference that old Steely Dan song "Midnight Cruiser"—ran most closely with their own.

One curious aspect of Taylor's place in Beatledom is how comparatively little time he spent with "the boys" in their tumultuous heyday. A year taken up overseeing the "Beatlemania" of 1964 was abruptly curtailed when he fell out with Epstein. Later, he received a providential reappointment in the spring of 1968, with Epstein dead, his charges bickering and the organization in melt-down as break-up loomed. And he did some post-split work on books and film projects.

Embedded in the Beatles' world Taylor conspicuously wasn't, and yet—far more so than many of the



HANDS-ON STYLE John Lennon and Derek Taylor (front) with others at Apple Corps HQ in 1968.

chancers and nest-featherers who swirled around them—Taylor was their kind of person: a local lad whose roots in West Kirby were almost identical to their Merseyside upbringings; an old-style journalist bowled over by this new-style music; a man reliably unbothered by the drugs and the behavioral excess. Though technically off the payroll in the mid-'60s, Taylor was always someone on whom the band members could depend, and when Harrison paid his famous visit to Haight-Ashbury in the summer of 1967 to gain firsthand experience of the West Coast hippy tribes, it was Taylor who capered at his side.

Beatle and minder alike were frankly appalled by the Haight (around which Harrison frisked, troubadourlike, strumming the recently composed Beatles song "Baby You're a Rich Man") and its complement of "ghastly drop-outs, bums and spotty youths." Back in London the following year, with a brief to promote Apple's newly consecrated record label, a boutique and the half-dozen other commercial activities on which the Beatles' gaze desultorily fell, Taylor's eye for the countercultural cavalcade that flowed up and down the staircase at 3 Savile Row was no less acute.

Here the reader's attention is directed to the memorable event known as "Black Friday," the day on which a gang of Hells Angels, the managers of the Grateful Dead, a homeless family of seven from Cali-

fornia, two transcendental meditators from Rishikesh, two Beatles, Yoko Ono, a German television producer and the Sinhalese poet Tambimuttu fetched up simultaneously on the Savile Row doorstep "needing cups of tea and conversation."

Borne aloft on a cloud of marijuana smoke, filing endless scrawled dispatches from an Alice in Wonderland landscape of acid-inspired grooviness,

## When George Harrison paid his famous visit to Haight-Ashbury in 1967, it was Derek Taylor who capered at his side.

Taylor is rarely less than a room or two distant from the rot seething away at Apple's core. Long derided as a vanity project ripe for collapse the moment its directors got bored, Apple, the author insists, needed only a controlling intelligence to make it triumphantly viable. "All we wanted," he writes, "was more consistency and a visionary with a business brain at the top (rather than four visionaries growing up and apart painfully and publicly)." As for Allen Klein—so cruelly taken off by Belushi—the contract- renegotiating New Jersey hustler whose importation set Mr. McCartney against Lennon, Harrison

and Mr. Starr, we learn that Taylor set the fateful deal in motion by telling one of Klein's associates that he might as well call the band to offer his help. "Well," he writes, "being as how I brought Klein to Apple, by making sure the way was clear, I owe someone, somewhere something, that's for sure."

That sentence gives a good idea of Taylor's slightly tripped out, conversational and—it must be said—quintessentially 1960s style, in which judgment comes by way of situational incongruity and the humor is by turns wry, impressionistic, tongue-in-cheek, buried and laconic. (Of a libel writ against the London Sunday Times: "Allen Klein doesn't like being called a dirty, lying, self-aggrandising tax-dodger. He is funny that way.")

Taylor also specializes in jaw-dropping bathos, as in the account of a night out in London with the Byrds in 1965, which ends up with a visit to the Rolling Stone Brian Jones's apartment, "where we smoked some hash and some grass and as there was no food in the place and, after the wine had finished, no liquid excepting a half-bottle of milk, solid as chalk, we went out for hamburgers and then went home."

Not all of "As Time Goes By" takes

place in Beatle-land. Vowing that he

"could make anyone famous," Taylor

whomps up a storm in the LBJ-era

States, softening reality for the Beach

Boys ("Christ, they were hard work"),

setting up the Monterey Festival in the summer of 1967 and attempting to finesse the likes of Captain Beefheart and His Magic Band into the pages of such innocuous teen magazines as Tiger Beat and Flip. All this is intensely, if not quite always intentionally, amusing, and yet inevitably the best bits are those dreamy elegies from 1968.

At one point, Taylor (high on drugs) and Mr. McCartney, in a chauffeur-driven car on their way south from Liverpool, stop off in a Bedfordshire village named Harrold. After a session in the pub they are entertained by the local dentist, whose daughter hands Mr. McCartney a guitar on which he plays a new song entitled—you guessed it—"Hey Jude." The evening ends at 3 a.m. in the reopened pub ("In your honor, Paul"), as Mr. McCartney dances with a woman who has just sung "The Fool on the Hill" to his piano accompaniment.

Once again I was transported back—not to the ransacked office of The Rutles, but to the moment in the "Beatles Anthology" series in which Harrison, viewing some ancient footage of milling fans, declares that he would like U2 to see this. That way they could understand what it was like to be really famous.

*Mr. Taylor's novel "Rock and Roll Is Life" has just been published by Canongate in the U.K.*

## Best-Selling Books | Week Ended June 24

With data from NPD BookScan

### Hardcover Nonfiction

TITLE AUTHOR/PUBLISHER	THIS WEEK	LAST WEEK
<b>The Legend of Zelda Encyclopedia</b> 1 New		
Nintendo/Dark Horse Books		
<b>Magnolia Table</b> 2 1		
Joanna Gaines & Marah Stets/William Morrow & Company		
<b>Fail Until You Don't</b> 3 New		
Bobby Bones/Dey Street Books		
<b>Little Moments of Love</b> 4 New		
Catana Chetwynd/Andrews McMeel Publishing		
<b>Yes We (Still) Can</b> 5 New		
Dan Pfeiffer/Twelve		

### Nonfiction E-Books

TITLE AUTHOR/PUBLISHER	THIS WEEK	LAST WEEK
<b>Things That Matter</b> 1 -		
Charles Krauthammer/The Crown Publishing Group		
<b>Freakonomics</b> 2 -		
S.D. Levitt & S.J. Dubner/HarperCollins Publishers		
<b>What Your Clutter Is Trying to Tell You</b> 3 -		
Keri L. Richardson/Hay House, Inc.		
<b>Kitchen Confidential</b> 4 1		
Anthony Bourdain/Bloomsbury USA		
<b>Born Trump</b> 5 New		
Emily Jane Fox/HarperCollins Publishers		
<b>Educated</b> 6 5		
Tara Westover/Random House Publishing Group		
<b>The Heminges of Monticello</b> 7 -		
Annette Gordon-Reed/W.W. Norton & Company, Inc.		
<b>Calypso</b> 8 3		
David Sedaris/Little, Brown and Company		
<b>A Brief History of Time</b> 9 -		
Stephen Hawking/Random House Publishing Group		
<b>Bad Blood</b> 10 4		
John Carreyrou/Knopf Doubleday Publishing Group		

### Hardcover Fiction

TITLE AUTHOR/PUBLISHER	THIS WEEK	LAST WEEK
<b>The President Is Missing</b> 1 1		
J. Patterson & B. Clinton/Little, Brown & Company & Knopf		
<b>The Perfect Couple</b> 2 New		
Elin Hilderbrand/Little, Brown & Company		
<b>The Outsider</b> 3 2		
Stephen King/Scribner Book Company		
<b>PopularMMOs Presents A Hole New World</b> 4 New		
PopularMMOs/Harpercollins		
<b>Oh, the Places You'll Go!</b> 5 4		
Dr. Seuss/Random House Books For Young Readers		

### Nonfiction Combined

TITLE AUTHOR/PUBLISHER	THIS WEEK	LAST WEEK
<b>The Legend of Zelda Encyclopedia</b> 1 New		
Nintendo/Dark Horse Books		
<b>Fail Until You Don't</b> 2 New		
Bobby Bones/Dey Street Books		
<b>Kitchen Confidential</b> 3 1		
Anthony Bourdain/Ecco Press		
<b>Magnolia Table</b> 4 2		
Joanna Gaines & Marah Stets/William Morrow & Company		
<b>Calypso</b> 5 4		
David Sedaris/Little, Brown and Company		
<b>Yes We (Still) Can</b> 6 New		
Dan Pfeiffer/Twelve		
<b>The Plant Paradox</b> 7 3		
Steven R. Gundry/Harper Wave		
<b>Little Moments of Love</b> 8 New		
Catana Chetwynd/Andrews McMeel Publishing		
<b>The Subtle Art of Not Giving a F*ck</b> 9 7		
Mark Manson/HarperOne		
<b>12 Rules for Life</b> 10 8		
Jordan B. Peterson/Random House Canada		

TITLE AUTHOR/PUBLISHER	THIS WEEK	LAST WEEK
<b>The Perfect Couple</b> 1 New		
Elin Hilderbrand/Little, Brown and Company		
<b>The President Is Missing</b> 2 1		
James Patterson & Bill Clinton/Little, Brown & Company		
<b>A Merciful Silence</b> 3 New		
Kendra Elliot/Montlake Romance		
<b>Mister Tonight</b> 4 New		
Stephen Ryan/Dream Press		
<b>The Outsider</b> 5 3		
Stephen King/Scribner		
<b>The Perfect Mother</b> 6 -		
Aimee Molloy/HarperCollins Publishers		
<b>White Lace and Promises</b> 7 -		
Debbie Macomber/Random House Publishing Group		
<b>Shelter for Blythe</b> 8 New		
Susan Stoker/Susan Stoker		
<b>The Bitter Season</b> 9 -		
Tami Hoag/Penguin Publishing Group		
<b>The Cottages on Silver Beach</b> 10 New		
RaeAnne Thayne/Harlequin		

### Methodology

NPD 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 (now inclusive of Walmart) and web retailers, and food stores. E-book data providers include all major e-book retailers. Free e-books and those sold for less than 99 cents are excluded. The fiction and nonfiction lists in all formats include adult, young adult, and juvenile titles; the business list includes only adult titles. The combined lists track sales by title across all print and e-book formats; audio books are excluded. Refer questions to Peter.Saenger@wsj.com.

### Hardcover Business

TITLE AUTHOR/PUBLISHER	THIS WEEK	LAST WEEK



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## PLAY

## NEWS QUIZ DANIEL AKST

From this week's  
Wall Street Journal

**1. Alexandria Ocasio-Cortez ousted a powerful incumbent twice her age in a New York City Democratic congressional primary. Who is he?**



- A. Joe Crowley  
 B. Daniel Dromm  
 C. Gary Ackerman  
 D. Corey Johnson

**2. Justice Anthony M. Kennedy, who announced his retirement, was often called the Supreme Court's swing vote. What did he say in response?**

- A. "I'm no swinger."  
 B. "I only swing for the fences."  
 C. "The cases swing. I don't."  
 D. "Justice isn't only to be found on one side."

**3. General Electric, its stock sharply down from its highs, will sell some more major parts of itself. Which two big ones will GE keep and focus on?**

- A. Locomotives and oil drilling equipment  
 B. Power turbines and jet engines  
 C. Farm machinery and tool-making  
 D. Manicure kits and bubble gum

**4. India's currency hit an all-time low against the dollar. What's driven the rupee's dive?**

- A. Early monsoons that swamped Indian export crops  
 B. Labor unrest at domestic steel plants

**Answers** are listed below the crossword solutions at right.

- C. Fears that rising oil prices will swell India's trade and budget deficits  
 D. The appointment of a dovish new central bank chief

**5. In a case of terrible timing, Britain faces a shortage of some beer brands during the World Cup. What is to blame?**

- A. Barley blight in northern Scotland  
 B. Malt mildew in Wales  
 C. Hop rust in Germany  
 D. A shortage of carbon dioxide

**6. In ruling that public employees can't be compelled to pay union dues, the Supreme Court overturned a precedent. Which one?**

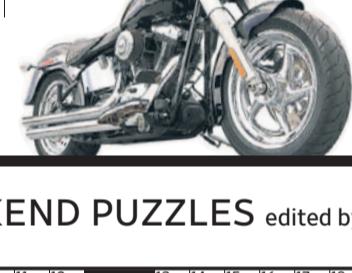
- A. Abood v. Detroit Board of Education  
 B. Davis v. Sacramento Municipal Utility District  
 C. Garcia v. Trinity Metro  
 D. Coyote v. Acme

**7. What new right did women just gain in Saudi Arabia?**

- A. The right to drink coffee  
 B. The right to take a job without a husband's permission  
 C. The right to fly in a plane  
 D. The right to drive a car

**8. Harley-Davidson will shift more production overseas to avoid tariffs—levied by what country or organization?**

- A. The European Union  
 B. China  
 C. Mexico  
 D. Luxembourg



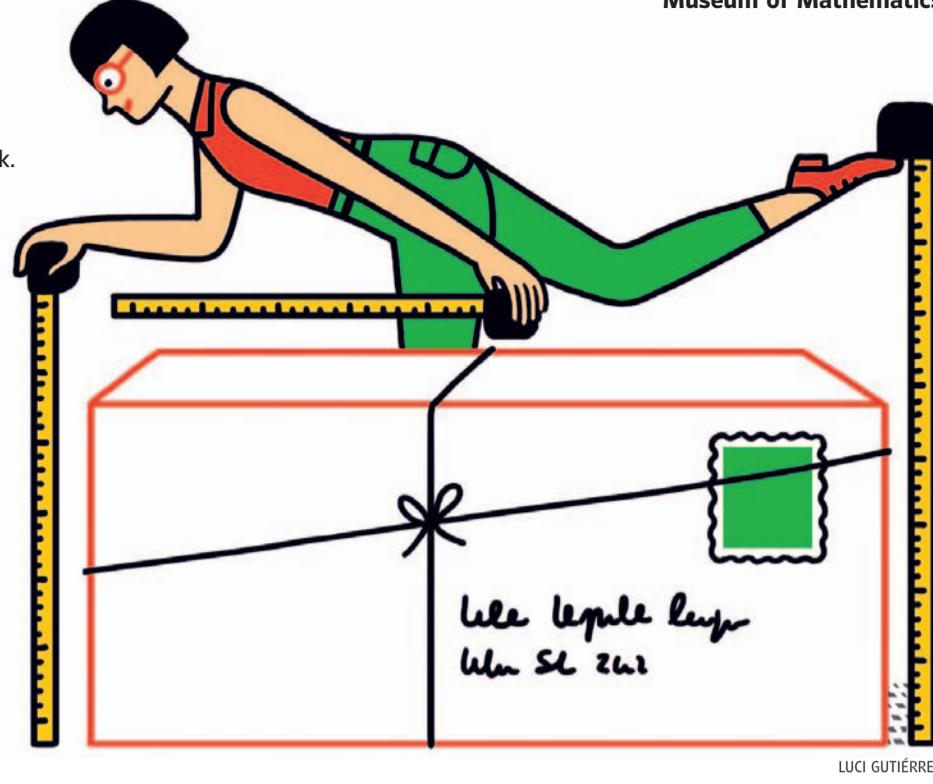
## VARSITY MATH

**A bit of geometry** is what's challenging the team this week.

## Mailing Problem

Back from a foreign trip, the coach reports an interesting pricing policy at a certain country's post office. A package is charged according to the total of length + width + height of the package, where the three dimensions are

whole numbers. The coach had considered a box with integers for each of the dimensions, but found that by changing each dimension by no more than one unit, the sum could be reduced



LUCI GUTIÉRREZ

while retaining the same volume.

If the volume of the coach's package was between 300 and 400, what were the dimensions of the package?

Learn more about the National Museum of Mathematics (MoMath) at [momath.org](http://momath.org)

## Pool Party

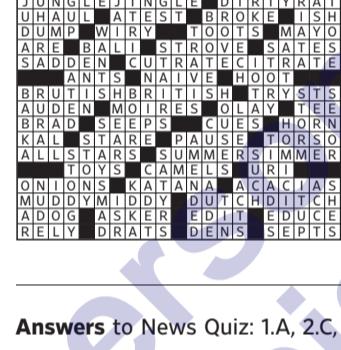
The coach has invited the team to a pool party at his house. The pool is circular and the largest possible for the coach's yard. It just touches the corner of a 2 foot by 9 foot walkway nestled in the lower left corner of the yard as shown.

How big is the coach's yard?

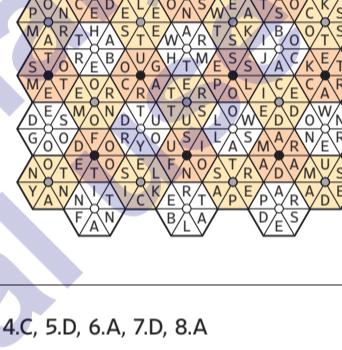


## SOLUTIONS TO LAST WEEK'S PUZZLES

## You and I



## Rows Garden



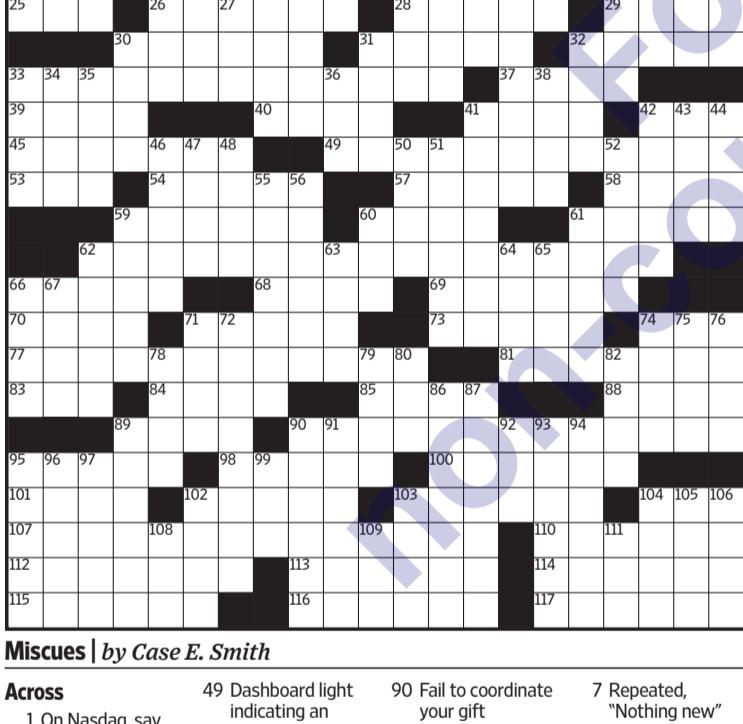
## Varsity Math

In Find m and n, m = ± 59 and n = 6. In Escape Room, there are seven people in the larger group and the ratio of the two possible total charges is two.

For previous weeks' puzzles, and to discuss strategies with other solvers, go to [WSJ.com/puzzle](http://WSJ.com/puzzle).

**Answers** to News Quiz: 1.A, 2.C, 3.B, 4.C, 5.D, 6.A, 7.D, 8.A

## THE JOURNAL WEEKEND PUZZLES edited by MIKE SHENK



## Miscues | by Case E. Smith

- Across**
- On Nasdaq, say
  - Pennywise's place, in "It"
  - Billy goat features
  - Playing around
  - Protective pendant
  - Harbor mover
  - Frappuccino size
  - Red herring's job?
  - Ready to proceed
  - Hooting hatchlings
  - Their backs feature the Lincoln Memorial
  - White Sox catcher Narvaez
  - Fine knit
  - Patches up
  - Sink
  - Manage a chain of saloons into bankruptcy?
  - Its capital is N'Djamena
  - Dust bowl farmer
  - Big Pharma product
  - Feature of Palau's flag
  - At the most
  - George Eliot, George Sand or George Orwell
- Down**
- Dashboard light indicating an engine failure?
  - Slump
  - "Indeed!"
  - Buff
  - Inside track
  - Nice round figure
  - Amphion's instrument
  - Radio Flyer product
  - Head of the practical joke company?
  - Hit the road
  - Fix features, say
  - Comedy of manners hallmark
  - Lamborghini's parent
  - Like some seats
  - Commerce
  - Connexion
  - Screw up the pillow factory inventory?
  - Official criers
  - Protector of the trees, in Tolkien
  - Bali products
  - Seller of Purrfect Delicacies products
  - Lecture
  - Crowdsourced review site

44 Magneto's foes

46 Biscotti flavoring

47 Netscape co-founder Andreessen

48 Impress deeply

50 "Come Sail Away" band

51 Ranger's place

52 Hit the road

55 Patronizing people

56 Didn't ignore

59 Honda model since 1972

60 Rent out

61 Electrician, at times

62 Heart

63 Alternative to Rex or Rover

64 Bonneville Salt Flats location

65 Daily rise and fall

66 Knight's equivalent

67 Bankrupt

71 Dumbbell exercise

72 Brazilian city that sounds like a state capital

74 Linseed oil source

75 Practicing sloth

76 Reproachful sounds

78 Don't ignore

79 Sensible

80 "Platoon" setting

82 Resting on

86 Denizen of Florida's Crystal River

87 High bunch

89 Bawl out

90 Make a hash of

91 Fighting words

92 X, at times

93 Kermit's creator

94 Casually indifferent

95 Alpha males

96 Sheepish

97 Output of atomizers

99 Headed up

102 Goofy Gomer

103 Penultimate letters

104 Like some dorms

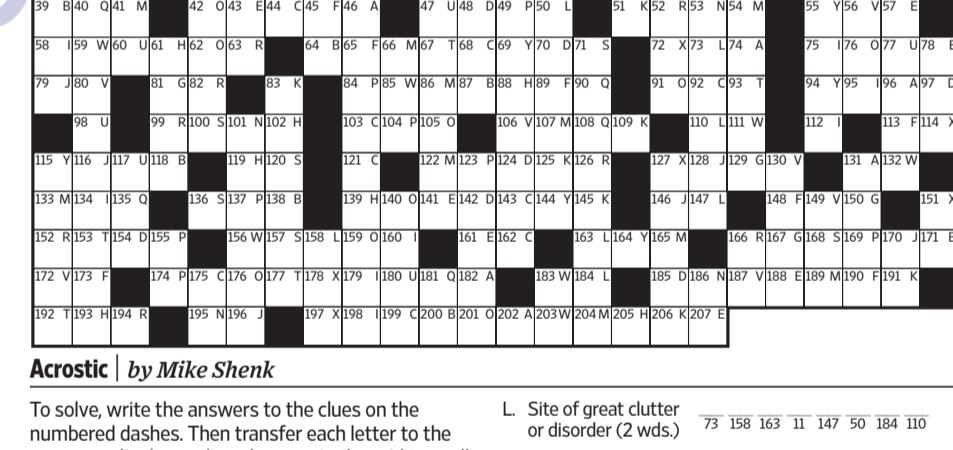
105 Check out

106 Fuse

108 Suffer

109 California's Santa \_\_\_ winds

111 Be behind



## Acrostic | by Mike Shenk

To solve, write the answers to the clues on the numbered dashes. Then transfer each letter to the correspondingly numbered square in the grid to spell a quotation reading from left to right. Black squares separate words in the quotation. Work back and forth between the word list and the grid to complete the puzzle. When you're finished, the initial letters of the answers in the word list will spell the author's name and the source of the quotation.

A. Brand named for the daughter of a Chicago bakery chain owner (2 wds.)

182 96 46 131 17 202 74

B. World's most widely used psychoactive drug (2 wds.)

39 87 200 64 118 171 138 15

C. Setting of the Resolute desk, made from the timbers of a Royal Navy ship (2 wds.)

175 44 121 92 143 162 19 68

D. Miserly sort

142 124 70 29 97 154 48 185

E. Science museum fixture that generates high-voltage sparking displays (2 wds.)

188 43 141 57 16 31 161 78 207

F. Coin whose reverse bears lions passant from the Royal Shield (2 wds.)

148 65 190 113 3 173 89 45

G. He fought for Paris

5 150 129 81 23 167

H. Capital that holds the queen's Holyrood Palace

37 61 119 193 139 205 88 102 2

I. Exchange of signals between two modems to ensure synchronization

95 179 198 75 160 134 112 58 9

J. Prehistoric ancestor of the horse

79 146 32 10 116 170 128 196

K. Glaswegian singer-songwriter best known for 1976's "Year of the Cat" (2 wds.)

83 125 145 191 109 36 206 51 20

L. Site of great clutter or disorder (2 wds.)

73 158 163 11 147 50 184 110

M. Superhero team whose members include Aquaman, Kid Flash and Robin (2 wds.)

133 165 66 86 54 107 204 189

N. Neighbor of New York, Michigan and Minnesota

53 101 4 195 22 186 35

O. Street fair treat derived from the Pennsylvania Dutch "Drechderkuche" (2 wds.)

201 176 42 105 76 62 24 91

P. Comics character whose maiden name was Pansy Hunks (2 wds.)

169 104 84 174 21 155 7 49

Q. 1820 novel whose hero is Sir Wilfred, a Saxon knight

13 108 40 181 90 26 135

R. Arcade game beast who hurls barrels at Mario (2 wds.)

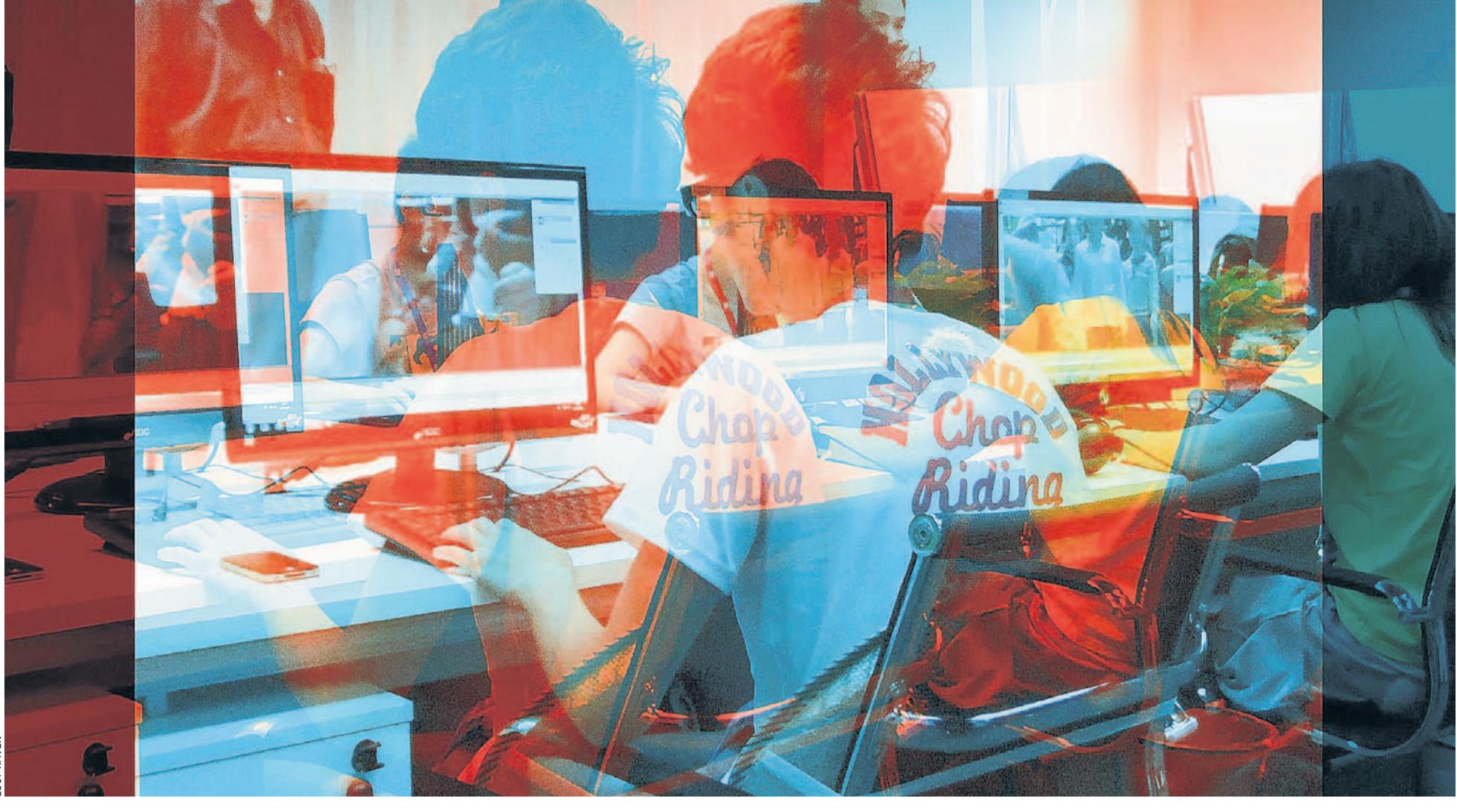
194 82 27 14 126 63 99 52

S. Bonny misses

34 168 120 71 100 157 136

T. Doing really well (3 wds.)

## REVIEW



LUCY RAVEN

BY SUSAN DELSON

**T**RACING 175 YEARS of visual experimentation, "3D: Double Vision" is an ocular workout. Opening July 15 at the Los Angeles County Museum of Art, the exhibition will entice visitors into peering through 3-D glasses and other devices, inviting them to deliberately soften their gaze to view some works and, if they're up for it, crossing their eyes to see others.

"It does require active spectatorship," said exhibition curator Britt Salvesen, head of the museum's photography, prints and drawings departments. In most cases, "it's your brain that's making the 3-D image," she said, not the viewing device or the artwork.

The show uses a loosely chronological, five-part structure to explore the quest for the ultimate three-dimensional image—from its scientific beginnings in the late 1830s to the Victorian-era craze for stereoscopic viewers to 3-D movies, holographic imagery and beyond. As the show's 80 or so works, video slide shows and film clips demonstrate, rarely has an optical phenomenon threaded its way through so many aspects of modern culture, from mass-market fads to avant-garde art.

The opening gallery introduces basic 3-D concepts like binocular vision—the way our two eyes each see a slightly different image, which our brain fuses into one image with depth and volume. The real workout starts in the second gallery, which explores the 3-D craze in the 19th and early 20th centuries and has "lots of lenses" to gaze through, said Ms. Salvesen. There's also a generous sampling of the stereoscopic photos made to be viewed through them, and a look at early attempts at 3-D film.

# ICONS

## The Many Sides of 3-D

From 1830s science to 1950s monster movies, from avant-garde experimenters to recent hits: a survey in L.A.

Another wave of 3-D mania struck in the 1950s, with American movie studios putting audiences into polarized glasses, watching images from two synchronized projectors superimposed on the screen. A clutch of B-movies promised eye-popping effects. "A lion in your lap! A lover in your arms!" proclaimed the 3-D adventure flick "Bwana Devil" (1952). Even Alfred Hitchcock got involved, with Grace Kelly battling a killer in his 3-D "Dial M for Murder" (1954). A small cinema in this gallery will show clips including several 1950s classics. 3-D hit the living room, too. Devices like the View-Master—an update of the Victorian stereoscope—achieved fad status in those years, and the Stereo Realist camera put 3-D photography into the hands of eager amateurs.

As the 1950s ended, 3-D technology seemed irretrievably mired in cheap movie effects and View-Master slide wheels. But in the 1960s, artists began claiming 3-D as their creative turf.

The second half of the show largely focuses on their explorations, which continue today.

▲ **A MOMENT**  
from Lucy  
Raven's  
'Curtains,'  
a 2014  
3-D video  
installation.

Much of this art—large-scale installations, computer animations, wallpaper and more—is meant to be viewed by the eye alone, without lenses. In 1986, Canadian conceptual artist Michael Snow created "Redifice," a massive, free-standing wall studded with small niches. Some hold sculptural dioramas and others, 3-D holograms that mimic the dioramas.

Japanese artist Mariko Mori uses a lenticular overlay—the ridged plastic coating seen on novelty postcards, which creates the illusion of depth and/or motion when the image is tilted or the viewer moves—to add 3-D dazzle to "Birth of a Star," her 1995 self-portrait as a schoolgirl pop singer.

Not all of the show's artists aim for flawless illusions. In fact, some are more interested in disrupting or exposing 3-D's underlying pro-

cesses. In his film installation "Binocular Zoom" (1969-70), Dan Graham makes a point of positioning the two screens so that the brain cannot resolve their projections into a single three-dimensional image. "Curtains," a mesmerizing 2014 installation by Lucy Raven, uses the anaglyph (blue and red) components of 3-D film as the "stars" of a 50-minute video. "The blue and the red converge really slowly toward each other," said Ms. Salvesen. "There's only a moment when they resolve and you can see the image in 3-D. Then they diverge again."

In recent years, 3-D film—technologically advanced but still requiring glasses—has again found a profitable home in Hollywood, getting a high profile with movies like "Avatar" (2009) and "Gravity" (2013). Along with its 1950s selections, the exhibition's cinema will show clips from recent 3-D hits.

Virtual reality may well turn out to be the ultimate 3-D technology, but in its current form it's cumbersome and labor-intensive to present in an exhibition. Instead, local experts will discuss VR in panel discussions, and a demo may be scheduled.

The exhibition closes with "Stereoscope," a 1999 film by South African artist William Kentridge. A hand-drawn animation, it uses stereography as a metaphor for a troubled character and his attempts to reconcile the two sides of his own nature—which, as Mr. Kentridge wrote in a 1999 book, seem identical but sometimes slip out of sync.

With her L.A. base, Ms. Salvesen said, "I had the luxury of calling on people who are experts" in everything from 3-D movie conversion to Stereo Realist cameras—not only people in the film industry and local universities but artists and collectors. Of the exhibition itself, she concluded, "I could have built it only here."

MASTERPIECE | 'TRIUMPH OF DEATH' (MID-1440s)

## Intimations of Medieval Mortality

BY LEE LAWRENCE

**SOMETIME IN THE MID-1440S**, an as yet unidentified artist filled a wall at the entrance to Palermo's first municipal hospital with a 19½-by-21-foot painting designed to scare people to death—and into the arms of the Church. Today, housed in the city's Sicilian Regional Art Gallery, this interpretation of the "Triumph of Death" roots you to the spot with its masterly composition and complex, hard-hitting message.

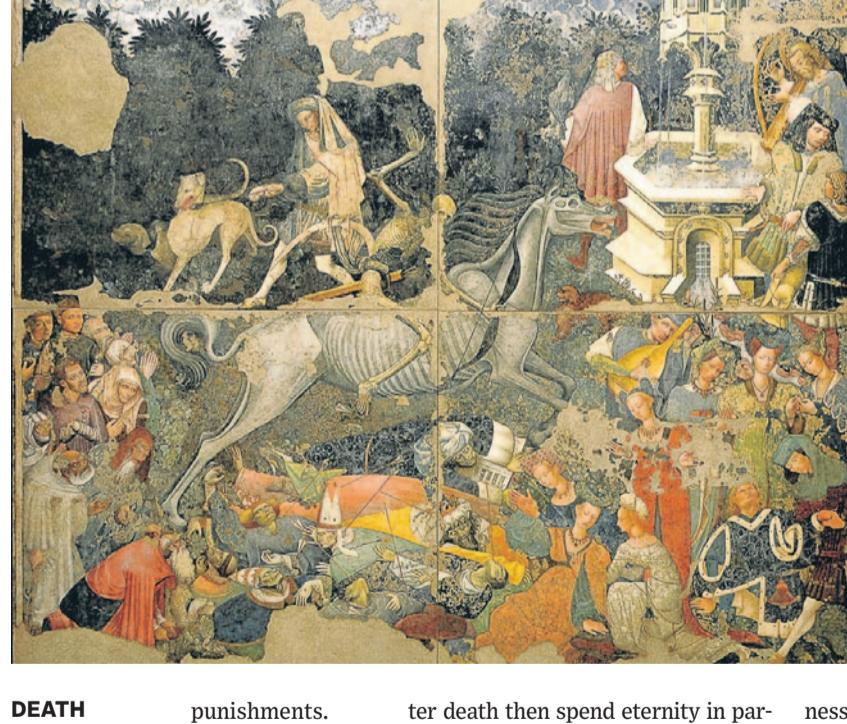
Filling the center of an almost perfect square, a large horse lunges left to right, its bony haunches, washboard ribs and skull-like head reminiscent of the horse in Pablo Picasso's "Guernica," which some art historians speculate this depiction inspired. But this horse is devoid of emotion: Its eye sockets empty, its body cadaverous and colorless, it charges, implacable, into the mortal world. Sitting astride is an ash-colored skeleton, a thick loop of fabric lashing a scythe to its waist.

The paint has in places chipped or faded—not least because medieval pharmacists cooked concoctions in the hospital courtyard and caretakers later scrubbed off smoke stains with Calabrian wine. So despite successive restorations, it takes a beat to realize that the curve of the scythe's blade and the bend of a skeletal leg form

an M, perhaps for *morte*, death; that the skeleton's raised right hand has just loosed an arrow from the bow resting against the horse's flank; and that polychrome vignettes encircle horse and rider.

The thrust of the horse's head directs the eye to a fountain in the upper right corner, where beautifully dressed young men are enjoying music and banter. From there, deft compositional devices—a downward gaze, the stretch of an arm, a swath of bright color—propel us ever clockwise. From maids attending bejeweled and well-coiffed women the eye moves down to a man and woman flinching from arrows lodged in their still-pink necks, then further down to the arrow-riddled corpses of noblemen and clergy, including two with triple crowns (which some scholars suggest might refer to Pope Eugene IV and the antipope Felix V). The message seems clear: Status and wealth cannot shield us from death.

Even as that thought forms, an old man's white beard and red cloak pull our attention to the left corner where others, bowed with age, stricken by illness, and mired in poverty, look longingly toward the horse and rider, some clasping their hands in supplication. Yet death ignores them, a trope typical of "Triumph" iconography. That's because, here, death metes out tailor-made



**DEATH METES OUT**  
tailor-made  
penalties in a  
work intended  
to scare  
viewers into  
piousness.

wave of macabre imagery, which began in the late 1200s with depictions of corpses followed by portrayals of death. In her 2016 book "Senza Misericordia" ("Without Mercy"), medievalist Chiara Frugoni links the rise of such imagery to the widespread belief in purgatory. People had begun to assume that, unless they murdered someone, they could atone af-

punishments.

Like other "Triumphs," Palermo's was originally accompanied by a hellish "Last Judgment" (destroyed in 1713) and belonged to a Church-sponsored

ter death then spend eternity in paradise. "At this point," Ms. Frugoni explains in an email exchange, "the Church finds itself without any instrument to instill fear." Hence the terrifying imagery in public spaces like Palermo's hospital, which was run by monks.

The Church's aim, she adds in the email, was "to disparage the body to make people think about the soul." Thus the skeletal rider deals untimely deaths to the rich and powerful—but why then skip over the poor and infirm? The answer lies in a "Triumph" made in Pisa a century earlier where an inscription voices the poor's plea: "Since prosperity has completely deserted us, O Death, you who are the medicine for all pain,

come to give us our last supper." They don't want to die "to go to heaven," says Ms. Frugoni, "but because they don't have the good health, wealth, and happiness of the rich."

In the Palermo painting, then, the poor and infirm mirror the wealthy youths by the fountain—both groups focused on their bodies' well-being, both in need of a spiritual wake-up call. Among the miserable, however, two men stare out at us, a paintbrush and pouch marking them as the artist and his assistant. Scholars generally presume the assistant to be local, but theories about the artist range from a foreign master—the treatment of the horizon recalls Flemish painting; the expressiveness of some figures points to Spain and Catalonia—to a local painter like Gaspare da Pesaro. As for their placement, perhaps we can read a barb about artists' diminished status.

Finally, at the top, a well-dressed youth is pulled by two dogs straining at the leash. His significance is far from clear, but he subtly closes the circle of vignettes so that the overall composition recalls that of a clock, an increasingly popular feature of town squares in the era. But, instead of ever-moving hands, death on his steed stops time, his centrality and scale declaring victory. Nothing, including our attention, escapes him.

Ms. Lawrence writes about art for the Journal.

ALAMY STOCK PHOTO



**Stop Shopping**  
The benefits of a  
six-month break  
from buying clothes

D3

# OFF DUTY

THE WALL STREET JOURNAL.

\*\*\*\*

SATURDAY/SUNDAY, JUNE 30 - JULY 1, 2018 | D1

FASHION | FOOD | DESIGN | TRAVEL | GEAR

**Start Cooking**  
This coconut-spice  
halibut is nobler  
than takeout

D10



JAMES GILLEARD

BY DAN NEIL

**W**HEN I WAS a kid my father would take me offshore fishing in his small outboard boat and I would get seasick. This was a cruel fate, because I loved boats, the sea and being with my dad. But our quality time was always cut short. Somewhere between the dock and the first ocean rollers I'd go pale, fall to my knees like James Brown, and hang my head over the side. Uhh...

It never got better, not with Dramamine or scopolamine patches or wristbands. I would just wind up in the bottom of the boat with purple hands. My friends teased me, called me "Chum." I'm sure my daylong, edge-of-death fugues were no fun for dad either.

But where medicine has failed to help sea-

## Wave of The Future

With a range of new tech—from mighty motors to stomach-easing gyros and virtual anchors—boat builders are leaving the auto industry in their wake

sickness sufferers—about a third of the general population—technology has at last succeeded, sort of. This year a company called Seakeeper, based in California, Md., began offering an aerospace-inspired gyroscopic stabilization system for boats of trailerable size—that is, 27 to 32 feet long, the heart of the recreational powerboat market.

The Seakeeper is part of a digital transformation in boating that addresses apprehensions of new boaters with a variety of boathandling aids and assists. And it's not just newbies. I grew up on boats without GPS positioning, without point-to-point autopilot, virtual anchors and auto-docking. You know what? We hit the dock a lot.

But the technology my younger self covets most is the Seakeeper. The company claims the device eliminates "up to 95 percent of all

Please turn to page D6

## Inside



### REMAKING HISTORY

Modern design invades a 19th-century living room and brokers a tricky peace

### SOLO: A CAMPING STORY

Tenting it alone is meditative, character-building...and risky. Pack the right gear

### IT'S NOT POCKET SCIENCE

But vests like these are set for take off. A preview of Spring 2019 men's trends

### SUDDENLY, THIS SUMMER

Too late to book a last-minute getaway? Nah. Here, five tempting destinations

D5

## STYLE &amp; FASHION

THE ONE SHEET / MEN'S SPRING 2019 TREND REPORT

## THE SPRING CYCLE

Who says guys' clothing is dull? Looking ahead to 2019, the recent runway shows in London, Florence, Milan and Paris outlined trends that ran the gamut from trite to trippy to terrific. Men's fashion editor Jacob Gallagher offers a preview

**THIS SEASON,** Louis Vuitton showed a sweater that depicted Dorothy, the Scarecrow, the Lion and the Tin Man cavorting down the Yellow Brick Road. That clichéd image felt resonant as the cycle of Spring 2019 menswear shows across multiple cities came to a close last week. Oz-like menswear today—is weird, wonderful and sometimes bears little resemblance to actual life. This latest trip down the Ozian road included visits with denim-wearing he-men at Rick Owens, vested G.I. Joes at Junya Watanabe and "Warriors"-inspired gangs at Undercover. Keeping in mind that the theatricality will be subdued as the clothes

are distilled for retail, these characters offered new ideas for what men will be wearing a year from now.

The new felt especially new thanks to notable debuts at two of the most illustrious Parisian houses: Kim Jones as artistic director at Dior and Virgil Abloh as artistic director at Louis Vuitton. With plenty of inspired suiting, both designers helped to define a season of poised elegance. Playfulness abounded, too, as seen in Dries Van Noten's wave-patterned coats and Craig Green's psychedelic tops. Because even the guy who believes there's no place like home shouldn't spend his entire life in drably familiar clothes.



## Oh, Relax

Loose constructions and light colors; softness defines the modern suit's power. Worn over lithe T-shirts and open shirts, it's a suit with the soul of a sweatshirt. Clockwise from top left: **Giorgio Armani**, **Kenzo**, **Dries Van Noten**, **Ermengildo Zegna**, **Officine Générale**.



## Houston, We Have A Poncho

One year shy of the 50th anniversary of Neil Armstrong's moon walk, designers tapped NASA for inspiration. From left: Crinkly metallic trousers that make the case that at least the bottom half of an astronaut's suit can be stylish, at **Balmain**; shimmering space-station shields reimagined as a glittering parka at **Ralph Lauren** and a full-length poncho at **Louis Vuitton**.



## Heavy Petals

To witteringly quote "The Devil Wears Prada": "Florals? For spring? Groundbreaking." On men, however, they actually are, especially when the flora is this mega-sized. From left: **Valentino**'s gothic, dark blooms; a homage to sunflowers at **Jacquemus**; tossed bouquets at Kim Jones's **Dior Men** debut; **Neil Barrett**'s oversize posies, which could almost be mistaken for camo.



## Dialed-Up Denim

The humble jean jacket got a supercharged jolt this season as designers got crafty with this Americana icon. From left: A tapered fit borrowed from a bomber at **E. Tautz**; a white trucker fused with windbreaker sleeves at **Martine Rose**; a firetruck-red number at **Off-White**; and a tapestry motif straight from Marrakesh at **Saint Laurent**.

## Non-Lean Pockets

Overachieving designers have responded to men's love of utility with coats and vests that pack a Container Store-level of storage. From left: pockets stacked on top of pockets at **Junya Watanabe**; **Louis Vuitton**'s luggage legacy repackaged as a vest, care of Virgil Abloh; a coat featuring two pockets that could fit a pre-work thermos and a post-work beer at **OAMC**.



## THINGS WE (MOSTLY) LOVED



## HAZY THINKING

Models at Rick Owens's Burning Man-inspired show walked through extravagantly colored smoke.

## LEG MAN

Miuccia Prada showed shorts so revealing that they're practically boxer briefs.

## KAWS FOR APPLAUSE

At Dior Men, guests were greeted by a mammoth topiary of the artist's famed "BFF" character.

## SWOOSH KINGS

Nike dominated with collaborative sneakers at **Craig Green**, **Alyx**, **Sacai** and **Off-White**.

## WUNDERKID

At the **CDG Shirt Boys** show, Stevie Wonder's son Kailand Morris was the new celeb spawn turned model.

## SPLASHY ENTRANCE

A rainbow runway, a diverse cast of models and great clothes: Virgil Abloh's debut at **Vuitton** promised much.

## STYLE &amp; FASHION

# Close Up Shop

One fashion writer took a six-month break from buying clothes—and emerged with some universal insights and a highly edited shopping list

By HAYLEY PHELAN

**T**HE SEED WAS planted close to midnight one uneventful December evening last year, as the Matches-Fashion shopping-cart clock on my laptop's browser ticked down. I was midway through buying a pair of pants, anxious to make sure I'd chosen the right size. While I frantically rifled through my crowded closet to retrieve some beloved velvet trousers from the same brand, five pairs of pants toppled to the floor, effectively carpeting my closet. I looked

**My forays into the retail abyss seemed to happen without my noticing.**

down at the sartorial detritus strewn at my feet and suddenly thought: "What is all this stuff and why on earth am I trying to acquire more of it?"

To untangle the roots of my behavior, I took a cue from the wellness industry and decided to embark on a shopping detox, shunning both e-shopping sites and brick-and-mortar stores to "reset" my habits. For six months, starting January 1, I vowed not to

buy anything fashion-related—no small challenge, considering I've spent most of my career writing about the topic. Some of what I learned was expected: No, I did not need any more pants. Yes, I was buying too much generally. Absolutely, those cookie-generated ads that follow you around the internet like willful sirens are evil, especially when you've sworn to resist them.

But the biggest takeaway was a surprise. Though I'd often agonized over the monetary price of fashion, engaging in complicated cost-per-wear equations to justify my choices, it turns out I was worried about the wrong resource. During my self-imposed hiatus, I realized I was wasting something else: serious amounts of time.

Today, between fast-fashion behemoths, direct-to-consumer startups and online marketplaces like the RealReal and eBay, you can usually find exactly what you want at a price within your budget if you know where to look. The problem: We have too many places to look.

And look (and look, and look) I did. For instance, to ferret out the "best" wrap-effect blouse for the lowest price, I'd launch an all-out investigation, conducting meticulous research, cross-referencing reviews, comparing shipping and return policies, and analyzing the merits and pitfalls of

wrapping cloth around myself.

When I eventually did make a purchase, I may have saved a buck or two—or at least achieved a degree of confidence that I was getting my money's worth—but I'd lost several hours of my life in the process. This, according to behavioral economists, is a poor trade: Since time is a finite commodity, it's more valuable than money.

My forays into the abyss of retail seemed to happen without my

noticing, like the onset of a yawn. Before my break, I would often pop into a store "just to see" what was on display (typically launching a digital recon mission when I got home) or, while studiously ignoring writing deadlines, I'd find myself on page 22 of the Net-a-Porter sale. Once, convinced that a new swimsuit might slightly improve a coming vacation, I spent the better part of the afternoon before my flight madly searching for one. I came home empty-handed—with barely enough time left to pack.

Consumer psychologist Kit Yarrow argues that shopping may serve the same function that visualization tactics do for athletes; it helps us prepare for the future, quelling anxiety in the present. But while trips to the mall with friends may qualify as a leisure activity, my solo research missions didn't feel like much fun. With so many options out there, choosing one felt stressful. Suffering from the retail equivalent of FOMO (fear of missing out), I worried I was losing out on a better deal, sure to be one tab away if only I kept clicking. I would often quit, frustrated, with a shopping cart full of things I wouldn't actually wind up buying. But when my detox precluded making any purchases, the appeal of that kind of browsing shriveled. Suddenly, I felt like I had a lot more hours in the day.

I also realized that fashion provides a genuine outlet of self-expression for me (when pursued in moderation). Which brings me to a confession: I broke my fast twice, once on a pair of Apiece

Apart high-waisted canvas pants, and again on a cropped, boxy jacket from Uniqlo U. Both times I felt a palpable zing of creative excitement which lasted for days. At the time, I couldn't have told you why, exactly, those two items defeated my self-control—or why they brought me so much joy. In retrospect I realize that my desire for each was grounded in the realities of my life—not a fantasy of that life. They were exciting, but also practical. The fast helped reinforce that I actually feel good about buying a certain type of clothes—and, unsurprisingly, it's the sort I wear all the time: the linen shirts, the ideal gold-pendant necklace, walkable flats. Not the occasion dresses or fancy new swimwear.

Now that I have lifted my self-imposed ban, I've sworn off shopping for good. Just kidding! It's too important a mode of self-expression for me, and quite simply, too much fun, to ever really give up.

However, I approach it differently. Instead of focusing solely on prices, I'm also paying attention to the temporal cost. I set aside finite amounts of time to shop (no more browsing while I binge-watch "Seinfeld") and, whenever possible, head to a store's physical location. To avoid feeling overwhelmed with choice, I only stop in at a limited number of stores, those I know sell pieces that will click with my needs. Does this mean I may miss out on the next best thing? Possibly. But, in today's hyper-fast-paced world, what I'm getting—time—may be the ultimate luxury.

**PARED-DOWN PRIORITIES / FOUR ITEMS OUR WRITER COULD JUSTIFY POST-FAST**

Wearable, considered pieces like these meet her criteria: Pants, \$295, [apieceapart.com](http://apieceapart.com); Jacket, \$40, [oldnavy.gap.com](http://oldnavy.gap.com); Foundrae Necklace, \$5,510 as pictured, [ylang23.com](http://ylang23.com); Slides, \$595, [gabrielahearth.com](http://gabrielahearth.com)





# Chloé



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ROY  
in caramel 'spazzolato sfumato' lambskin  
[CHLOE.COM](http://CHLOE.COM)

## ADVENTURE &amp; TRAVEL



AKOS STILLER FOR THE WALL STREET JOURNAL; JAMES GULLIVER HANCOCK (MAP)

A DAY BY THE DANUBE Clockwise from left: the Hungarian Parliament Building as seen from Fisherman's Bastion; a kremes pastry at Ruszwurm Confectionery; on duty at the Children's Railway.

## Hopscotching Around Budapest

How do you make easy work of sightseeing in Hungary's meandering metropolis? Follow our district-by-district guide to find the coolest quarters, Communist-era curiosities and a matzo ball soup that's alone worth the trip

By J.S. MARCUS

**N**UMBERS COUNT in Budapest, Hungary's sprawling capital, whose residents invoke the digits identifying the city's 23 districts whenever possible to narrow down what's where and what's worth doing. Historically and sentimentally, Budapest is actually three separate cities. Buda, on the Danube's west bank, is the hilly, historic home to Hungary's major monuments and exclusive, villa-laden neighborhoods. Pest, on the east bank—flat, modern and bursting with boulevards—is where most people work and everyone shops. Smaller, out-of-the-way Obuda, above Buda, is blessed with Roman ruins, a contemporary music festival or two and little else. The three burgs officially merged in the 1870s, and Budapesters, who live in a municipality not much smaller than Paris, like to refer to their districts as Budapest IV or Budapest XIII, the city-name proper followed by a Roman numeral like a stately surname. Reminiscent of Parisian arrondissements, these Magyar mashups are the natives' code, but easy to pick up, and will help you make the most of a Hungarian holiday.

**BUDAPEST V**  
**Tourist turf**

The heart of Budapest is really the heart of Pest: small, dense District V, where many tourists tend to stay and then stay put. Attractions here are obvious—from Váci utca, the main shopping drag, to Hungary's riveting, riverside, neo-Gothic Parliament. You'd be a fool to bypass V, but foolish not to break out to see what else is on offer.

**Where to stay** Four Seasons Hotel Gresham Palace, an urgently art nouveau colossus, where you should hang out even if you're not going to

camp out. *From about \$540 a night, fourseasons.com/budapest*

**Where to eat** Borkonyha Wine Kitchen, in the shadow of V's neoclassical St. Stephen's Basilica, cross-pollinates French savoir-faire with Hungarian chutzpah, and has a Michelin star to boot. *Sás utca 3, borkonyha.hu*. Across the street, Aszú, is named after the dried grapes used to make Tokaji, Hungary's storied sweet wine *Sás utca 4, azsurestaurant.com*.

**Where to go local** Walk along the Dunakorzó, the riverside promenade, for trans-Danube grandeur and drop-

dead gorgeous views of city landmarks, like District I's Buda Castle and V's own Széchenyi Chain Bridge, a mid-19th-century wonder.

**BUDAPEST I**  
**Selfie stick required**

Budapest was Belle-Époque Europe's boomtown par excellence, and it can feel more like Chicago than its central European rivals, Vienna and Prague. But it does have a few visible, meaningful medieval roots on a Buda hilltop, now known as Castle Hill, the main reason to visit District I.

**Where to stay** A room at the Hilton Budapest means you can forego the uphill climb to Castle Hill attractions. *From about \$280 a night, hilton.com*

**Where to eat** Quaint Castle Hill has a 200-year-old cafe called Ruszwurm Confectionery, which holds on to its Biedermeier charms. *Szentháromság utca 7, ruszwurm.hu*

**Where to go local** Castle Hill's pavilion-like Fisherman's Bastion is a little more than a century old, but it's meant to recall Hungary's founding myth—the arrival of Magyar tribes on the Hungarian Plain, way back in the ninth century. A stage-set agglomeration of neo-Gothic and neo-Romanesque architecture, it grants the best view in town. If you only indulge in one round of selfies, this is the place to do it, but be prepared for tourist hordes with the same thing on their minds.

**BUDAPEST VII**  
**Having it all**

District VII would have been a grand place to be in 1910, when the city's grand bourgeoisie rubbed elbows with louche literati. It was close to hell on earth during World War II, when the occupying Ger-

mans and their Hungarian collaborators turned it into a ghetto for the city's once thriving Jewish residents. These days, VII has morphed into Brooklyn-on-the-Danube, as hipsters hold firm while upmarket rivals nip at their heels.

**Where to stay** The New York Palace Budapest is housed in a late-19th century palatial office building that once served as the Hungarian flagship of a New York insurance company. Bonus: Staying here means you can be a regular at the adjoining New York Café, the city's most ornate coffeehouse. *From about \$200 a night, budapest.boscolohotels.com*

**Where to eat** Upscale Fricska Gastropub knows just what to do with goose liver, a Hungarian specialty. *Dob utca 56-58, fricska.eu*. Down-home Bors GasztroBár serves up weird, wonderful riffs on Hungarian fruit soup that may very well involve candy bars. *Kazinczy utca 10, facebook.com/BorsGasztroBar*

**Where to go local** Központ has breakfast in the morning, coffee in the afternoon and a DJ late at night. *Madách Imre út 5, facebook.com/kozpondbudapest*

**BUDAPEST VIII**  
**Gritty Gone Trendy**

Once the wrong side of the tracks, VIII is in full-blown makeover mode, home to young creatives and energetic expats.

**Where to eat** Matzo ball soup is now a Budapest mainstay, thanks to the city's Jewish traditions and a revitalized Jewish community. No one does the dish justice quite like Rosenstein, a restaurant tucked away near Budapest's main train station. *Mosonyi utca 3, facebook.com/rosensteinpest*

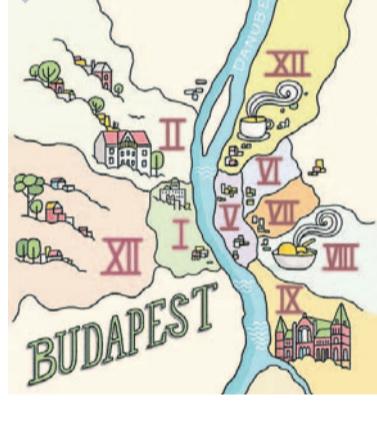
**Where to go local** Up until a few years ago, VIII's Rákóczi Square was a low-rise answer to New York's Times Square, circa 1978. Now it's like Berlin, circa 2008. Find out what the fuss is about at Csiga Café. *Vásár utca 2, facebook.com/cafecsiga*

**BUDAPEST IX**  
**Come for the food, stay for the music**

Urban planners have their eye on IX, which starts out urbanely in the center of Pest and then fans out into postindustrial blight. Once home to the city's largest slaughterhouse, it's now where you'll find Budapest's premier cultural complex, the grandiose Great Market Hall and what many regard as the country's best restaurant.

**Where to eat** Costes has had its Michelin star since 2010, and its signature dish—pigeon breast, served rare, with mixed beets and a sauce including Ethiopian coffee—still wins kudos. The house pálinka, Hungary's fabulous fruit brandy, comes from Marton and Daughters, a small, celebrated distiller in a Danube-area village. *Ráday utca 4, costes.hu*

**Where to go local** The city's leading classical music ensemble, the Budapest Festival Orchestra, draws a world-wide following, but concerts tend to attract locals. The BFO's home court is the Bela Bartok Na-



tional Concert Hall, part of the Müpa Budapest complex. *bfz.hu*

**BUDAPEST XIII**  
**Cornering the market**

The southwest part of XIII feels like a low-key extension of V, but it remains hidden, for most tourists, on the wrong side of the city's grand, inner-ring road, known at this end as Szent István körút. This is the place to find some of the city's best coffee as well as its liveliest food hall.

**Where to eat** True-blue lovers of Viennese pastry know you have to go to Budapest to find the real thing. (Legend has it that strudel, among other treats, arrived in Austria via Hungary.) You can't do much better than the rather new, but tradition-minded confectionery Marodi. *Jászai Mari tér 3*

**Where to go local** Lehel Market Hall opened in 2002. Its baffling architecture—inspired, apparently, by early Soviet styles—is an eyesore, but this is where ordinary people do their daily shopping. Expect sauerkraut mountains, salami jungle gyms, and a lifetime's worth of peppers.

**BUDAPEST II and XII**  
**High profile**

The city's most exclusive districts, II and XII harbor secluded villas winding up into the Buda Hills. Locals come in hot weather for higher elevations, cooler temperatures, cleaner air, and a sideways glance at how the other half lives.

**Where to eat** At Sunday brunch at Émile, a District II restaurant housed in its own discreet villa, expect well-behaved Hungarian toddlers sporting bow ties. *Orló utca 1, emile.hu*

**Where to stay** The seven-bedroom Writer's Villa, way up in the hills, will feel out of the way unless finding refuge in a restored 19th-century mansion is just what you have in mind. *From about \$1,700 a night for the entire villa, brody.land/the-writers-villa*

**Where to go local** When it opened in 1947, the Gyermekvasút, or Children's Railway, was staffed by children, and war-weary town dwellers got a dose of cuteness to complement a day free from the destroyed city below. These days, children (ages 10 to 14) still staff the narrow-gauge train and you can still take it up near the top of the Buda Hills. Get off at the last stop, Hűvösvölgy, and climb up to a summit or descend down into a valley. *www.gyermekvasut.hu*



**PEST IN SHOW** From top: Handmade linens at the Great Market Hall in Pest's District IX; Four Seasons Hotel Gresham Palace in Pest's District V.



## ADVENTURE &amp; TRAVEL

# No-Sweat Summer Trips

Five American holiday havens that you don't need to book a year in advance

**BY THIS TIME OF YEAR**—when hotel and vacation rental reservations at summertime hot spots are all sewn up—the deals are gone and what's left is in ruins, ruinous, or both. Procrastinators start to panic. What? No exit strategy? Fear not, distracted multitaskers. Recall that summer is not only a season but a state of mind. For those in a last-minute search for American-style relaxation and fun in the sun, don't think trendy. Think old-fashioned classic summer. Jump in a lake. Watch a turtle hatch on the beach. Reel in a trout. Kayak around dolphins. Gorge on blueberries and lobster rolls. Here are some spots where a couple, a family or a group of friends can still find good times for good value.

—Alison Humes

REDUX (MAINE, UTAH, SOUTH CAROLINA), KEUKA BREWING (NEW YORK)



Maine's Chebeague Island.

## CHILLING IN MAINE

Well-heeled city folk have spent the summer "rusticating" on Maine's Casco Bay since the mid-19th century and the local pastimes haven't changed all that much. Visitors come to bike, hike, sail, play tennis and golf, hang out on the beach and take dips in Maine's attitude-improving water. Chebeague (pronounced sha-beeg), at 2-by-5 miles, is one of the largest islands in the bay, home to about 350 people year round and a host of summer natives, families who've been marching out here for generations. Although some residents have jalopies (and sometimes one will come with a rental house), the way to get around is on a bike, a golf cart or your own two feet. No rental car agencies exist on the island.

**Getting There** Take a 15-minute ferry from Yarmouth, Maine operated by the Chebeague Transportation Company. [chebeaguetrans.com](http://chebeaguetrans.com). From Portland, it's a 70-minute ferry ride with Casco Bay Lines. [casacobaylines.com](http://casacobaylines.com)

**Staying There** The classically beautiful 1880s Chebeague Island Inn, overlooking the ocean from its wraparound porch, consists of 21 rooms and a good, inventive restaurant that deploys local ingredients (lobster, blueberries, cheddar cheese, among others) in a number of dishes. The hotel is wired for Wi-Fi, but little else: no TV, no phones, no a/c. From \$189 a night, [chebeagueislandinn.com](http://chebeagueislandinn.com). For vacation rental properties, check out the listings at [chebeague.org](http://chebeague.org).

The Waterline Marina Resort and Beach Club



## TURTLE SPEED IN NORTH CAROLINA

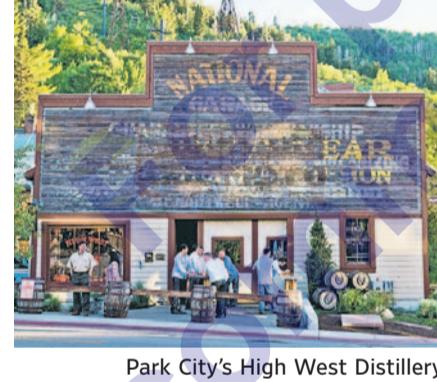
At the mouth of Cape Fear River, just south of Wilmington, N.C., sits Bald Head Island, a small resort community with a magnificent beach, a golf course and a strict weathered-shingle, earth-tones aesthetic. Incorporated only 33 years ago, it is uncrowded, noncommercial and reachable only by a small and rather cute ferry. Cars aren't allowed; islanders get around by golf cart or bicycle. The small market area accommodates a grocery and hardware, and little businesses that provide everything from boogie boards to fishing tackle, jewelry to facials. The only really happening thing on the island is its nature conservancy, notably the sea-turtle nesting and protection program. From late July through September, a big night out on Bald Head usually means heading over to the beach after dark with the BHI Conservancy to watch hatchlings wiggle out and make their way down to the ocean. [bhic.org](http://bhic.org)

**Getting There** A 20-minute ferry runs from Southport, N.C., to the island.

**Staying There** The Inn at Bald Head Island, a three-story B&B, offers 10 rooms for adult guests (no kids allowed). From \$225 a night, [theinnatbaldheadisland.com](http://theinnatbaldheadisland.com). Alternatively, privately owned houses are available for rent through the island's property management group. [baldheadisland.com](http://baldheadisland.com)



A Bald Head Island clambake.



Park City's High West Distillery.

## UTAH WHEN IT'S NOT SNOWING

In summer, Park City, Utah offers everything except snow, like ski season but turned inside out. All those slopes are sporting a new look, dramatic landscapes in mild-weather dressing suitable for other activities—say mountain biking, hiking or rock climbing (see [whitepinetouring.com](http://whitepinetouring.com) for guided excursions). Meanwhile snow melt courses through the valleys, priming the local waters for rafting and kayaking ([allseasonsadvventures.com](http://allseasonsadvventures.com)) as well as fly-fishing ([utahproflyfishing.com](http://utahproflyfishing.com)). Obsessive amateur photographers can get a few pointers on their own back-roads tour with a pro shutterbug. [davidcschultz.com](http://davidcschultz.com) Another off-season perk: the town's slate of talented chefs have the time to goof around with summer ingredients.

**Getting There** From Salt Lake International Airport, Park City is a 35-minute drive.

**Staying There** The Washington School House Hotel, built as a school in 1889, re-emerged a few years back as a stylish art-filled hotel with 12 rooms and a heated pool. From \$405 a night, [washingtonschoolhouse.com](http://washingtonschoolhouse.com). For something a little smaller, the six-suite Torchlight Inn is a B&B with a terrific breakfast. From \$198 a night, [torchlightinn.com](http://torchlightinn.com)

## COOL AS A KEUKA-COMBER IN NEW YORK

Keuka Lake, almost 20 miles long and shaped like a Y, is among the smallest of New York's Finger Lakes. At the top sits the town of Penn Yan, and at the bottom, Hammondsport. In between is clean fresh water, delicious for swimming and boating, and all around are wineries and breweries, great hiking and bike riding and tiny museums. Still verdant farm country, this part of New York is home to a growing community of Old Order Amish and Mennonites, who run produce stands and stores like the Quilt Shop and Oak Hill Bulk Foods, which easily has 15 kinds of



flour. Grapes have been planted in the area since the 1800s, and 18 wineries now cluster around the lake, many of which hold tastings. If you prefer suds, stop by Keuka Brewing Company (pictured left).

**Getting There** Penn Yan is a five-hour drive from New York City.

**Staying There** Steamboat Castle B&B, right on the lake in Penn Yan, loans guests kayaks and canoes. From \$200 a night, [steamboatcastle.com](http://steamboatcastle.com). In nearby Hammondsport, Black Sheep Inn and Spa occupies a historic octagon house. From \$169 a night, [stayblacksheepinn.com](http://stayblacksheepinn.com).

## OLD-SCHOOL FLORIDA

At the southern end of Tampa Bay, you'll find Anna Maria Island. This 7-mile, white-sand strip on Florida's Gulf Coast sustains three little cities and a trolley that runs up and down, from one end to the other, stopping to allow you endless perspectives on ocean or bay beaches along the way. Charming Anna Maria, at the northern tip, is the sleepiest. Not that any area is party-hearty: Even Bradenton Beach, the liveliest town, has a nighttime noise ordinance. The island's soaring popular-

ity has brought high-season traffic and crowds, but summer is generally cheaper, less crowded and thus arguably nicer.

It is also hot and wet, the kind of climate in which orchids and other hothouse flowers—and manatees—thrive. Temperatures will go up to 90 and cool off a bit after the rain that often falls in the late afternoon. Beyond playing in the ocean or in a pool, the summer crowd likes to fish, kayak, look for manatees and dolphins, and wander down boardwalks through restored nature preserves.

**Getting There** Anna Maria Island is about a 20 minutes' drive from Sarasota-Bradenton airport.

**Staying There** Pineapplefish is a small and particularly appealing collection of sustainably well-designed and appointed 3- and 4-bedroom vacation houses, each with a private pool. From \$1,950 a week, [pineapplefish.com](http://pineapplefish.com). The Waterline Marina Resort & Beach Club, the only full-service resort hotel on the island, just opened in November. From \$332 a night for a 2-bedroom suite, [waterlineresort.com](http://waterlineresort.com)

## STAND UP FOR US ALL

Clinical trials bring us closer to the day when all cancer patients can become survivors.

Clinical trials are an essential path to progress and the brightest torch researchers have to light their way to better treatments. That's because clinical trials allow researchers to test cutting-edge and potentially life-saving treatments while giving participants access to the best options available.

If you're interested in exploring new treatment options that may also light the path to better treatments for other patients, a clinical trial may be the right option for you.

**Speak with your doctor and visit StandUpToCancer.org/ClinicalTrials to learn more.**



Sonequa Martin-Green,  
SU2C Ambassador

Photo Credit: Matt Sayles  
Stand Up To Cancer is a division of the Entertainment Industry Foundation, a 501(c)(3) charitable organization.



## GEAR &amp; GADGETS

## Rock the Boat

*Continued from page D1*

boat roll, the rocking motion that causes seasickness, fatigue and anxiety."

My stomach had to see for itself.

I made arrangements to meet company rep Kelsey Albina at the city marina in Morehead City, N.C., the weekend before the Big Rock Blue Marlin Tournament (June 8-16). These are home waters for me so I had a baseline. I know where I usually throw up.

On the brilliant Sunday morning of our appointment, seas were 3 to 5 feet, winds southwest at 5 knots, and the marina was gunnel-to-gunnel with white-hulled 50-foot fish killers, staging for the tournament. These guys worry me. Power boating is booming in the U.S., with record sales in 2017 of more than 262,000 boats. But the post-2008 rebound exposed a dangerous skills deficit among the rising class of boat owners.

In 2017 the United States Coast Guard reported 4,291 recreational boating accidents (just 3.9% down from the 2016 record) and 658 fatalities. The top three types of accidents, in order: collision with another boat; collision with a fixed object; and flooding/swamping. The primary causes: "operation inattention," "improper lookout" and "operator inexperience." This is the least salty generation of boat-buyers yet.

As for me, I would have run Dad's boat up on the rocks and walked home to escape the horrors of my inner ear.

"We don't claim it is a cure for seasickness," cautioned Ms. Albina, when we met aboard the company's 29-foot cabin cruiser demonstrator. For one thing, the system only restricts movement in one of six degrees of freedom. It doesn't restrict the boat's pitch motions, for example, the tail up/nose down motions, nor should it; otherwise the boat wouldn't ride over ocean swells but try to punch through them.

As for the accelerative forces in the Z axis—rising and falling, the up and down, up!—the boat floats on the water. You really wouldn't want it any other way.

The demonstrator boat—a sleek Albemarle 29 Express cabin cruiser—conceals the Seakeeper 3 (for boats up to 10 tons displacement) under its rear deck. However, the company says the devices can be installed almost anywhere on the boat and work the same.

The device consists of an aluminum-cased sphere about the size of a Pilates ball, rotating back and forth on side bearings. Inside the sphere is a 288-pound steel flywheel spinning in a near vacuum at a "tip speed" of 836 mph, within nanometer-scale tolerances. As a boat rolls, the angular momentum of the flywheel creates a reaction force that transmits through the mounts to the hull of the boat.

As Ms. Albina explained, gyro stabilizers have been around since the early part of the 20th century in oceangoing vessels. The innovation is the packaging of the device in an average-size boat. The Seakeeper 2 is currently the smallest such unit in production; the design team's mission is "20 by 21"; that is, a device that can fit in a 20-foot boat by 2021.

## The anti-seasickness device is part of a technical transformation in recreational boating that addresses apprehensions of new boaters.

Stability doesn't come cheap. The Seakeeper 2 (\$22,700, not including installation) is the range-starter, fitting boats up to 7 tons displacement. The largest such system, the 35, for boats up to 100 tons displacement, costs \$216,300 out of the box. But as Ms. Albina noted, the bigger the boat the lower the incremental cost of the stabilization.

By the time I got aboard the demonstrator boat the device was humming quietly (&lt;68 dB) with 2,000 Newton-meters/sec of angular momentum. It takes 36 minutes and 85 amps (12V system) to spool the device up to operational speed of 7,185 rpm. When our captain, George Penna, fired up the big twin Yamaha outboards, the hum disappeared. He then cautiously joy-sticked us into the busy channel between Radio Island and Fort Macon.

There was a light chop in the channel through which the boat moved eerily unaffected, the bow rail level as the horizon. Every few minutes a big sportfisherman or ferry churned up deep-troughed wake, over which the boat floated level like a duck. In a few minutes more we rounded Radio Island and motored into Back Sound. A jouncy 3-foot chop slapped the hull. On such a day when I was a kid, it was right about here that I'd get my sea-knees. But I felt fine. We trolled around for a while. Still OK. We stopped for a few minutes, as if bottom fishing. The device spun hectically, but there was no roll.

"Do you want to me to turn it off?" asked Mr. Penna. The device can be locked in such a way to disable the gyro effect. "Do I?" I said.

A few seconds later the boat, as if released by some invisible hand, starting rolling under my feet like a board on a ball. Whoa. The horizon wagged, the waves suddenly got higher. Roll movement may be only one of six degrees of freedom but it is the one most directly tied to motion sickness.

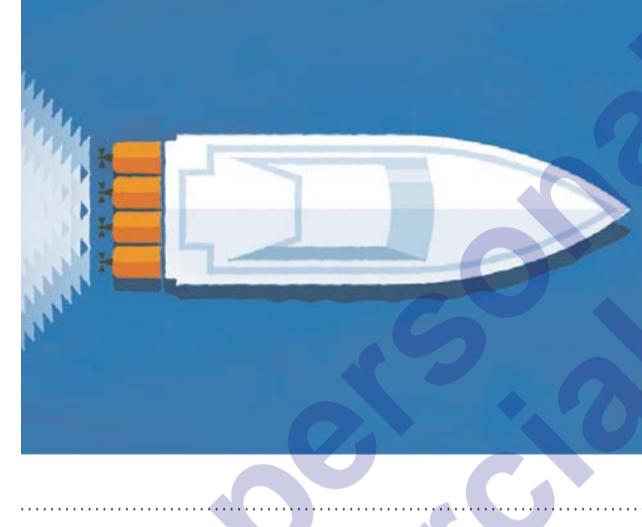
I tried to fight it off—this one's for you, Dad!—but within a couple minutes I got that old familiar feeling. Please, Captain, would you reactivate your magic orb.



**BOAT TO THE FUTURE** Built to handle a suite of outboard engines and designed to reach deep water faster, the latest console boats use A.I.-optimized hull designs to reduce drag and increase max speeds. The Midnight Express 37 (above) features a "stepped" hull design, with sawtooth-like serrations in the hull strakes that raise the boat when on plane, reducing the wetted surface and helping it reach 70 mph.

ILLUSTRATIONS BY ARTHUR MOUNT

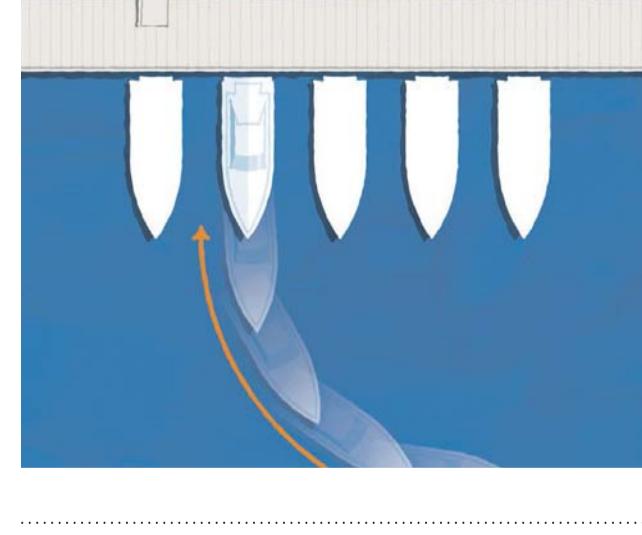
## INNOVATION, AHoy! THE LATEST IN MARINE TECHNOLOGY THROWS A LIFELINE TO UNEASY NEW CAPTAINS

**Mega Multi Motors**

At the 2015 Miami International Boat Show, Seven Marine unveiled its outboard motor for the End Times: the 627s, a horizontally mounted, supercharged and direct-injected 6.2-liter V8 producing the eponymous 627 hp and 600 lb-ft of torque. This Poseidon of prop-spinners—under a carbon-fiber cowling pinstriped with LED lightbars—is currently the world's most powerful production outboard motor. But the mega-motor space is filling up. In May Yamaha announced the XTO Offshore: a 5.6-liter, 425-hp V8 with integrated electric steering, no less. Such engines can run solo but are typically ganged together in groups of two to four. These arrays power the emerging class of extra-large center console fishing yachts (30 to 50+ feet). The HCB Speciale, for example, is a 39-foot center console with a horsepower rating of 1,400 hp and a top speed of more than 60 mph. It's the smallest boat the company makes.

**Gyroscopic Stabilization**

This technology addresses a vast untapped market in recreational boating: landlubbers, which is to say, those prone to seasickness, perhaps as much as a third of the population. But even old salts will appreciate not getting thrown around as much. The Italian company Gyro Marine offers the following example involving a typical flybridge cruiser: Such a boat would typically have a maximum roll angle of about 12 degrees and a roll rate of 25 degrees per second, which is rocking pretty good. With stabilization, the roll rate would be 2.5 degrees per second and maximum roll angle of a negligible 1.2 degrees. Gyrostabilization is used in commercial shipping, military vessels and cost-is-no-object megayachts, and the devices are easily ganged together. A fun fact, though counterintuitive: Gyrostabilizers work the same regardless of where they are placed in the ship. They don't need to be on the center line or at the center of buoyancy.

**Seamless Self-Docking**

"Docking is one of the most challenging boat handling maneuvers—getting it wrong can be embarrassing, expensive and precarious," said Björn Ingemansson, president of Volvo Penta, which this month revealed self-docking technology for its Inboard Performance System. The system augments joystick-controlled maneuverability with GPS awareness and sensors allowing the boat to see its surroundings, not unlike such systems in cars. Scheduled to come to market by 2020, the hands-free system will move the boat into docking position and then hold there against tide, wind and current, until the captain signals the go-ahead. Four sensors are on the dock to help guide the ship to its moorings. The onboard computers make constant micro adjustments in power and steering angle of the IPS drive to keep the boat on its intended course into a safe berth. "Even in changing sea conditions it can make the sea appear to stand still," said Mr. Ingemansson.

**Virtual Anchors**

One of the advantages of having multiple outboard motors is the boat's ability to coordinate forward-reverse thrust at low speeds to hold a GPS-located position. (Note: This is a trick electric bass-trolling motors—e.g., Minn Kota's Spot-Lock—can do all by their lonesome because they can rotate 360 degrees.) In 2013 Mercury introduced the Skyhook, a push-button anchor that holds the boat in position against wind, tide or current. The Skyhook function also allows the boat to hold heading but drift with the current; or the other way, stay in position but swing freely in heading. Such station-keeping allows boats to be electronically parked over a fishing hole, for example. But it's also hugely helpful—to say nothing of safer—while pilots are waiting for a bridge to open in close quarters with other boats; or perhaps holding position in high winds in a busy marina full of more-expensive-than-yours boats.



## GEAR &amp; GADGETS



DICK VINCENT (ILLUSTRATION): TKTKTKTK

HANDY IF SOLO / OUTDOOR MUSTS WHEN CAMPING SINGLE



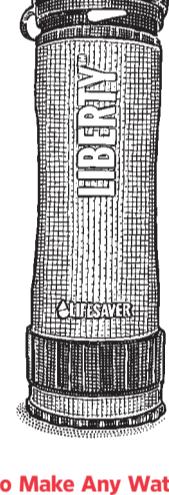
## A Phone That Always Has Service

Beyond letting you ping emergency-response authorities with an SOS button, the waterproof Spot X can send and receive texts, run 10 days on a charge and plot a GPS map that someone back home can monitor online. \$250; [findmespot.com](http://findmespot.com)



## A Space-Saving Tent

The free-standing Marmot Tungsten UL one-person tent provides 20-square feet of sleeping space. Thanks to ultralight nylon and polyester fabrication, and its aluminum poles, the tent weighs less than 3 pounds all in. \$259, [marmot.com](http://marmot.com)



## A Way to Make Any Water Potable

To save yourself some gastrointestinal anguish in the back country, pack a Lifesaver Liberty. The bottle eliminates viruses, bacteria and pathogens, so with a couple pumps, you're free to drink river water with impunity. \$100; [iconlifesaver.com](http://iconlifesaver.com)

patches for blisters. And make sure to jot down an itinerary. "Before I leave, I still write up a trip plan and leave it with my wife," said Mr. Johnson. "And she'll ask: 'What is my freak-out time? At what time and date should I be worried?'"

Of course, most tragedies aren't actually tragedies at all. They're minor inconveniences. You scrape a knee, or sleep on the cold ground. And in the end, you emerge stronger for the effort.

## Alone Again, Naturally

When you venture into the wilderness by yourself, all the challenges of camping are yours to bear. But then, so are the spoils

BY CLINT CARTER

**L**AST NOVEMBER I spent a night shivering on the ground, huddled against a hubcap-sized stone that held a trace of the day's warmth. I had hiked alone into Harriman State Park, about 40 miles from my Brooklyn home, and in an effort to test the limits of ultralight camping, I'd packed skimpily. My sleeping bag was too thin, and instead of a tent, I carried a feathery hammock that allowed the freezing air to circulate beneath me and steal warmth from my shivering muscles. About 3 miles from the nearest road, I dropped to the dirt, swaddled myself in the hammock, and slept in blinking intervals waiting for the sun to re-emerge. It was an amazing trip.

I have friends, and a wife, who find it peculiar that I count this experience a triumph, but during my hike out the next day, after surviving what had briefly felt dangerous (it wasn't, really), I was overcome with optimism. While resting by a creek and drinking campfire coffee, I burst out laughing. A hammock? What the hell was I thinking?

"Mistakes you make by yourself carry heightened consequences," said Marco Johnson, a senior instructor with NOLS, a nonprofit wil-

derness school, of solo camping. "On one hand, it can be incredibly tiring"—you need to pack slowly and contemplate each item more carefully, for instance—"but on the other, it can be powerful and liberating. You can come back from a trip, look yourself in the mirror, and say, 'Look what I did by myself!'"

While my backcountry experience pales next to Mr. Johnson's (his solitary trips often last weeks), my cuddling-a-rock odyssey wasn't the first time I was friendless in nature. Three years ago in the Adirondacks, where four nights alone proved too many for me, I returned starved for human interaction. Still, the experience gave me the profound gift of a quiet mind for a few days and access to that headspace when I need it. My tumultuous inner monologue—what I thought was the sound of productive thinking—was replaced by soothing waves of consciousness that came to shore at predictable intervals.

Solo camping isn't just recreation for me. It's a therapeutic exercise. We humans have a complicated relationship with solitude. I'm known to pull up Twitter or Facebook any time I begin feeling self-reflective or lonely, but after long stretches of isolation, I'm better able to deal with short, day-to-day doses of it. And if being alone for a couple

nights is a type of bitter medicine, then trees and rivers are the sugar that make it go down easy.

"There's something special about nature that has these far-reaching consequences on our emotional and social well-being," said Jessica Andrews-Hanna, Ph.D., a researcher of cognition and mind-wandering at the University of Arizona. "Everything is homogenous and quiet. You're often consumed with the present moment."

## You come back from a trip, look yourself in the mirror, and say, 'Look what I did.'

That's why Keith Moon, a climbing instructor in North Conway, N.H., spends several nights a year camping solo. "Meditation doesn't work for a lot of people—it's too passive," he said. "But being alone in nature has a similar effect. It's changing your headspace without you even realizing it."

When I have time to plan, I still prefer trips with friends. But unaccompanied hikes give me license to set off spontaneously when the mood strikes. Once, on a work trip to Salt Lake City, I packed a small

bag and hiked into the Wasatch after my last meeting. The morning before my flight home, I woke to a fir- and spruce-filled valley, and I returned to New York feeling like I'd been on vacation rather than at work.

If you're considering a solo adventure, Mr. Moon has a simple piece of advice: Start small. Instead of four nights in a remote area, look for an overnight hike on popular trails, where, reassuringly, you're more likely to encounter help. And along with your mission-critical tools, pack backups in case one fails. Besides your lighter, for instance, carry a 25-pack of UCO Stormproof Matches (\$8; [ucogear.com](http://ucogear.com)), which spark even when soaking wet. And since you absolutely need to see, the Waka Waka Power+ is a combination flashlight and power source that can supply 200 hours of light on a single charge and juice up your phone on the go. Pair it with a reliable headlamp, like Black Diamond's Revolt (\$60, [blackdiamondequipment.com](http://blackdiamondequipment.com)), which is waterproof and power agnostic, running off either AAAs or a rechargeable battery.

Finally, take this critical precaution: Pack a basic first-aid kit—antiseptic wipes with gauze and tape for wounds, plus ointment and

## Swapping Tongues

Can smart earbuds really translate conversations at the speed of sound?

**S**TEPPING OFF THE PLANE in Russia for the first time in 2013, I collided with a wall of blunt language and was intrigued beyond repair. Five years, countless classes and ten visits to Moscow later, I still claim a distinctly below-average capacity for the Russian tongue and its dense, foreboding components. To fill these gaps ahead of my next adventure abroad, I turned to technology.

Late last year, Brooklyn's Waverly Labs released the Pilot (\$299, [waverylabs.com](http://waverylabs.com)), one of several new intelligent earpieces that attempt to instantaneously translate foreign speech. These eavesdropping devices use a cloud-based machine learning technology to pipe dozens of different languages into your brain in your mother tongue.

When synced with its app, Pilot's oversized wireless earbuds—think Apple AirPods on steroids—work in "Converse" and "Listen" modes. "Converse" requires that the person you're chatting up also install the app on his or her device, letting both of you hear the translated exchange and see it in text on your device's screen like an internet chat. To me, this seems too high a barrier for real-world practicality: How likely is a voluble Russian stranger to install an app because I asked him

to, much less share my crusty earbuds?

"Listen" mode, meanwhile, smartly uses Pilot's noise-canceling mics to convert speech to text instantly. After you select input and output languages, Pilot listens in, doing its best to provide a real-time translation in your ear and on your screen. But when I tested the mode with native speakers at the Russian House in Austin, Texas (a restaurant complete with Stalin nesting dolls and "Slavic Soul Nights"), it was easily flummoxed by the post-Soviet pop anthems playing in the background. Its performance improved only after the manager, Dima, turned the sound system off—suggesting that Pilot would flounder in thumping Moscow nightclubs.

I had to speak in a loud, forced manner to accommodate Pilot's computers, rather than the people in front of me. And Dima showed me just how quickly and easily he could verbally dictate a full-speed Russian phrase into Google Translate using his smartphone—no earpiece required.

Translation gadgets like the Pilot, along with Google's Pixelbuds (\$159, [store.google.com](http://store.google.com)) and the Bragi Dash Pro (about \$400, [bragi.com](http://bragi.com)) are hard tech de-



vices with a hippie subtext, smelling of a world united by shared realities. Misunderstandings and incorrect translations are too common with these gadgets, but the category should improve significantly soon as A.I. and

machine learning technology ramps further into the mainstream. That wall of impenetrable language is beginning to show its cracks. These devices may help us finally break through. —Dylan Love

## HOUSE TOUR

## DESIGN &amp; DECORATING

# Eclecticism Turned Way Up

In the Hollywood Hills, a designer capitalizes on her rock-star client's open mind—and art collection—and dials the décor energy to 11

BY CARA GIBBS

**I**T'S FITTING THAT a man who's achieved fame and wealth mixing music would be drawn to a house that's a hodgepodge of architectural styles. The Hollywood Hills home that Alex Pall—one half of the Chainsmokers, a Grammy-winning DJ duo—bought two years ago was built in the 1930s. While its classic bungalow features include slate floors and stone fireplaces, its open layout, accommodating a tree that grows through the entryway, gives the 3,600-square-foot dwelling a distinctively midcentury feel. Renovations in the 1980s and '90s added a dash of industrial edge. The mashup appealed to Mr. Pall, but when it came to decorating it, he sought professional help.

His chosen ally: New York interior designer Peti Lau, who has transformed homes and restaurants from Thailand to San Francisco, and who has literally trademarked her signature style as "AristoFreak." It's defined by a blend of the aristocratic and the bohemian, the luxe and the cozy, and both international and local influences.

"The house had this built-in eclecticism," said Ms. Lau, a Chinese-Vietnamese American born in Israel whose own influences might be similarly characterized. "It felt appropriate to approach each interior space as its own unique environment." She brashly mixed decades and colors and incorporated Mr. Pall's growing contemporary art collection, an approach that miraculously holds each room together.

"People say, 'What is this?'" said Ms. Lau, "but they're really intrigued." Here, how she rocked the house.

**LINE AND DINE**

"This is my homage to the '80s, the most rock 'n' roll room in the house," said Ms. Lau. Kelly Wearstler's Channels wallpaper and a rug by Los Angeles artist Retna, for Marc Phillips, call to mind the way graffiti was elevated to art during that decade, but Ms. Lau pointed out that both patterns are deceptively structured, laid on grids. The high-contrast vermillion upholstery adds both coziness and drama, she said. And in a room with brass and lacquer finishes and a chandelier straight off the "Dallas" set, Ms. Lau placed a farm table. "It's rustic and down-to-earth," she said. "Everything else is so glamorous." A neon-rainbow lightbox adds a colorful '80s glow.

**PUTTING THE 'KITCH' IN 'KITCHEN'**

Come evening, the star of the kitchen is the neon sign that accompanied the Chainsmokers on stage at their first television performance on "Saturday Night Live." Interestingly, given that the show is filmed in Manhattan, the sign is backed by simple New York-style subway tiles. During the day, the tiles and clean-lined cabinets take a humble back seat to the spectacular vista visible through windows opposite the tile wall. "Looking out is so beautiful and serene, I just kept the kitchen light and calm, and painted the walls a soothing sea-foam gray."

The stainless steel island, salvaged in a previous decade from a nearby hospital after an earthquake, is one of the industrial elements that add to the house's eclecticism.

**TROPICAL BRAINSTORM**

When designer Peti Lau began designing the Hollywood Hills home of Chainsmokers' DJ Alex Pall, he had already installed the nature-themed wallpaper and the orange-velvet couch in the family room. "I thought the sofa was a very good choice, because orange and green are complementary," said Ms. Lau. She continued the interior-jungle theme, as she called it, with a

natural-fiber coffee table that evokes dried versions of the leaves on the wall, and leopard and tribal-print pillows. The orange, green and blue palette of the painting by Hassan Hajjaj (the Andy Warhol of Morocco, said Ms. Lau) recurs in trippy throw pillows from Silken Favours and the vintage Turkish rug laid over a larger jute rug. "A classic antique rug is a nice way to stabilize all the stuff that's going on," she added.

**BEDROOM DRAMA**

In a strangely proportioned chamber with a sloping high ceiling covered in faux tin, Ms. Lau made the overhead tiles disappear by painting them white, and framed out the room with curtains. The area around the piano became a little stage, and she created another "moment" around the bed. These vignettes, she said, give your eye somewhere to rest: "It isn't looking all over the place." The room initially had an industrial feel, so she softened the space with swags of lightweight painted velvet and layered the walls with plaster and paint to imitate aged European interiors. "Alex always said this was like his chalet, his escape in the hills."

**IF IT AINT BROKE**

Original to the home, this Hollywood-Regency-meets-Art-Deco bathroom required only cosmetic fixes. The ceiling was clad in more of the plastic "pressed-tin" tiles, which had to go. "You don't want silver up there to highlight the unattractive legs of the sink," said Ms. Lau, who painted the ceiling a glossy black to match the shiny black ceramic tiles and to create an air of moodiness befitting a rock-star home. "It looked richer that way, and the texture becomes more noticeable." Ms. Lau noted that the original tiles that surround the mirror and highlight the floor were not high quality, just laid out in beautiful, simple, geometric patterns. "This room really taught me that good design is eternal," she mused. "You can use inexpensive materials and a little Venetian plaster for texture and create a killer bathroom." Missoni bath towels offered the finishing touch.

BRITTANY AMBRIDGE (FAMILY ROOM, BEDROOM, KITCHEN, BATHROOM); PHOTO ILLUSTRATION BY BRITTANY AMBRIDGE (DINING ROOM)

## DESIGN &amp; DECORATION

THE CRITICAL EYE

## 19th-Century Foxy



STUCK IN NEUTRAL An intentionally pallid living room, featured in 'MR Architecture + Decor,' by David Mann with Ingrid Abramovitch (Abrams).

## Our Design Assessment

When we first came across this image of a Manhattan living room designed by MR Architecture + Decor, two things stood out. First, the way the icing-like, festooning, 19th-century detailing on the walls contrasts with how severely boxy and modern everything else is: While the upper half of the room is delicate and curvaceous, what lies below is stern (the Pietra Serena limestone mantel, the blocky custom sofas and coffee table). Second, except for the hint of blue in the painting at left, color seems verboten. Varied textures keep things interesting: Sexy velvet upholstery and a sculptural rug make all the stone seem a bit more relenting. Still, that glass vase and the organically twiggy Japanese magnolia that fill it—both rigid and expressive—have to work overtime to mediate between the split personalities of this room. Would a bit of blending have hurt?

## The Designer's Response

The couple who lives in this 1857 townhouse, designed by St. Patrick's Cathedral architect James Renwick Jr., love and respect its original details, said David Mann, founding partner of MR: "However, this is their time in this space, and our interventions were befitting the life they want to lead." Hence, the decision to avoid a design overly reverent of those details. The couple already had a large modern-art collection, and Mr. Mann's firm brought in the metal-fabric artwork, by Ghanaian sculptor El Anatsui, that's stealthily reflected in the mirror. It, too, bridges the room's masculine and feminine aspects, being both drapey and hard-edge. As for the harsh juxtaposition of old and new? "I think it makes you more aware of what was there, and distinguishes that from the work we did," he said. "I think that's a positive thing." —Catherine Romano

## Totem Recall

Bring a bit of gravitas to your interior with a secular update on the sacred poles of the past

**ONCE, THE PHRASE** "spiritual but not religious" was one you'd expect to hear only in yoga studios and juice bars, but today, nearly 23% of Americans identify as such and their number is growing, according to the Pew Research Center. In our secular dens and dining areas, this trend manifests in mystical mandala wall tapestries, the Zen-like combo of shoji screens and plants, floor pillows that hurt our backs but promise to nourish our souls and, now, abstract totem poles inspired by the spiritually significant examples of the past. Iterations range from modest statements, like Schoolhouse Electric's Totem Candles, to expressions of hero worship, like the Sass Side Table, from Brooklyn company Souda. The table's stacked geometries allude to the work of Memphis Design Group founder Ettore Sottsass, whose sculptures and furniture often took totemic shape.

The form can express the evolution of gender roles, too. Michele Cernosia, design manager at New Mexico product design firm Pfeifer Studio, pointed out that its six-and-a-half-foot-tall marmosa wood sculpture, called "La Silueta," widens at the bottom and top and narrows at the middle in "a symbol of feminine strength that differs from historically phallic totems." Husband-and-wife design team Ryden and Lanette Rizzo's Alabaster Totem light may be the most transcendent. "Alabaster has ties to Ancient Egypt and historically has been used as a sacred stone," Mr. Rizzo said of the 200-pound tower of translucent rocks. "There's a human need to create something bigger than you that's sacred and a little esoteric," Ms. Rizzo explained. "Totems always outlast the civilizations that made them." And that's nothing to scoff at, even if the only altar you worship at is the altar of high design.

—Tim Gavan



**HEY, STACK** Clockwise, from far left: Alabaster Totem Light, 74 inches, \$35,000, [alliedmaker.com](http://alliedmaker.com); Totem Candles, from \$12, [schoolhouse.com](http://schoolhouse.com); Sass Side Table, 20 inches, from \$1,300, [soudasouda.com](http://soudasouda.com); Totem Tray, about 10 inches, \$850, email [info@bloc-studios.com](mailto:info@bloc-studios.com); Totem Table Lamp, 28 inches, \$179, [westelm.com](http://westelm.com); La Silueta Sculpture, 78 inches, \$2,249, [pfeiferstudio.com](http://pfeiferstudio.com)



# EATING & DRINKING

**OENO TRIP** Germany's Mosel Valley offers abundant charms and world-class Riesling to those in the know.



ON WINE / LETTIE TEAGUE



## Visit the Mosel Before Everyone Else Does

The first in a three-part series on German wines.

**WHEN I MENTIONED** to friends I was traveling to the Mosel region of Germany, invariably they asked one of two questions: "Where else are you going?" and "Why?"

American wine drinkers don't visit German wine regions the same way they do those in Italy or France. And yet the Mosel is one of the oldest, most beautiful wine regions in the world, home to small, charming villages with half-timbered houses and spectacular Riesling vineyards.

Some of the vineyards are so steep they're practically vertical. "You learn to dig in your heels," said Johannes Selbach, owner of Selbach

Oster winery, as we stood at the edge of the vertiginous Zeltinger Sonnenruh vineyard, above the town of Zeltingen. Mr. Selbach lives there, in a generations-old waterfront house that's regularly inundated when the Mosel river floods.

Mr. Selbach produces some of the region's greatest Rieslings, and his family is one of several who have been growing grapes in the Mosel for hundreds of years. Unlike Tuscany or Bordeaux or, increasingly, Burgundy, the Mosel is almost entirely populated by small, family-owned wineries, operated by the producers themselves.

Foreign investors are virtually nonexistent here, but should one decide to buy a vineyard I'd recommend the place where I spent some

time recently, the Middle Mosel or "Mittelmosel." Most visitors there, I was told, are English, Belgian, German or Dutch. Ernst Loosen of Dr. Loosen estate believes part of what keeps Americans away are German wine labels, crowded with too much information. "People say, I like your wines but don't explain them to me, it's too complicated," said the high-energy, fast-talking Mr. Loosen, waving his hands.

The region's wines are also too often (mis)perceived as sweet. Though Mosel wines are actually made in styles ranging from exceedingly sweet to bone dry, perhaps the greatest expression of the Mosel can be found in its Kabinett Rieslings, according to Mr. Selbach. These are the lightest, freshest and

most delicate—fruity with a beautiful balancing acidity. They're also refreshingly low in alcohol (often around 8%). "You can drink a bottle by yourself," he said.

When I visited, Mr. Selbach received me on the ground floor of his house. (He recently opened a tasting room about a mile downstream from their house that is open during business hours, no appointment necessary; Gänselfelder Str. 20, 54492 Zeltingen-Rachtig). Visitors who make their way to the Dr. Loosen estate find an imposing, four-story, slate house just outside Bernkastel-Kues, the Mosel's most famous (and touristy) town. Because Mr. Loosen makes wine in other parts of Germany as well as in Washington state, in conjunction with Chateau Ste. Michelle, his winery is better known and more visited than most.

I met Mr. Loosen on the second floor of his house for a tasting of sweet wines as well as the dry ones he introduced into the portfolio in 2008. The latter account for 30% of production today. As we began to taste, he pointed out the window to an impressive structure across the river in Wehlen, the home of an equally famous producer, Joh. Jos. Prüm—my next stop.

Mr. Loosen is related to the Prüm family on his mother's side. "Say hello to Katharina," he said. Katharina Prüm recently took over management of the 12th-century estate from her father, Dr. Manfred Prüm. He made the Prüm estate one of the most highly regarded Mosel names, known for the purity and ageability of its wines. Its Kabinett Rieslings are famously long-lived.

The Loosens and the Prüms make wine from some of the most famous Mosel Riesling vineyards, including Wehler Sonnenruh, which faces the town of Wehlen and features a large 19th-century sundial. It's one of several "sundial" vineyards—"Sonnenruh" means "sundial"—on the sunny side of the Mosel. Exposure matters in this cool, rainy region where hail isn't uncommon and ripening is a perpetual challenge.

Multiple producers own small plots in these vaunted vineyards, with their individual holdings identified by their names or simply their winery colors painted on the tops of stakes among the vines. (Mr. Selbach noted that some wine lovers have made off with the name-marked poles as souvenirs.) Unlike Burgundy's grand-cru plots, these great Mosel vineyards are remarkably accessible. It's possible to move

from one town to the next simply by walking through vineyards, as both tourists and residents often do.

Some Mosel vineyards, such as the famed Bernkasteler Doctor, are nearly 100 years old, while others are quite new. There has been a good deal of planting in the region of late, particularly of non-Riesling grapes. The day after my visit, Mr. Selbach was planting Pinot Noir, which has become more common in the Mosel recently thanks to a warming trend. "Nothing has changed in the Mosel," he said. But then he allowed, "The climate has gotten better."

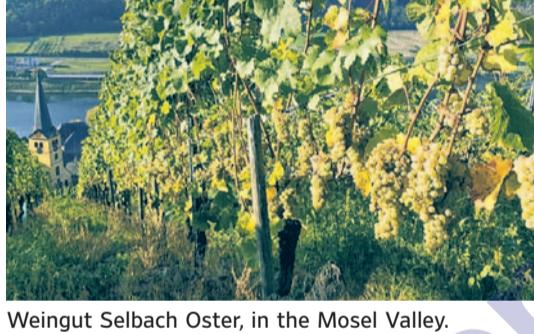
The weather was certainly warm the week of my late-April visit, which happened to coincide with *spargelzeit* (asparagus season). This season is short—April-June—so ev-

ery restaurant around had at least one and often two or three asparagus dishes on the menu. When I arrived at the Zeltinger Hof Gasthaus des Rieslings, the modest but charming hotel where I stayed, I found the proprietor, Markus Reis, laboring over a large pile of asparagus, shaving the thick stalks down to a more manageable size. (I found him repeating the task at breakfast time the following morning and again later that day.)

Mr. Reis is not only the owner of the hotel and operator of a Volkswagen microbus advertising his wine tours; he is also de facto wine director of his hotel's restaurant. A fan of Mosel Riesling, he's accumulated quite a few bottles in the cellars of the buildings he's purchased and renovated over the years.

His wine list includes a remarkably deep selection of old Mosel Rieslings, some dating back more than 100 years, and up to 150 wines by the glass at any given time. Up to now, the only Americans who have stayed at his hotel have been in the wine business, but Mr. Reis is optimistic that will change. "The market for Mosel wine isn't big," he said, "but I think it's coming."

► Email Lettie at [wine@wsj.com](mailto:wine@wsj.com).



Weingut Selbach Oster, in the Mosel Valley.

### RIESLING RECONNAISSANCE / WHERE TO SIP, STAY AND DINE IN THE MOSEL

**Joh. Jos. Prüm** In the village of Wehlen, this estate, run by the elegant Katharina Prüm, is among the region's most famous. At this and the other wineries listed here, an appointment for visits is necessary. Uferallee 19, 54470 Bernkastel-Kues, 49-6531-3091

**Weingut Dr. Loosen** The Loosen estate webpage notes that Ernst Loosen travels frequently and may not be able to meet you, but the welcome will still be warm at this stately slate home. St. Johannishof, 54470 Bernkastel-Kues, [drloosen.com](http://drloosen.com)

**Weingut Selbach Oster** Few winemakers are more charming or welcoming than Johannes Selbach. In addition to great Rieslings, he might share a taste of the wild boar he hunts in his vineyards. Uferallee 23, 54492 Zeltingen-Rachtig, [selbach-oster.de](http://selbach-oster.de)

**Zeltinger Hof Gasthaus des Rieslings** This three-star hotel has a range of rooms (ask for the Spätburgunder), one of the best wine lists in Germany and a proprietor passionate about wine. Kurfürstenstraße 76, 54492 Zeltingen-Rachtig, [zeltinger-hof.de](http://zeltinger-hof.de)

**Bistro-Bar Remise** In a lovely hotel on the site of a 17th-century winery, this charming bistro offers regional fare and a well-priced wine list big on Mosel Riesling. Weinromantikhotel Richtershof, Hauptstraße 81-83, 54486 Mülheim, [weinromantikhotel.com](http://weinromantikhotel.com)

SLOW FOOD FAST / SATISFYING AND SEASONAL FOOD IN ABOUT 30 MINUTES

## Coconut-Spice Halibut En Papillote

**FOR A CHEF** as well-versed in his idiom as Floyd Cardoz is, tradition and originality aren't necessarily mutually opposed. "Indian dishes always have a balance of sweet, sour, salty, spicy and bitter," he said. "The push and pull between these five things changes depending on what you want to achieve."

In this recipe, Mr. Cardoz's second Slow Food Fast contribution, halibut fillets are rubbed in a paste of coconut, serrano chile, spices and fresh herbs. Lime juice provides the sour note, balanced by a dash

**Total Time** 30 minutes  
**Serves** 4

**½ cup shredded coconut, soaked in warm water 10 minutes and drained**

**Leaves from 12 sprigs mint, plus more to garnish**

**Leaves from 6 sprigs cilantro, plus more to garnish**

**1 serrano chile, stemmed and seeded**

**1-inch piece fresh ginger, peeled and roughly chopped**

**1 teaspoon fennel seeds**

**1 teaspoon coriander seeds**

**½ teaspoon ground turmeric**

**3 limes, juiced, plus extra lime wedges to garnish**

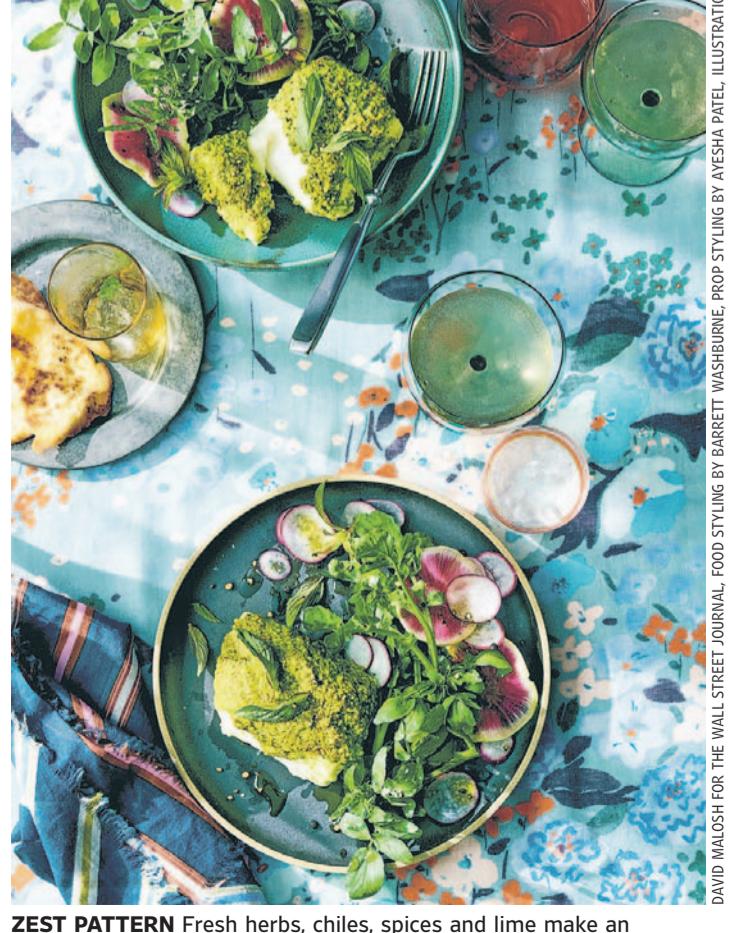
**½ teaspoon sugar**

of sugar. A more conventional recipe would call for more spice, but Mr. Cardoz opts for a light touch here. "Halibut is delicate," he said. "If it were fattier, like tuna or mackerel, it could take the heat."

Sealed inside individual foil packets, the tender fish steams just a few minutes, protected from direct heat, for moist, flaky results. This method is foolproof enough to be flexible, depending on the occasion. "You can also put the parcels on the grill," said Mr. Cardoz. "The fish will get more caramelized, but that's also nice." —Kitty Greenwald

each fillet on a 6-inch square of aluminum foil. Spread rub evenly all over fillets. Fold foil over fish to form packets and crimp edges to seal.

**4.** Before placing fish in steamer, make sure basket sits just above simmering water. (If necessary, pour out excess water.) Place fish in steamer, cover pot and steam parcels until a cake tester inserted in center of each fillet emerges warm, indicating fish is cooked through, about 6 minutes. Carefully open parcels and transfer fish to plates or a serving platter. Garnish with lime wedges and sprigs of mint and cilantro. Serve with a salad and flatbread, rice or potatoes.



**ZEST PATTERN** Fresh herbs, chiles, spices and lime make an invigorating rub for this light, summery steamed halibut.

**The Chef**  
Floyd Cardoz

**His Restaurants**  
The Bombay Bread Bar in New York City; the Bombay Canteen and O Pedro, both in Mumbai, India

**What He's Known For**  
Cooking regional-Indian food with creativity and finesse for over three decades. Winning the third season of Top Chef Masters.