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INSANE *in the* MEMBRANE

How the right lost its MIND, sold its SOUL—and embraced DONALD TRUMP

by CHARLES SYKES

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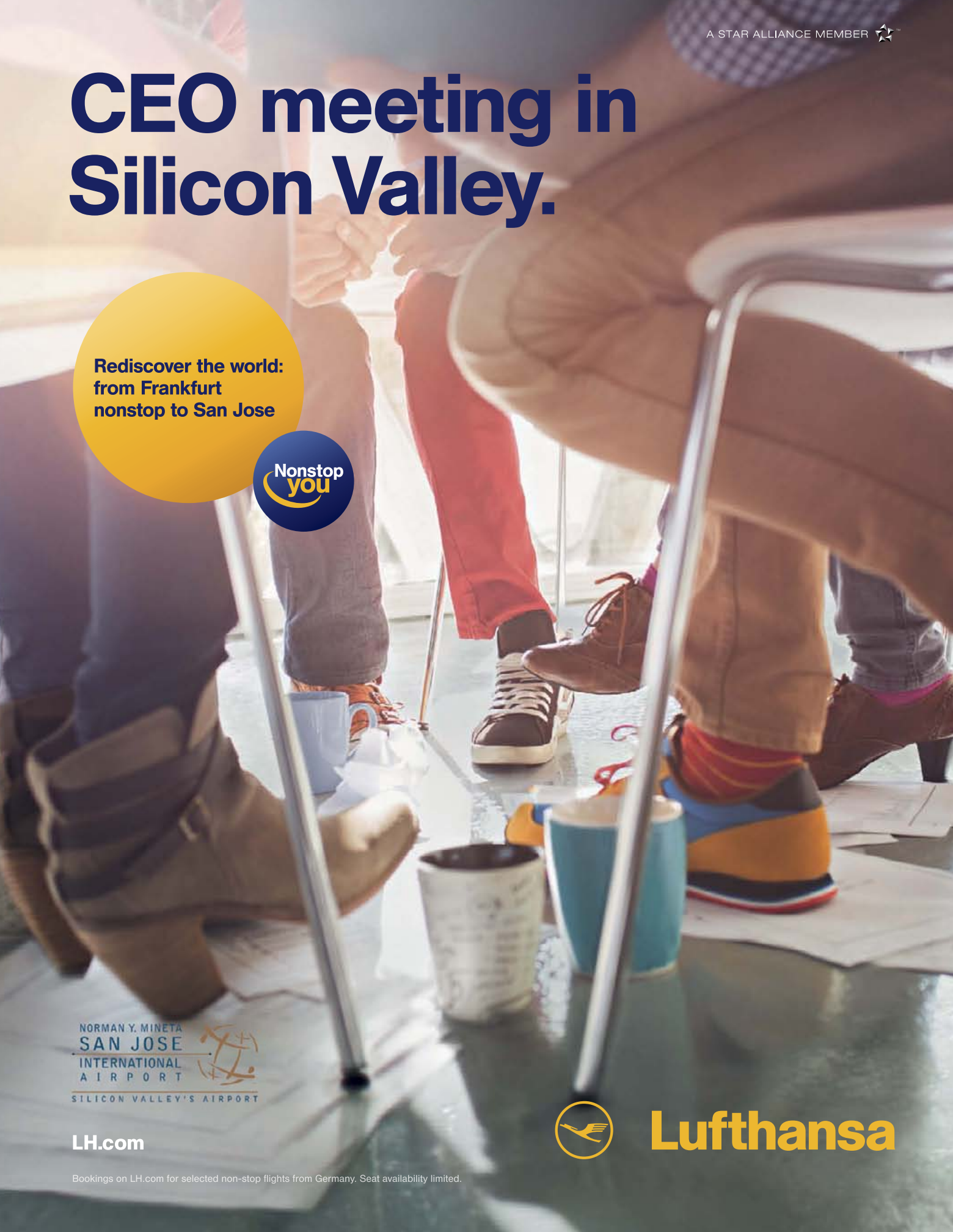
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Newsweek

SEPTEMBER 29, 2017 / VOL.169 / NO.11 INTERNATIONAL

+
AUTO ZONE: Workers make some finishing touches at a Ford plant in Detroit, one of the cities where several companies dominated the global car industry for almost a century.

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NEW WORLD

WEEKEND

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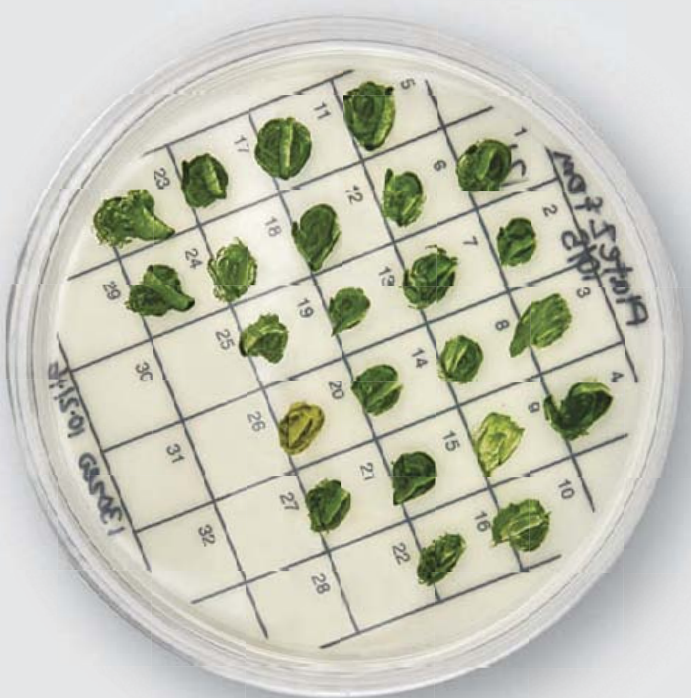

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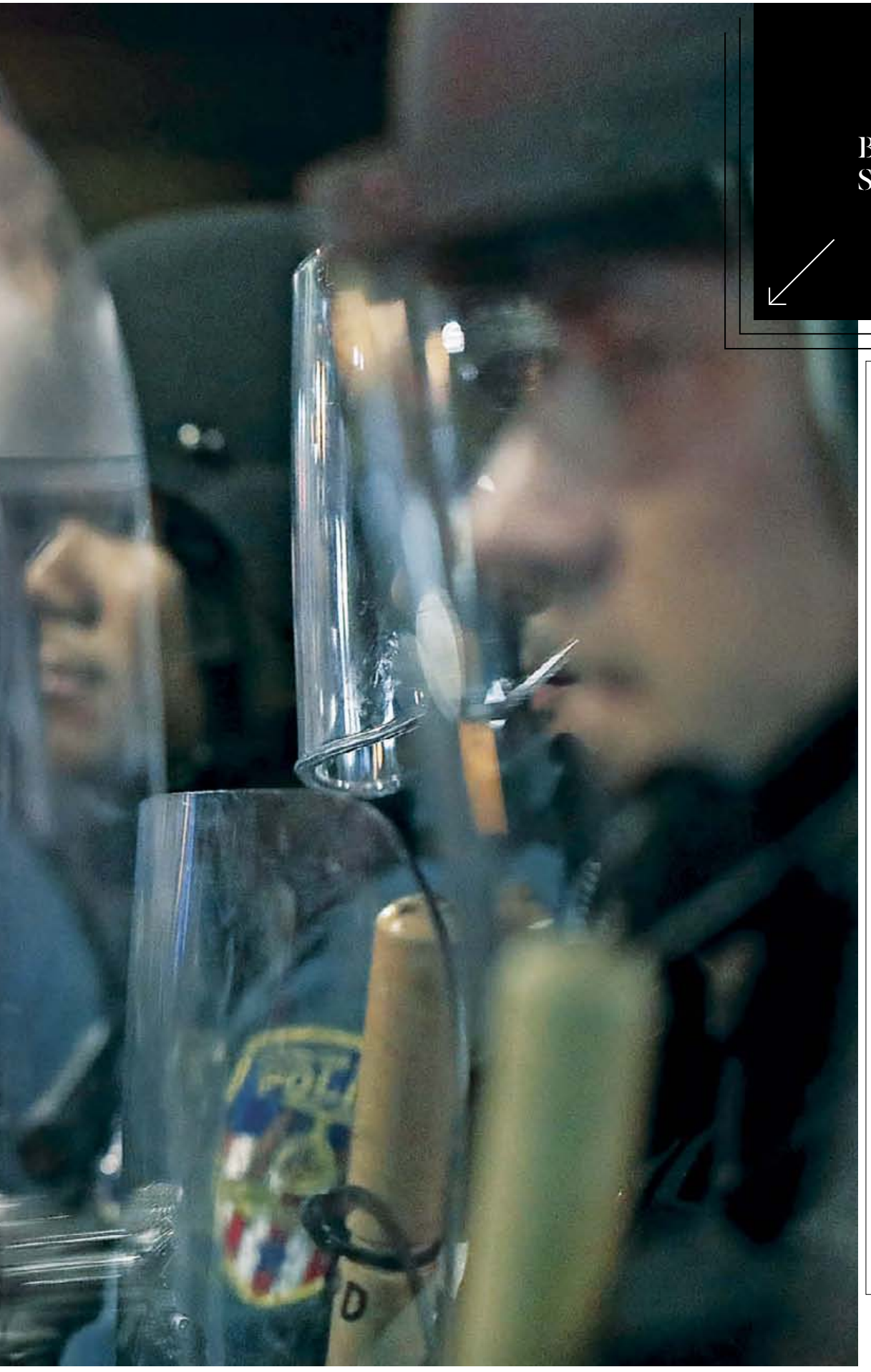

USA

Really Close Encounters

St. Louis—Demonstrators face off with police on September 16 after a former cop, Jason Stockley, was acquitted on murder charges. Some protesters turned violent, smashing windows and damaging police cars, and critics of the verdict say there is much to be angry about. In 2011, Stockley, who is white, was on duty when he shot and killed Anthony Lamar Smith, a black man whom the officer chased in his police car after a suspected drug deal. Prosecutors said the police had planted a gun on Smith. (The weapon had Stockley's DNA on it but not Smith's.) And as Stockley and his partner were chasing Smith at high speeds, the former said he was "going to kill this motherfucker," according to prosecutors.

SCOTT OLSON

Big S

SPAIN

Most Likely to Secede?

Vilafranca del Penedès, Spain—Performers known as *correfocs* dress as devils and light fireworks on September 10 in the lead-up to National Day in Catalonia. The festival commemorates September 11, 1714, when Barcelona fell to Spanish troops after a long siege and Catalonia was integrated into Spain. An autonomous region in northeastern Spain, Catalonia has long flirted with independence, although support appears to have waned in recent years. In September, the Catalan government started its official campaign for a referendum to secede from Spain, which the government in Madrid says is illegal.

DAVID RAMOS

DAVID RAMOS/GETTY IMAGES

HIGHWAY RUBLE-RY

Russia is finally embracing virtual currencies. But to what end? Hint: It rhymes with honey wandering

NOBODY DOES the dark side of the internet better than the Russians. From AllOfMP3.com, once the world's most popular piracy site, to the campaign to disrupt the U.S. presidential election, Moscow's hackers have long been world leaders in cybercrime. So it's no wonder Russian computer geniuses are heavily involved in the internet's latest craze: virtual currency. And it's not just attracting cybercriminals—the Kremlin wants to get in on the cryptocurrency revolution by issuing state-backed "bit-ruble."

Cryptocurrencies, such as bitcoin, work on a technology known as blockchain, a decentralized network of synchronized online registries that track the ownership and value of each token. They can be used as virtual cash and traded like currency. Private companies can issue their own virtual currencies to finance specific ventures, similar to crowdfunding or bonds. And their future value can also be traded, like options.

With approximately $70 billion in bitcoins in circulation and more than 100,000 merchants around the world—including Russia's largest online retailer, Ulmart—accepting similar forms of payment, "suddenly, everyone has to take cryptocurrency seriously," says Richard Titus, an investor of cybermoney. Virtual currencies are also a potential bonanza for money launderers, online blackmailers and cybercriminals—especially in Russia. And with the market still basically unregulated, Titus warns, "it's definitely the Wild West." Even JPMorgan Chase CEO Jamie Dimon, usually a bull on tech innovation, warned in September that virtual currencies are "a fraud.... It won't end well. Someone is going to get killed. It will blow up."

Russians have been involved in cryptocurrencies since their inception in the mid-2000s. Criminals used the first virtual currencies, such as e-gold, to commit cross-border credit card fraud. The original technology was "mostly U.S.-based, but it was always linked to Russia," where 80 to 90 percent of global card fraud activity took place, says Alexander Klimburg,

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+

ALL ABOUT THAT

OTHEK/GETTY IMAGES

author of *The Darkening Web*, a newly published examination of cybersecurity threats.

The Kremlin has long been wary of cryptocurrencies, which are technically illegal in Russia—yet the government recently signaled it's changing its stance. At the St. Petersburg International Economic Forum in June, President Vladimir Putin announced that Russia was considering launching its own "digital ruble" and praised the possibilities of virtual currencies. A group of financial institutions under the supervision of the Russian Central Bank is testing a proprietary "master chain" based on a popular platform called Ethereum that could be used to issue bit-rubles.

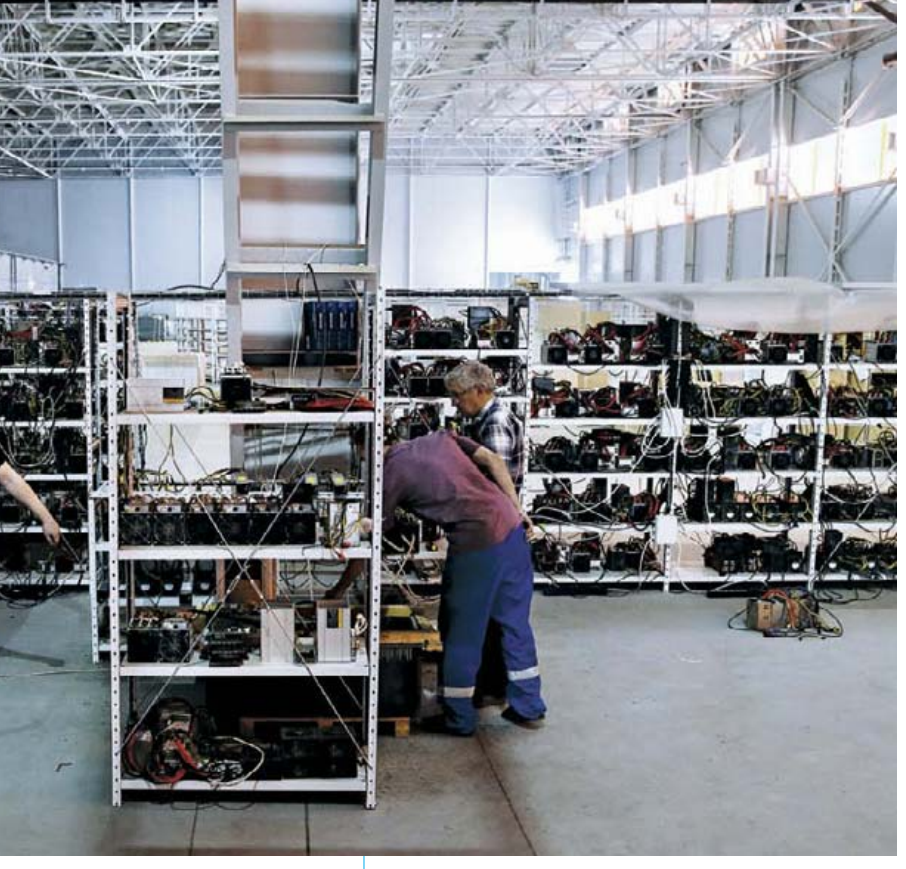
There's even been talk of creating a supranational cryptocurrency for the emerging BRICS nations—Brazil, Russia, India, China and South Africa—as "a good alternative to the dollar," Kirill Dmitriev, head of the Russian Direct Investment Fund, told state-run news agency Ria Novosti in August. Though the entire sum of cryptocurrencies in the world remains under $100 billion, a long way off the estimated 10.2 trillion U.S. dollars, the idea of undermining America's dominion as owner of the world's chief reserve currency appeals to Putin, who recently called for the BRICS nations "to overcome the excessive domination of the limited number of reserve currencies."

There are other legitimate reasons Moscow is interested in cashing in on cryptocurrencies. The Kremlin is keen to attract the enormous cash flow being poured into blockchain projects around the world. It also wants to open up Russia to the bitcoin mining industry, in which anyone can claim newly issued bitcoins—generated automatically by a preprogrammed, blockchain-based computer network—by solving extremely complex codes that unlock each new coin. China is the world leader in bitcoin mining, with miners deploying huge power-hungry computer server banks to crunch the necessary numbers—and Moscow is eager to get into that business. Putin aide Dmitry Marinichev predicts that "Russia has the potential to reach up to 30 percent share in global cryptocurrency mining in the future," which at current values would mean a $100 million annual market share for Russia.

The Russian Central Bank is also exploring the use of cryptocurrency to help regulate the country's notoriously corrupt banking system, with dubious financiers frequently making loans to fake companies, then closing down, leaving the government to return depositors' money. Cryptocurrencies are traceable, which would allow closer oversight of where a bank's money is going.

"SOMEONE IS GOING TO GET KILLED. IT WILL BLOW UP."

FROM TOP: MAXIM ZMEYEV/AFP/GETTY IMAGES (2); ANDREY SMIRNOV/AFP/GETTY IMAGES



BITCOIN RULES EVERYTHING AROUND ME: Many players have been dabbling in cryptocurrencies, from Putin aide Dmitry Marinichev, middle, who has a currency mining farm, above, to Burger King.

It's the third reason for Russia's interest in virtual currencies that has international law enforcement agencies worried: their use as money laundering tools. Unlike with cash, all cryptocurrency transactions are recorded. That makes them perfectly trackable, so it's easy to monitor dealings between legitimate businesses. However, the problem is that ownership of virtual cash isn't necessarily attributable to people or businesses. And digital currency units can be anonymized by putting them through what's known as a tumbler, a service that changes the owner's identity by exchanging the tokens with ones belonging to other users also seeking anonymity. That gives virtual money the potential to become the perfect klepto-currency for anyone with shady motives—and it can be moved around the world with a few keystrokes.

One of the most high-profile Russian fans of cryptocurrencies is lawmaker and former KGB officer Andrei Lugovoi, the prime suspect in the fatal 2006 poisoning of former Russian spy Alexander Litvinenko in London. Lugovoi is one of dozens of Russian officials and businessmen who are forbidden from traveling to or holding assets in Europe or the United States. Some have been the target of international sanctions because of their support of Moscow's annexation of the Crimea, or their role in the 2009 killing of anti-corruption lawyer Sergei Magnitsky, or, like Lugovoi, their outstanding arrest warrants for crimes in the West. Despite being a murder suspect in the U.K., Lugovoi is deputy chair of the Duma committee on security and anti-corruption—and in this role, he appeared at an April cryptocurrency forum in Moscow to praise blockchain-based currencies. He argued that virtual money would allow Russian companies—he tactfully didn't mention individuals—to get around Western restrictions. "This is a rare situation where the sanctions policy of the West gives rise to the opportunity for our own businesses to create something new," he said.

Russians have certainly been prolific at creating new—and often bizarre—cryptocurrencies. ZrCoin, for instance, raised over $7 million from its "initial coin offering" (the crypto equivalent of an initial public offering) in April for a project to recover zirconium from industrial waste in Magnitogorsk, Russia. The value of each ZrCoin is backed, says the company, by a kilogram of synthetic zirconium. One Moscow region farmer, Mikhail Shlyapnikov, raised over $2 million in two months earlier this year by issuing his farm's virtual currency. Known as the Kolion—named after Shlyapnikov's village of Kolionovo and based on the agricultural production of his farm—the currency had doubled in value since it was launched in May. Even Russian Burger King has gotten involved, issuing loyalty tokens called Whoppercoins, which can be exchanged for burgers but also swapped and traded on the peer-to-peer Waves blockchain platform.

Many of these virtual currencies look like gimmicks. But money launderers are poised to take advantage of Russia's cryptocurrency revolution too. The Organized Crime and Corruption Reporting Project, a nongovernmental organization, recently updated its 2014 study titled "The Russian Laundromat Exposed" to include the latest details of a vast and sophisticated network of offshore banks and shell companies that Kremlin-connected oligarchs use to flout sanctions and park stolen money—so far, in conventional ways. Between 2011 and 2017, the NGO reported, more than 20 Russia-connected shell companies fired out 26,746 transfers to launder some $20.8 billion—through a single scheme.

FROM TOP: DONAT SOROKIN/TASS/ALAMY STOCK PHOTO; ANDREY RUDAKOV/BLOOMBERG/GETTY IMAGES

Blockchain currencies could make that type of laundering much easier. Virtual currencies "are a potential nightmare for investigators," says one former U.S. law enforcement official with experience in Moscow, who asked for anonymity because of his ongoing consulting work for government clients. "It's pretty easy to trace how money goes from bank to bank. Same for bitcoins.... You know what online entity owned them at what time. But [who] is behind that online identity? Laundering is all about creating fake ownership. That's where cryptocurrency's anonymity becomes a problem."

> "THE WHOLE COUNTRY IS A MASSIVE MONEY LAUNDERING AND TAX-EVASION OPERATION."

It's a strange irony that both Russian criminals and the government should favor cryptocurrencies—one as a means of money laundering, the other as a way to trace government money. But blockchain technologies are flexible enough to do both. The U.S. Treasury and the Russian Central Bank have announced plans to regulate the market, though it's not clear how new rules would control virtual currency trading conducted outside their national jurisdictions. "The Russians are drafting legislation, but that is laughable," says Klimburg. "The whole country is a massive money laundering and tax-evasion operation."

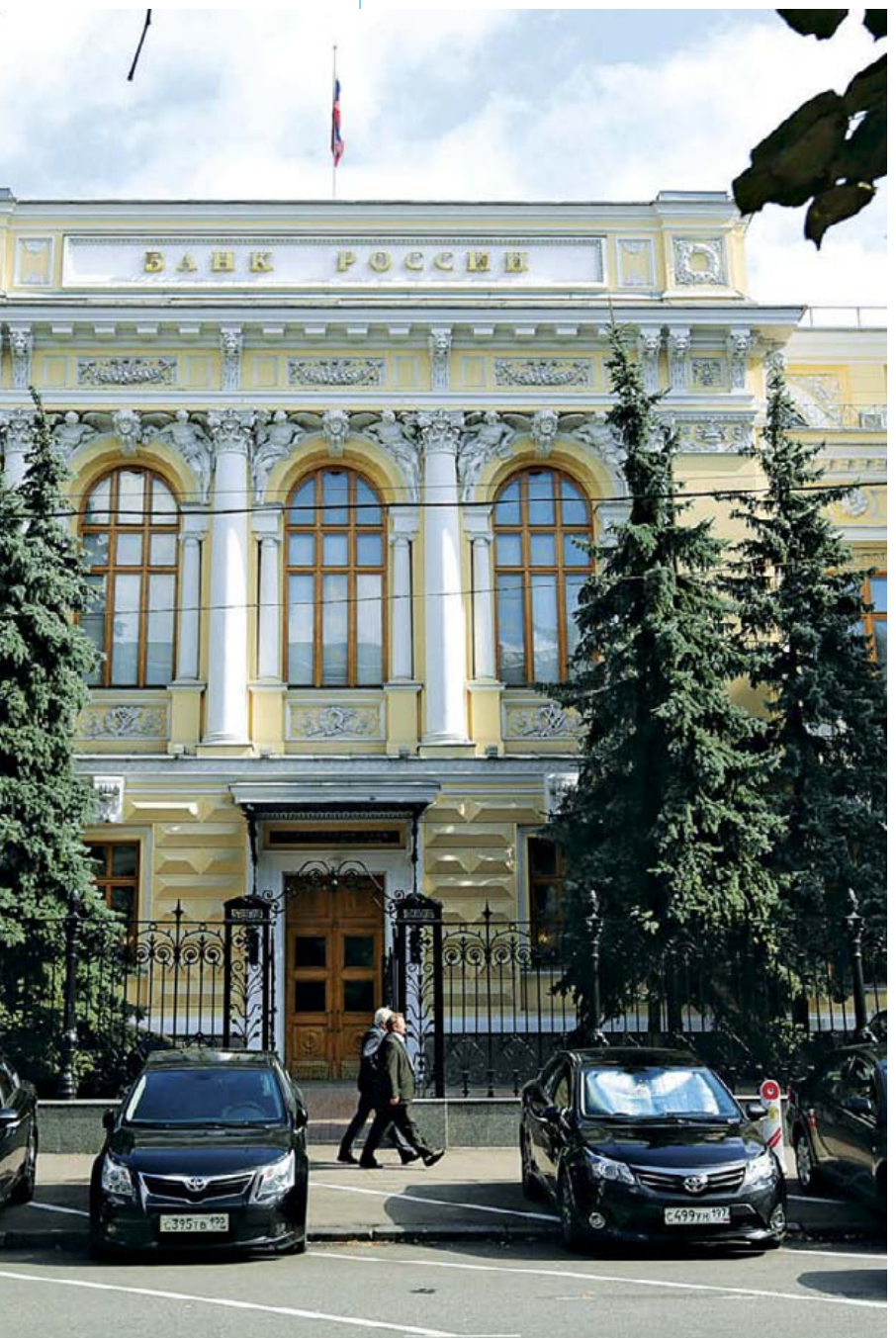
Blockchain technologies have other criminal applications too. They're a gold mine for hackers with access to giant networks of computers known as botnets. A bot is a computer that has been infected with a type of virus known as a Trojan horse that allows the botnet's owner to remotely control the machine. Botnets can number in the hundreds of thousands of machines and are normally used to generate enormous traffic that can crash websites. Their disruptive power allows them to be weaponized to demand ransom money or wage political warfare.

Back in 2007, Russian hackers showed the offensive capability of botnets for the first time when they attacked and briefly crashed much of tiny Estonia's e-infrastructure. Most recently,

though, botnets have been put to a different use: stealing computer capacity to crack the codes of new bitcoins.

Legitimate bitcoin miners have to invest in expensive computer equipment and cut deals with power companies to buy their spare electricity. (Russian energy giants Gazprom and EuroSibEnergo recently announced that they were negotiating the sale of cheap megawatts to around 70 bitcoin-mining companies.) But bot masters simply steal that computing capacity by hijacking strangers' computers. The latest example was a group of hackers—"probably North Korean actors based in China," according to Klimburg—who in late April used a vulnerability in the Windows operating system to create a botnet they used for bitcoin mining.

MO' BITCOIN, MO' PROBLEMS: A monument to Bitcoin in Yekaterinburg, above. Below, Russia's Central Bank. Because ownership of virtual cash isn't attributable to people or businesses, it could be a boon to money launderers.



That vulnerability—known in the trade as an "exploit"—was most likely discovered by the U.S. National Security Agency as a hacking tool that could be used to get into computer systems via faults in programs. The exploit, dubbed "EternalBlue," was probably one of thousands of hacking tools stolen from the agency's highly sensitive Tailored Access Operations by Navy reservist Harold Martin III, a former contractor for Booz Allen Hamilton indicted in October 2016 for absconding with approximately 50 terabytes of secret hacks and other data from the NSA and CIA.

Exactly how the EternalBlue exploit got into the hands of a hacker group called Shadow Brokers—closely linked to Russia's Federal Security Service—isn't clear. But on April 14, hackers leaked the exploit code online, free for any hacker who wanted to use it. Within two weeks, more than 230,000 computers in 150 countries had been infected with viruses using EternalBlue. The North Korean bitcoin miners were the first to take advantage of this backdoor. But others soon followed, using EternalBlue to distribute viruses called WannaCry and NotPetya. Both so-called ransomware programs threatened to destroy the infected computer's system unless they received a payment in bitcoins. By May 12, WannaCry had frozen large parts of the computer systems of Britain's National Health Service, Spain's Telefónica, Germany's Deutsche Bahn and FedEx.

Cryptocurrencies may not be inherently dubious. But it's clear that there's a deep crossover between the worlds of hacking and the darker corners of the cryptocurrency world. As huge sums of money start to pour into the market—bitcoin grew 7.5 times in value over the past year alone, and Ethereum's flagship token, the ether, was up 4,000 percent for the year earlier this summer—it is turning into a playground for brilliant entrepreneurs, risk-hungry investors and inventive criminals. Russia, with its unique nexus of computer genius and money laundering expertise, looks set to become the new cryptocurrency world's Wild East.

DISRUPTIVE

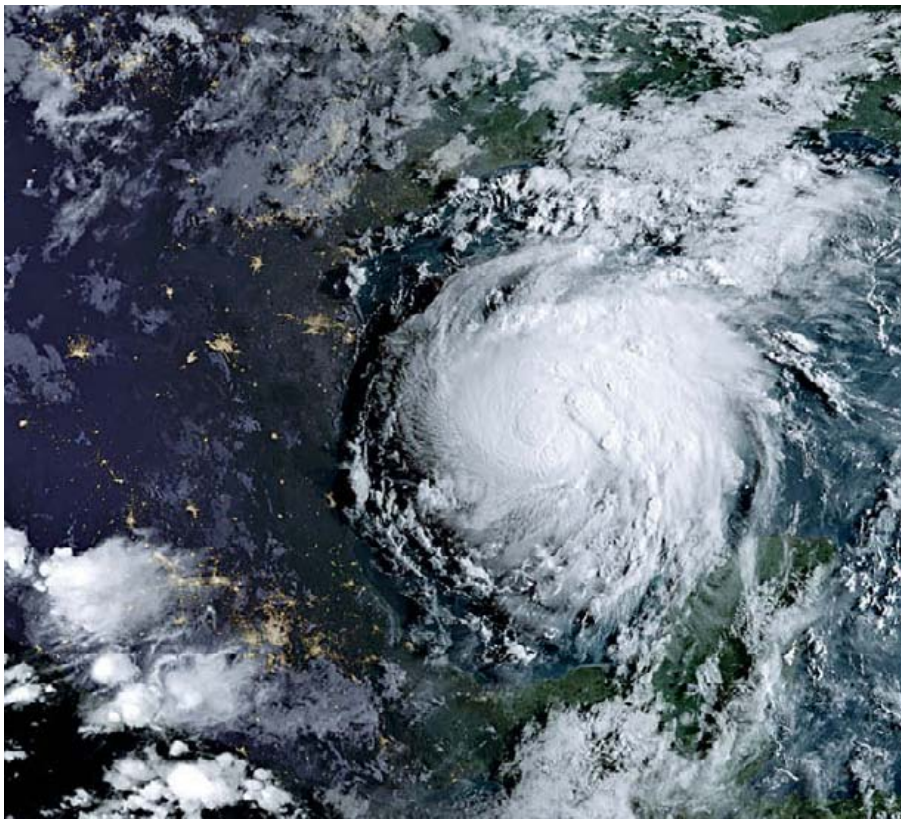
THE WEATHER REVOLUTION WILL BE TELEVISED

Better data and microstations are making forecasting better—but never perfect

IT'S EASY TO take weather forecasting for granted. Every goofy TV meteorologist told us more than a week ahead that Hurricane Irma was turning into a giant storm that would nail the U.S. East Coast. Given the incomprehensible complexity of weather, such a feat is like predicting today who will win the 2020 presidential election. (Crowdsourced site Paddy Power gives Oprah 33-to-1 odds.)

Over the next few years, technology will make weather modeling even more precise and useful, which is good news as the planet enters an era of worse storms driven by climate change. Not only will models get a better bead on storms that can wreck things, but superspecific forecasts will integrate with everyday actions. An app might read your calendar and automatically let you know that there is going to be a rain cloud directly over your patio the moment people arrive for that barbecue a week from Saturday.

Great weather modeling needs four key components: data, computing power, math and scientific understanding. They all feed off one another, and technologies such as artificial intelligence, robotics and the "internet of things" are having a big impact. While no one is expecting an $E=MC^2$–like breakthrough that suddenly reveals weather's secrets, forecasts are steadily going to get more accurate further out. "We're making improvements incrementally, but if you look back over decades, it's really phenomenal,"



BY
KEVING MANEY
@kmaney

Mary Glackin, head of science and forecasting for IBM's Weather Company, tells me.

Data is the most elemental component. The data revolution in weather started almost 100 years ago, when Pavel Molchanov in Russia invented the radiosonde—a balloon that carried a few sensors and a radio transmitter into the atmosphere, sending readings back to Earth. In 1960, NASA won the race to put up a weather satellite, TIROS 1. It sent back the first photos of the Earth's cloud cover. Ever since, major countries have been packing the skies with weather satellites, leading up to the GOES-16 satellite launched by the U.S. in late 2016. It transmits a constant stream of detailed images of weather systems. David Novak of the U.S. National Weather Service calls GOES-16 "one of the biggest advancements we've seen."

Satellites give us the macro view, and internet of things devices bring in microdata. These cheap sensors can relay readings from almost anywhere—streetlights, buoys, webcams. The Weather Company has 250,000 tiny weather stations around the world. For perspective, Starbucks has only about 25,000 stores worldwide. "We work with citizens that have these [stations] in their backyards," Glackin says. "It helps fill in the blanks." Drones and robots will play more of a role too, carrying sensors to places where neither humans nor satellites can venture.

All of this data has to get fed into mathematical equations that represent the way scientists think the weather works. More data help the models spit out better results, and the results inform the scientists, who can then make better models. But running so much data through supremely complicated models takes fantastic computing power. In 1922, British mathematician Lewis Fry Richardson set mathematical weather modeling in motion by publishing his study, *Weather Prediction by Numerical Process*. But, he noted, doing the calculations fast enough would take 64,000 people working in a room simultaneously. Computers have made that a little easier. In early 2016, the National Oceanic and Atmospheric Administration turned on two supercomputers that each tripled the speed of its previous capability. These are some of the most powerful computers in the world.

The next step, happening now, involves AI learning from multiple models. TV weathergeeks often talk of competing European and American models, but there are lots of models with multi-lettered abbreviations—CMC, NAVGEM, CFSv2, CanSIPS—all working differently and churning through different data sets. The new wrinkle is that AI can suck up results from all the models and learn from them. Glackin's group at IBM runs through results from more than 160 models multiple times a day. "We adjust forecasts based on how different models are performing at different points on Earth and on different time scales," Glackin says. "So we take the best of the best and do machine learning on that."

The pace of improvement in forecasts is speeding up, which means we'll get more accuracy further ahead of time, and forecasts can get more granular, predicting the weather for a small patch of the planet. That, of course, is tremendously helpful for public safety, but it also aids critical decisions in major industries like aviation, energy, construction and agriculture.

It will also help our everyday decisions. "We're in the middle of this big revolution in how we use weather," says Bill Gail, co-founder of Global Weather Corporation in Boulder, Colorado. "In a decade, those of us who already use weather information will be using it 100 times as often and won't even know it." Today, most people make plans for travel or a bike ride or building a still in the backyard, and then look at the weather, or vice versa. But going forward, your still-making app will understand what you want to accomplish and how long it will take, look at your calendar and hyperlocal weather forecasts, and tell you which day would be best to get set up to make a nice full-bodied rye.

Just don't expect weather forecasts to get perfect anytime soon. Like the global economy and politics, weather is too complicated and capricious to ever exactly model. "At some range in the future, it doesn't matter how good your computer models are, the way the atmosphere is chaotic in nature, your predictability will break down," says Greg Carbin, forecast operations branch chief of the National Weather Service.

Tornadoes, for instance, are the modeling equivalent of Donald Trump tweets—no amount of data or supercomputing can foresee what will cause them or how much damage they will do. N

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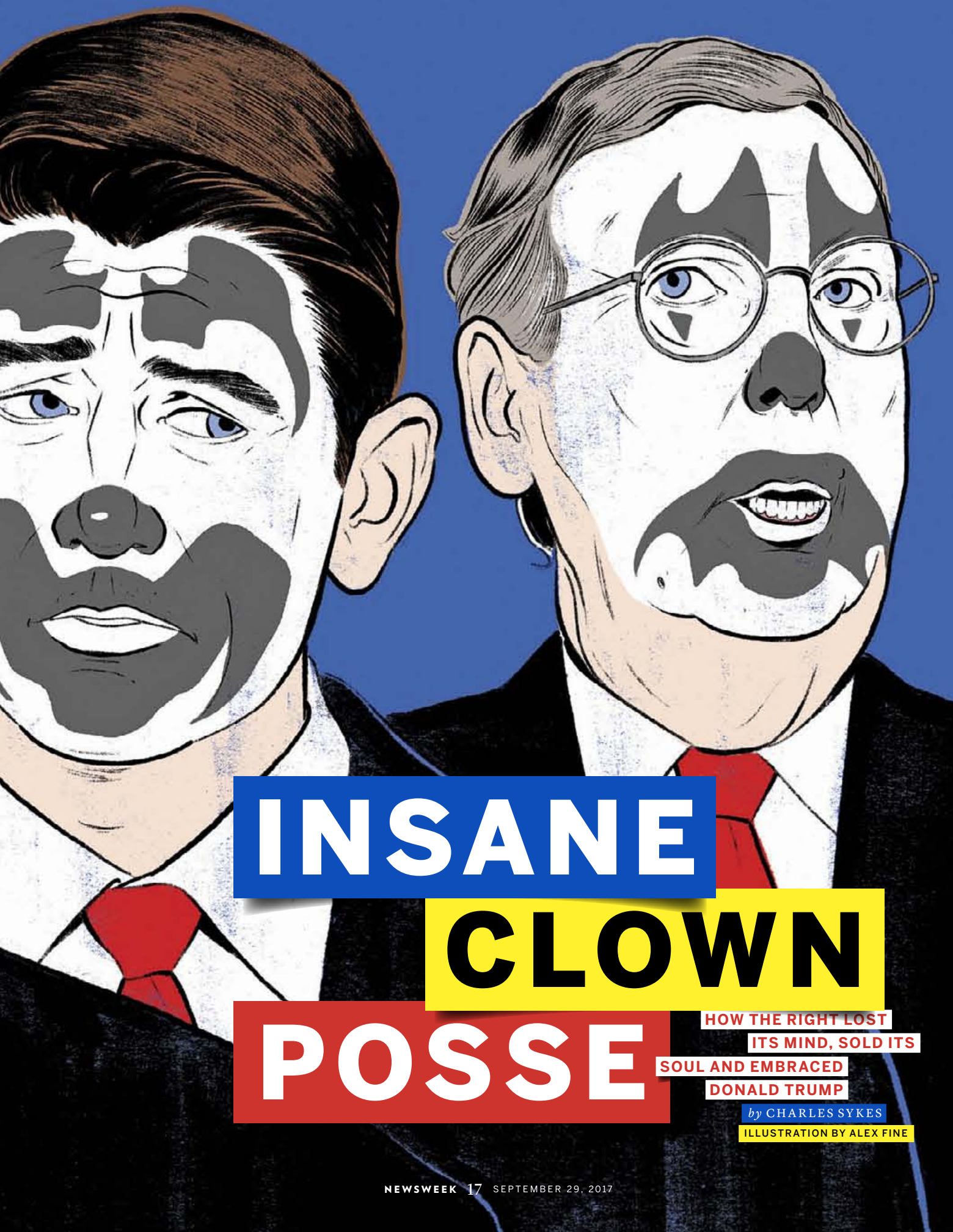
PICNIC PICK: Advances in forecasting will let us use weather data 100 times as often as we do now, and often without even knowing it.

CLOWN SHOW: The party of Paul Ryan, middle, and Mitch McConnell, right, has allowed liberal overreach to blind it to the crackpots in its midst.



INSANE CLOWN POSSE

HOW THE RIGHT LOST ITS MIND, SOLD ITS SOUL AND EMBRACED DONALD TRUMP

by CHARLES SYKES

ILLUSTRATION BY ALEX FINE

THIS IS A PAINFUL STORY FOR ME TO write. For a quarter of a century, I was a major part of the conservative movement. But like many on the right, in the wake of Donald Trump's victory I had to ask some uncomfortable questions. The 2016 presidential campaign was a brutal, disillusioning slog, and there came a moment when I realized that conservatives had created an alternate reality bubble—one that I had helped shape.

During the 2016 election, conservatives turned on the principles that had once animated them. Somehow a movement based on real ideas—such as economic freedom and limited government—had devolved into a tribe that valued neither principle nor truth; luminaries such as Edmund Burke and William F. Buckley Jr. had been replaced by media clowns such as Ann Coulter and Milo Yiannopoulos. Icons such as Ronald Reagan—with his optimism and geniality—had been supplanted by the dark, erratic narcissism of Donald Trump. Gradualism, expertise and prudence—the values that once were taken for granted among conservatives—were replaced by polls and ratings spikes, as the right allowed liberal overreach in the Obama era to blind them to the crackpots and bigots in their midst.

Some have argued that the election was a binary choice, that Hillary Clinton had to be defeated by any means. I share many of their concerns about Clinton, but the price was ruinous. The right's electoral victory has not wiped away its sins. It has magnified them, and the problems that were exposed during the 2016 campaign haven't disappeared. Success does not necessarily imply virtue or sanity. Kings can be both mad and bad, and the courtiers are usually loath to point out the obvious—just look at Caligula or Kim Jong Un.

Today, with Trump in office, the problems of the right are the problems of all Americans. And the worst part of it is that we—conservatives—did this to ourselves.

Donald Trump is the president we deserve.

Off the Wall

THERE WAS A TIME when we deserved better. And had it too. On June 12, 1987, President Reagan was in West Berlin to deliver a powerful message to the evil empire, the USSR. His Soviet counterpart, Mikhail Gorbachev, had branded himself as a benign peacemaker, and Reagan wanted him to prove it. More than two decades earlier, East German Communists had erected the Berlin Wall to keep defectors from fleeing the eastern part of the city, and the barrier remained, physically and symbolically dividing the two sides. With two panes of bulletproof glass separating him from a crowd of roughly 20,000, Reagan stood with East Berlin's Brandenburg Gate behind him and uttered the words that have come to define part of the greatness of his presidency. "If you seek peace," Reagan said, "come here, to this gate. Mr. Gorbachev, tear down this wall."

SPENCER PLATT/GETTY IMAGES

LOCO-MOTION: With anger and bravado, Trump declared war against Reaganism during the 2016 campaign. And some people loved him for it.

Reagan's words championed freedom and unity, capitalism and strength. He saw America as "a shining city upon a hill," as he put it in a later speech, an ebullient description that captured the source of his popularity. And though he personified much of what conservatives loved about America—our positivity, grit and determination—Reaganism was always about the country, not the man. He was our president, not our "dear leader."

Almost three decades after Reagan's speech in Berlin, Trump delivered a very different message in Manhattan. On June 16, 2015, he made a dramatic entrance at Trump Tower, descending into the lobby on an escalator to the sounds of Neil Young's "Rockin' in the Free World." And with the cameras rolling, the reality-TV star announced he was running for president. The country was in real trouble, he said, in part, because Mexicans are sneaking across the border. "They're bringing drugs," he snarled. "They're bringing crime! They're rapists!" There was only one

TRUMP TAPPED INTO SOMETHING DISTURBING THAT WE HAD IGNORED —A SHIFT FROM FREEDOM TO AUTHORITARIANISM.

solution, Trump explained: "I will build a great, great wall on our southern border. And I will have Mexico pay for that wall. Mark my words."

With anger and bravado, Trump had declared war against Reaganism (the Gipper had been pro-immigration too)—and some people loved the brash new candidate for it.

This shift took many by surprise. In the 1980s, after Reagan became the face of the right, conservatives seemed like a united, monolithic force (especially to liberals who never really listened to what we had to say). The truth is, we have long been a jumble—a contentious collection of disparate, often querulous factions: libertarians, evangelicals, traditionalists, chamber of commerce types. As far back as the 1950s, there have been deep fissures in the movement. We called ourselves conservative, but supported the creative destruction of capitalism; we championed limited government, but also traditional values. We were the party of freedom, but also national security, law and order.

Over the past 50 years, conservative leaders had sought to knit together those ideological strands. It hasn't always been easy. In the 1960s, Buckley, the conservative author and founder of the *National Review*, went to war with both the far-right libertarian writer Ayn Rand and the extreme anti-Communist crackpots at the John Birch Society. Those divisions and others carried over into the Richard Nixon era in the 1970s. It wasn't until the early 1980s that Reagan managed to control these contradictions with a combination of charisma and competent governance.

Trump, however, exploited such divisions for his own gain. He tapped into something disturbing that we had ignored and perhaps nurtured—a shift from freedom to authoritarianism, from American "exceptionalism" to nativism and xenophobia. From his hard line on immigration and rebuttal of free trade to his strange fascination with Russian President Vladimir Putin, Trump represented a dramatic repudiation of the values that had once defined the movement. If Reagan were alive, he would hardly recognize his party—or the walls it had erected.

Birther of a Nation

IN BETWEEN REAGAN and Trump, there were signs of deep dysfunction in the conservative ranks, moments when the right seemed on the verge of losing it—from outbursts of anti-Semitism during Pat Buchanan's unlikely surge in 1992 to Sarah Palin's embarrassing ascendancy to the GOP ticket in 2008.

But the real turning point came with the election of Barack Obama and the rise of the Tea Party. While many of its discontents can be traced to the Bush years—Medicare Part D, changes to immigration policy and the big-bank bailouts—the Tea Party did not gain traction until after Obama's victory. The timing fueled suspicion that the movement had more to do with the new president's race—and party affiliation—than his policies, yet the early days of the Tea Party defied easy categorization. Despite the caricatures and repeated attempts by the left to portray them as dangerous or bigoted, Tea Party rallies were generally orderly events—and extraordinarily diverse. As the writer John Avlon put it in his book *Wingnuts: Extremism in the Age of Obama*, attendees at a typical rally included "libertarians, traditionalists, free-marketers, middle-class tax protesters, the more-patriotic-than-thou crowd, conservative shock jocks, frat boys, suit-and-tie Buckley-ites and more than a couple of requisite residents of Crazytown."

The Tea Party soon became the face of the conservative movement, firing up a base that had been defeated and demoralized. As Avlon noted, the movement marked an aggressive shift in tactics, as some conservatives decided to "mimic the confrontational street theater of the far left they had spent decades despising. Civility was the first calculated casualty." At rallies, signs comparing Obama to Hitler began popping up (as they had on the left with George W. Bush), while literature appeared skewering "Obama's Nazi

health plan." Legitimate concerns over rationing health care morphed into overheated rhetoric about "death panels." All of this was accelerated by the rise of a perpetual outrage machine that included scam PACs and even the venerable Heritage Foundation, pushing the GOP into increasingly extreme and untenable positions, which ultimately led to a futile government shutdown.

Few on the right pushed back against these excesses. "In this environment," Avlon noted, "there are no enemies on the right and no such thing as too extreme—the more outrageous the statement, the more it will be applauded." Even after Representative Joe Wilson was censured for yelling "You lie!" at Obama during a speech on health care in 2009, many on the right hailed the South Carolina Republican as a hero.

"BIRTHERISM MAKES US LOOK WEIRD. IT MAKES US LOOK CRAZY. IT MAKES US LOOK DEMENTED."

In the lead-up to the 2012 presidential election, this shift toward vulgarity and bluster accelerated. But perhaps the defining moment occurred on March 23, 2011, when Trump made an appearance on *The View*. Few at the time thought he had a real interest in—or shot at—the presidency. But polls indicated he was popular, and he was flirting with the idea. Wearing his trademark dumpy blue suit and long red tie, the New York real estate mogul launched into what today feels like a typical stump speech. "We're not going to be a great country for long if we keep going the way we're going right now," he said. Trump was friendly and cordial, cracking jokes and holding Whoopi Goldberg's hand. But when the conversation turned to Obama, it grew heated. "Why doesn't he show his birth certificate?" Trump whined. "If you're going to be the president of the United States...you have to be born in this country."

The birther canard—that Obama was born in Kenya or somewhere abroad—didn't start with Trump. (And despite his false claims, it didn't start with Hillary Clinton either.) But perhaps more than any other figure, Trump proliferated birtherism, took the lie from the internet's lunatic fringes and brought it to the mainstream. After his appearance on *The View*, he went further, implying to conservative commentator Laura Ingraham that the president might secretly be a Muslim. After Obama produced his birth certificate in April 2011, Trump briefly acknowledged his legitimacy, then quickly seemed to recant, saying that "a lot of people do not think it was an authentic certificate." In doing so, he soaked up some much-desired publicity, which arguably helped him launch his 2016 campaign.

Not everyone on the right bought into birtherism. Some, such as talk show host Michael Medved, slammed the conspiracy theory. "Birtherism," he said, "makes us look weird. It makes us look crazy. It makes us look demented. It makes us look sick, troubled and not suitable for civilized company."

But many leading Republicans either stayed silent or refused to denounce such an outrageous lie. One reason for their reluctance: A Public Policy Poll in February 2011 found that birthers had become a majority among likely Republican primary voters—51 percent said they did not think Barack Obama was born in the United States. Birtherism was not a fringe idea in the GOP. The poll also suggested, as Steve Benen noted in *Washington Monthly*, that "candidates hoping to run sane campaigns will be at a disadvantage in the coming months." Republican voters who doubted Obama's legitimacy tended to gravitate to candidates like Palin, Newt Gingrich and Mike Huckabee (all of whom would play key roles in Trump's 2016 campaign).

In private, conservatives who knew better justified their return to the dark fringes on the grounds that it fired up the base and antagonized liberals. Or as Palin put it so memorably in 2016, "It's fun to see the splodey heads keep sploding." The result was a compulsion to defend anyone attacked by the left, no matter how reckless, extreme or bizarre. If liberals hated something, the argument went, then it must be wonderful and worthy of aggressive defense. So conservatives embraced the likes of Christine O'Donnell, a failed Senate candidate who ran a curious ad denying rumors she was secretly a witch. They defended Todd Akin, a former Missouri congressman who said female victims of "legitimate rape" rarely get pregnant. We treated these extremists and crackpots like your obnoxious uncle at Thanksgiving: We ignored them, feeling we could contain them or at least control their lunacy.

We were naive. By failing to push back against the racist birther-conspiracy theory—among other harmful ideas—conservatives failed a moral and intellectual test with significant implications for the future. We failed it badly.

Safe Spaces and Angry White Men

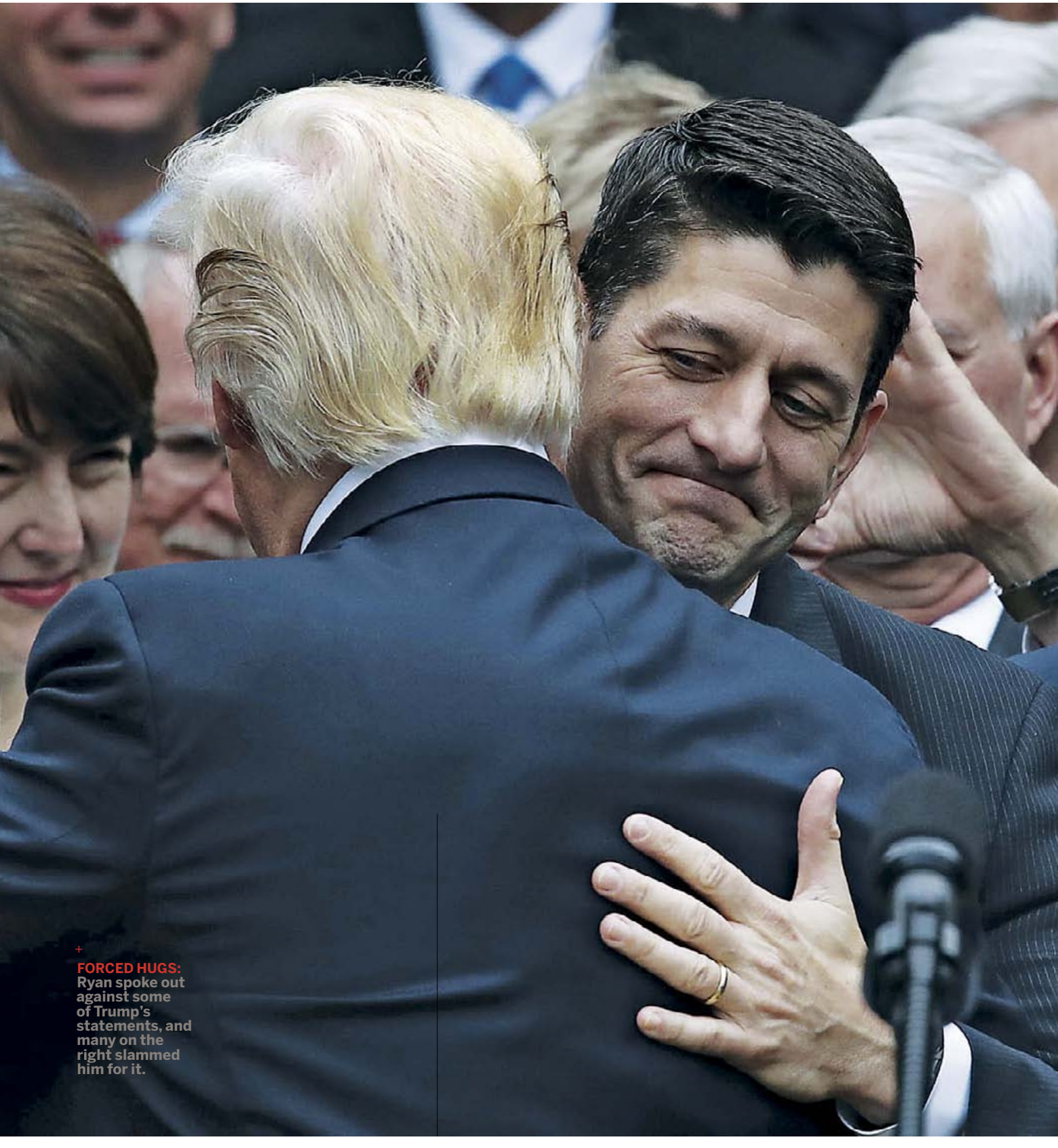
THERE IS, OF COURSE, another side to the story of how the right lost its mind. Decades of liberal contempt, including the almost reflexive dismissal of conservatives as ignorant racists, had created deep antipathy on the right. And during the Obama years in particular, many conservatives felt attacked. First there was the massive stimulus package, which threatened to balloon the national debt. Then the Democratic Congress rammed through Obamacare with the barest of partisan majorities. These moves came at a time when con-

CLOCKWISE FROM TOP LEFT: DAVID GREEDY/GETTY; SPENCER PLATT/GETTY (3); BRYAN R. SMITH/AFP/GETTY; STEPHEN LAM/GETTY; ANDREW LICHTENSTEIN/CORBIS/GETTY; SPENCER PLATT/GETTY; CENTER: ANNALISE KAYLOR/NURPHOTO/GETTY

+

IDIOCRACY

With the rise of Trump, a movement once driven by ideas has found itself dominated by Kardashian-like hosts, intellectually dishonest shills, cynical careerists and alt-right bullies. Recent debates among conservatives, one commentator quipped, "show[ed] the nuanced differences between a YouTube comments section and a chain email to your grandfather."



FORCED HUGS: Ryan spoke out against some of Trump's statements, and many on the right slammed him for it.

servatives felt their free speech and religious liberty were under assault, when the Internal Revenue Service was targeting Tea Party groups, and on university campuses activists began enforcing their demands for ideological conformity, complete with lists of microaggressions, trigger warnings and safe spaces. Later, Democrats began dismantling the filibuster, while Obama, frustrated by gridlock in Congress, started issuing a dizzying array of executive orders on issues ranging from immigration to clean power.

The right distorted and exaggerated all of these issues. But Democrats seemed to act as if their success were preordained, not merely by history but by demographics, assuring themselves that as America became younger and more diverse, it would deliver one liberal win after another. Not content with winning historic victories on gay marriage, some progressives called their opponents bigots, deriding their religious faith as hatred and discrimination. The goal was not tolerance but to drive out dissent. Or so it seemed to many conservatives, especially evangelicals, who came to feel they were not simply losing the culture war; they were being dismissed by a country they no longer recognized.

During the 2016 campaign, for instance, commentators on the left expressed legitimate concern that Trump was encouraging violence at some of his rallies. At the same time, conservatives were inundated with stories, links, and video clips of protesters chanting "What do we want? Dead cops! When do we want it? Now!" and "Pigs in a blanket, fry 'em like bacon." But on cable television, they watched their concerns denounced as racial "dog whistles."

As the Democrats became a party dominated by a highly educated, urban elite, its traditional blue-collar base felt increasingly disenfranchised. Many called them "angry white men" without really asking if they had legitimate reasons to be angry. The left, for instance, embraced the notion of "white privilege," even as white working-class America entered a period of acute decline, as blue-collar workers faced devastating job losses and a mounting opioid crisis.

The alienation of center-right voters was especially unfortunate because the excesses on the left pushed many small-government conservatives into an unnatural alliance with the authoritarian and nationalistic right.

Cementing that alliance: the newly emboldened right-wing media—a place where facts became malleable and loyalty mattered far more than truth.

THESE SITES WERE PUSHING FAKE NEWS AND PRAVDA-STYLE PROPAGANDA —THAT WAS THE POINT.

The Fake News Revolution

SINCE THE 1950S, conservatives have criticized the bias and double standards of the mainstream media. And much of the criticism has been deserved. Conservatives may exaggerate media bias, but they do not imagine it. The double standards made for daily fodder on my radio show for the past 23 years.

During much of that time, I was proud to be part of the conservative media. I frequently shared the latest column by Charles Krauthammer or set up topics by reading a *Wall Street Journal* editorial on the air. Other hosts provided a broad forum for conservatives to share their views. Sure, we had our problems, our excesses—particularly during the Bill Clinton years. But I genuinely believed we were helping people become savvier, more sophisticated analysts of current affairs.

During the Obama era, however, we crossed a line. The right's echo chamber didn't just remain silent about the crackpots in our ranks; it embraced them, exploiting their insanity for clicks and ratings. Take Matt Drudge. His site, the Drudge Report, consistently ranks as one of the top five media publishers in the country, often drawing more than a billion page views a month. Media critic John Ziegler describes him as the tacit "assignment editor" for conservative talk radio, right-leaning websites and a significant portion of Fox News.

But at some point in the past decade, Drudge began linking to Infowars, a website run by Alex Jones, a conspiracy theorist extraordinaire. On his site, Jones has suggested that the U.S. government was behind the September 11 attacks, the Oklahoma City bombing and the Boston Marathon explosions. He would be hilarious if people didn't take him so seriously. And in linking to his stories, Drudge broke down the wall separating the full-blown cranks from the mainstream conservative media, injecting a toxic worldview into the right's bloodstream.

Evidence of that toxicity came on the campaign trail on May 3, 2016. Months before the GOP convention, as Trump was competing against Ted Cruz for his party's nomination, the birther in chief used yet another conspiracy theory to his advantage. This one was about the assassination of President John F. Kennedy and the bogus theory that Cruz's father was involved in it. "His father was with Lee Harvey Oswald prior to Oswald's being—you know, shot," Trump said, citing a story in the *National Enquirer*, a fake news tabloid owned by his ally David Pecker. "That was reported, and nobody talks about it.... It's horrible."

Trump not only got away with this gambit; he doubled down, embracing

MARK WILSON/GETTY

Jones by appearing on his show. The Donald also enlisted the help of Breitbart bloviator Steve Bannon as his campaign strategist—a man who had turned his website into a platform for the hate-mongering "alt-right."

Never mind that these sites were pushing fake news and Pravda-style propaganda—that was the point. By then, conservative media had convinced their audiences to ignore and discount anything that came from the mainstream press. The cumulative effect had destroyed much of the right's immunity to false information. The media's failure to get the election right made it easier for conservatives to ignore anything outside their bubble. So it should have come as no surprise when false stories—blasted out by Russian interests and others—became a major campaign issue. "The American Right," Matthew Sheffield wrote on the *American Conservative* website, "has become willfully disengaged from its fellow citizens thanks to a wonderful virtual-reality machine in which conservatives, both elite and grassroots, can believe anything they wish, no matter how at odds it is with reality."

The proliferation of hoaxes—and the number of gullible voters who believed them—should have inspired introspection among conservatives. It didn't. Those of us who were slow to join the bacchanal were denounced as sellouts, traitors or elitists. Under the withering fire of social media trolls, one GOP politician and commentator after another fell into line.

Those who didn't faced the wrath of their base. When Paul Ryan denounced Trump's statements about a Mexican-American judge presiding over a case about Trump University, he was hit with an avalanche of opprobrium from many of his fellow conservatives. They believed winning the election was more important than pushing back against racial animus. They were wrong.

By Trump's inauguration, the GOP had morphed from the party of the right to the party of the Donald. Conservatives who had previously agreed that Russia posed a global threat pivoted to embrace Putin as an exemplar of white Christian civilization; Tea Party activists who had railed against deficit spending accepted calls for a massive stimulus; the party of free markets endorsed protectionism and an economic policy that seemed driven by personal fear and favor; constitutionalists watched silently as the rule of law was undermined and norms of public integrity ignored. After Trump won the presidency, activists who had clamored to "burn it all down" suddenly

+ THE EMPEROR'S NEW CLOTHES: The GOP has morphed from the party of the right to the party of the Donald.

pivoted to demand party loyalty and virtual lockstep support of policies, even when they conflicted with fundamental principles or contradicted what Trump had previously said.

A movement once driven by ideas during the Reagan era—back before the advent of Rush Limbaugh or Fox News—now found itself dominated by Kardashian-like hosts, intellectually dishonest shills, cynical careerists and alt-right bullies. Recent debates among conservatives, one commentator on Twitter quipped, "show[ed] the nuanced differences between a YouTube comments section and a chain email to your grandfather." This has paralleled a surge in the anti-intellectualism in American life, perhaps aided by compromises among the people whose judgment and ideas I once relied upon and trusted.

TWO FLEW OVER THE CUCKOO'S NEST: Some in Trump's orbit have embraced far-right conspiracy theories. Among them: Jones, left, and Stone, center.

KINGS CAN BE BOTH MAD AND BAD AND THE COURTIERS ARE USUALLY LOATH TO POINT OUT THE OBVIOUS—JUST LOOK AT CALIGULA OR KIM JONG UN.

Thomas Aquinas warned of the dangers of the "man of one book." This now seems quaint. We live in an age where political leaders such as Trump no longer read books at all. They just watch television and tweet, rallying supporters with outrage and misspellings.

This is the *covfefe* we created.

Confessions of a Recovering Liberal

IN THE 1970S, I was a liberal, until I looked around and decided I no longer wanted a part of what that had come to mean. I hated the left's smugness, its stridency and dogma. I also felt many of the well-intentioned social programs seemed to hurt the very people they were designed to help. My decision came slowly, but it was liberating to break free from the cant of tribal politics and its tendentious talking points. My circumstance today feels familiar. If the conservative movement is defined by the nativist, authoritarian, post-truth culture of Trump and Bannon, I want no part of it. So once again, I am an ideological orphan.

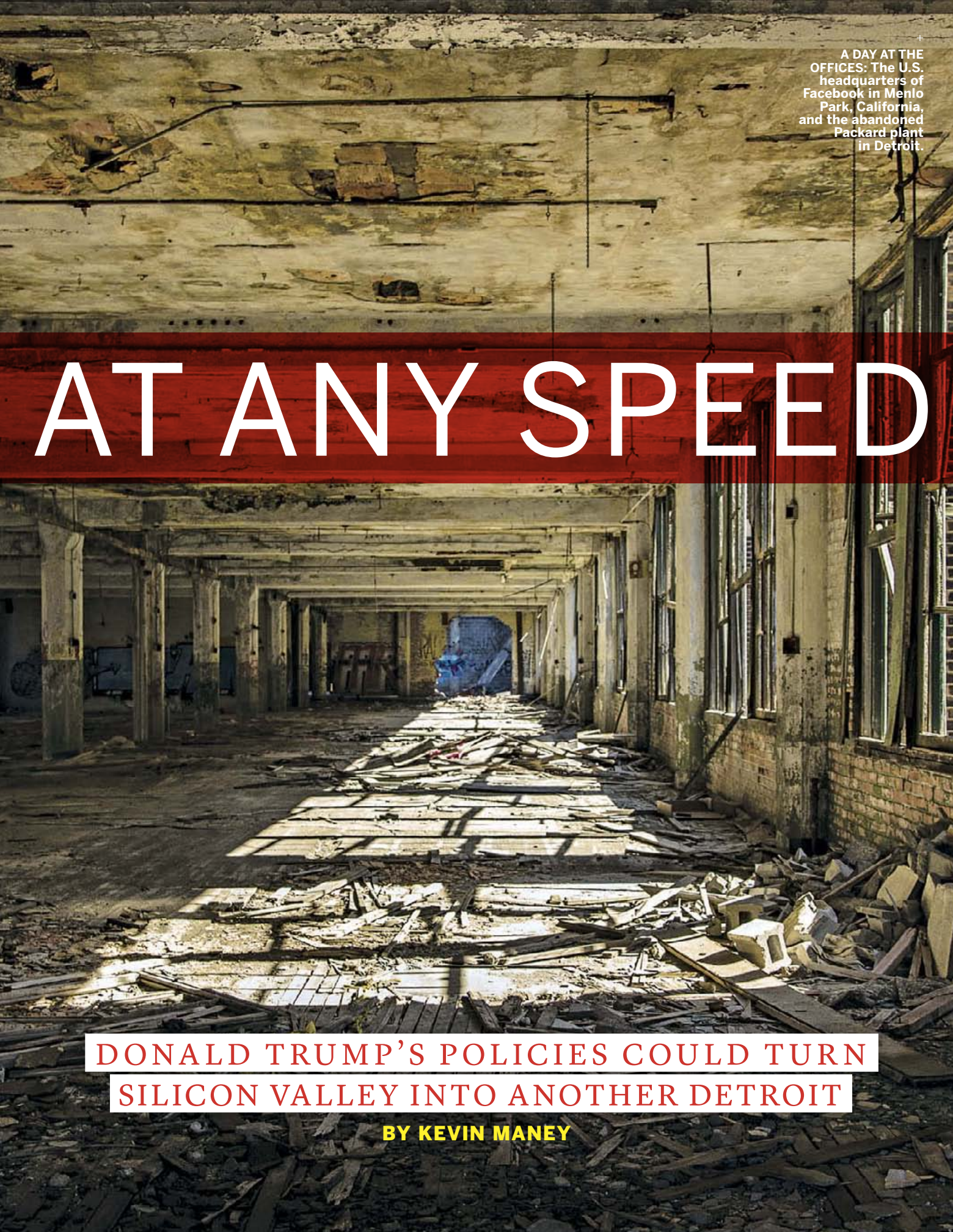
Despite the demands that conservatives obey the new regime, precisely the opposite is needed. Rather than conformity, conservatism needs dissidents, contrarians. It needs people who believe in things like liberty, free markets, limited government and personal responsibility—but who have no obligation to defend the indefensible or rely on alternative facts. It needs people who can affirm that Trump won the election fairly and freely but recognize the gravity of Russia's interference in the campaign. It needs those can support tougher border controls and still be appalled by the cruelty and incompetence of the president's immigration bans. It needs those who applaud Trump's support for Israel but are still thoroughly appalled by his slavish adulation of Putin and his flirtation with France's Marine Le Pen.

This position will be a lonely one; we may lose some friends. But conservatives have a long history of being out of step with the spirit of the age. It's worth remembering that conservative spokesmen like Buckley were actively opposed to Nixon during Watergate, well before he stepped down. Today, there are no "Nixon conservatives," short of maybe Roger Stone.

They are extinct. And good riddance. N

FROM LEFT: DREW ANGERER/GETTY; BEN JACKSON/GETTY


DANGEROUS



A DAY AT THE OFFICES: The U.S. headquarters of Facebook in Menlo Park, California, and the abandoned Packard plant in Detroit.

AT ANY SPEED

DONALD TRUMP'S POLICIES COULD TURN SILICON VALLEY INTO ANOTHER DETROIT

BY KEVIN MANEY

IF YOU WANT AN OMINOUS WARNING ABOUT THE IMPACT OF THE TRUMP ERA ON SILICON VALLEY, LOOK AT A FORMER AMERICAN BEHEMOTH OF INNOVATION: DETROIT.

By 1908, when Henry Ford started building the Model T in a factory there, the automobile was the most important new technology in the world. The industry coalesced in and around that city as inventors and investors rushed to the region. Out of a torrent of startups—Cadillac Automobile Co., Dodge Brothers, Durant Motors, Mercury Cyclecar Co.—a few global monoliths emerged and consolidated. For the next four decades, Ford, General Motors, Chrysler and the city's car-making ecosystem dominated every aspect of the global auto industry—and, for that matter, the U.S. economy. Charles Wilson, who was the president of GM before becoming President Dwight D. Eisenhower's secretary of defense, coined the phrase "What's good for General Motors is good for the country."

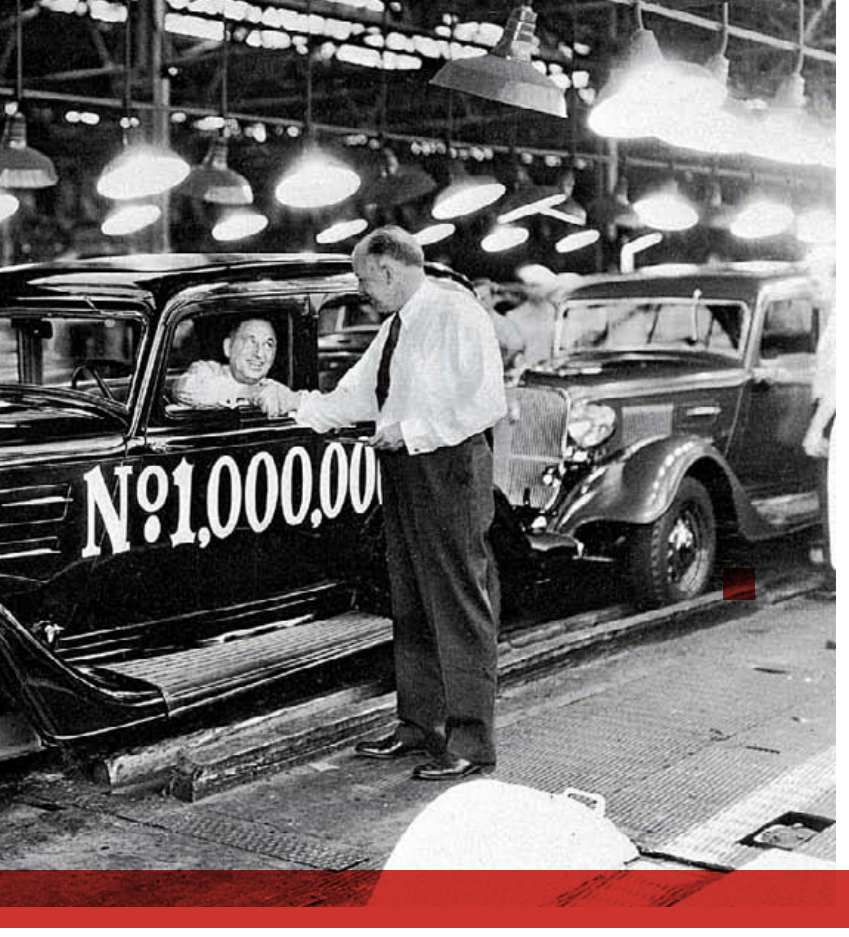
The 1960s were Detroit's apex. In the early 1970s, dubious U.S. economic and foreign policy led to disaster when the OPEC nations initiated an oil embargo. Gas became scarce and expensive, and Detroit was caught focusing on the wrong products—ostentatious gas-guzzlers—at the wrong time, giving Japanese makers of small cars an opening in the U.S. market. Pulitzer Prize–winning auto historian Joseph White wrote about two fateful mistakes that made things worse. First, "Detroit underestimated the competition," he said. The likes of Toyota and Honda had become much more adept than industry executives realized. Second, the U.S. companies "handled failure better than success." Detroit's decades of triumph set up the hubris, waste and bad practices that came to haunt it.

From there, it was a short trip to loss of market leadership, layoffs, plant closings and a city that fell into a desperate decline.

Think that could never happen to Silicon Valley? Like 1970s Detroit, Silicon Valley seems to be handling success rather badly. Look at the twisted mess at Uber and the culture wars tearing at Google's guts. Insanely high valuations of private companies are starting to look like a perilous pyramid scheme Bernie Madoff might admire. High costs and ever-worsening congestion are making the San Francisco Bay Area nearly unlivable for all but the superrich. At the same time, much of U.S. tech is underestimating the competition, particularly from China and the European Union.

Making it all worse, the Trump administration seems to be doing everything it can to help shove Silicon Valley off its pedestal. Trump's policies on trade, immigration and investment are giving competing nations openings to steal important chunks of Silicon Valley's global leadership, lure away talent and divert capital to other rising tech centers—even France. (You know, the country President George W. Bush once

FROM TOP: BETTMANN ARCHIVE/GETTY; MICHAEL SHORT/BLOOMBERG/GETTY; ANN E. YOW-DYSON/GETTY IMAGES; PREVIOUSE SPREAD, FROM LEFT: KIM KULISH/GETTY IMAGES; TUDOR APMADOC/GETTY



SILICON VALLEY, ONCE THE CENTER OF **THE TECH UNIVERSE,** IS NOW JUST ONE **STAR IN A CONSTELLATION.**

+
ENTREPRENEURS DU JOUR: Detroit ruled the car industry for nearly a century by pumping out Fords, Cadillacs, Buicks and Plymouths, top. Silicon Valley rose to prominence by pumping out data and attracting talent from all over the world—including Stepan Pachikov, bottom, who brought his company there from Russia in the mid-1990s.

said doesn't even "have a word for *entrepreneur*.")

The Silicon Valley tech industry isn't going to suddenly crumble and vanish. Detroit's auto industry didn't disappear either. But there's a clear demarcation point in the early 1970s, when Detroit's worldwide hegemony ended. The CEOs, founders and wizards of Silicon Valley would be misguided to think they're immune from any similar stumble off their pedestal.

THE UN-AMERICAN DREAM

I FIRST MET Stepan Pachikov in Moscow in 1991. He had founded ParaGraph, one of the first private software companies in the collapsing Soviet Union. ParaGraph had developed a way for computers to recognize handwriting—not easy in those days. Apple ended up licensing the software for its ill-fated Newton, a handheld PDA. Before 1991, a citizen of the USSR could barely dream of working in Silicon Valley. "The major obstacle between me and the world was the Soviet Union," Pachikov once told me. When the Soviets could no longer keep their people from leaving, Pachikov bolted for the most dynamic technology center on the planet, moving his company and his family to the Bay Area. In 1997, he sold ParaGraph to Silicon Graphics for $50 million.

A few years after, Pachikov built on his knowledge of character-recognition software and founded a company you've probably heard of: Evernote. Based in Redwood City, California, in the heart of Silicon Valley, Evernote makes a productivity app and has around 400 employees. It has raised 10 rounds of funding from 15 investors, including top-tier venture company Sequoia Capital. The story is Silicon Valley at its best: lure great innovators; make capital available; let the startup draw from a local milieu of the best engineers, coders and MBAs; and watch as the enterprise moves the world ahead a few steps.

Fast-forward a couple of decades. Included in the family that Pachikov moved to the U.S. was a son, Alex, now 37. Alex Pachikov recently started Sunflower Labs, a company that marries artificial intelligence and drones to create a new kind of home security system. But to him, the tech scene looks different from the one his father embraced—it's now spread across the globe. "My R&D office is in Zürich," he says. "My industrial design, graphic design and PR are in San Francisco. One of my investors-advisers is in Tokyo. Our manufacturing will be in China and Taiwan. Getting all the time zones right is a challenge."

The arc of the Pachikovs suggests that Silicon Valley, once center of the tech universe, is now just a star in a constellation. Alex Pachikov's company-creation story is becoming more common. Tech investor Andres Barreto said he has six companies incubating inside Y Combinator in Silicon Valley, "but their engineering teams are all in Latin America or they are starting to build teams in Latin America." The transition is reflected in tech job listings in Silicon Valley, down 5.9 percent the first half of the year, according to jobs site Indeed. The trend shows up in the number and kinds of companies started. The region's seed and angel investors completed about 900 deals in the second quarter of 2017, down from 1,100 the same quarter a year before, according to a PitchBook report, while company creation is climbing globally.

Famed tech analyst Mary Meeker noted that 60 percent of the most highly valued U.S. tech companies were founded by first- or second-generation Americans. Those companies employ 1.5 million people and include Apple, Alphabet, Amazon and Facebook—four of the most valuable companies in America. Imagine the long-term impact if more would-be immigrants to the U.S. launch their startups from wherever they are now—if the likes of Stepan Pachikov don't make the journey. The implications are enormous for the U.S. economy, and it could affect America's position in the world. The U.S. projects its culture and values through its tech exports. Billions of people globally are on Facebook, use iPhones and rely on Google—all made in America. The next generation of technology, coming from nations other than America, might look and feel different.

THE UN-UNICORN

IF SILICON VALLEY'S dominance wanes, it will be in part because of what it's doing to itself, and what is being done to it by Donald Trump.

DIGGING A HOLE: Silicon Valley's bro culture—see former Uber CEO Kalanick, top—and Trump's pandering to coal in defiance of economic trends, right, have opened the door for Chinese tech companies.

Remember all the fuss last year about the explosion of tech "unicorns"—those privately held billion-dollar companies? The financial trap behind that trend is threatening Silicon Valley's company-building model.

Because of U.S. regulations and shifting attitudes in the tech industry, successful startups are staying private. Initial public offerings used to be a common way for emerging companies to finance growth, but in 2016, according to a new paper by investment startup Urgent International, just 18 U.S. companies completed IPOs that raised less than $50 million, compared with 557 companies in 1996. In other words, within 20 years, an important path to expansion for small, fast-growing Silicon Valley startups has been blocked. Instead, companies rely on rounds of private financing, which inflate or muddle valuations, leading to unicorns that shouldn't be unicorns. Urgent has a plan to exploit Silicon Valley's IPO problem: It is proposing a way to take U.S. companies public on other stock exchanges around the world. "It's a huge opportunity for us as a fund amid a travesty for U.S. tech companies," Urgent's Jeff Stewart tells me.

The financial mess in Silicon Valley is writ large in the turmoil at Uber. Founder Travis Kalanick, who was ousted as CEO but remains Uber's chairman, refused to consider taking Uber public. He also raised huge round after huge round of private financing, so Uber is now valued at $70 billion—

more than Ford or GM. Yet, at some point, the company will run out of "greater fool" investors who will put up funding at even higher valuations, limiting Uber's ability to raise money. New CEO Dara Khosrowshahi says Uber may go public around 2020, but public markets might value Uber lower than the private valuations, which would mean big losses for Uber's private investors.

This tension over an IPO was at the heart of why one of Uber's main investors, venture company Benchmark Capital, sued Kalanick in a struggle to control the company, making for a mind-jarring scenario: one of the most successful tech VCs suing one of the most successful company founders—an epic Silicon Valley equivalent of Brutus turning on Caesar. In fact, Uber investor and Kalanick supporter Shervin Pishevar unleashed in August a Shakespearean tirade aimed at Benchmark: "Let our just cause give pause to those who would ever dream of ever emulating the shameful shenanigans of these sanctimonious hypocrites," he fumed. You don't often see that in business circles.

At the same time, issues of sexism and discrimination are sullying Silicon Valley's self-image as a land of opportunity for all. At Google, low-level engineer James Damore wrote an anti-diversity manifesto that went viral and challenged the leadership of CEO Sundar Pichai. A book by Ellen Pao, who famously sued venture capital giant Kleiner Perkins for sexual discrimination, just came out, squirting more lighter fluid on that issue's hot coals.

INSANELY HIGH VALUATIONS OF PRIVATE COMPANIES ARE STARTING TO LOOK LIKE A **PERILOUS PYRAMID SCHEME.**

In another ring of the Silicon Valley circus, Tesla CEO Elon Musk has been slamming Facebook CEO Mark Zuckerberg, mocking his knowledge of AI as "limited" after Zuckerberg accused Musk of making "irresponsible" comments about AI being dangerous to humanity. This would be as entertaining as watching Bugs Bunny debate duck season vs. rabbit season with Daffy Duck, except it reflects a growing and sometimes hostile divide in tech over whether AI needs to be tamed or let loose.

Most damaging of all may be the policies of the Trump administration, which has been implementing or proposing one policy after another that puts the industry at a competitive disadvantage. Earlier this year, the president initiated a review of H-1B visas for foreign workers, which tech companies rely on to bring in talent. More recently, the Trump administration delayed—and may kill—the International Entrepreneur Rule, which would make it easier for foreign company founders to bring their startups to the U.S. "At a time when countries around the world are doing all they can to attract and retain talented individuals to come to their shores to build and grow innovative companies, the Trump administration is signaling its intent to do the exact opposite," said Bobby Franklin, president and CEO of the National Venture Capital Association.

And in early September, Trump said he will end the Deferred Action for Childhood Arrivals program, which has allowed undocumented immigrants who were brought to the U.S. as children to stay. Now, they may be deported. Some are valuable employees of tech companies. Microsoft pledged to pay the legal expenses of any employees who face deportation as DACA ends. Microsoft President Brad Smith called Trump's decision "a big step back for our entire country," and the industry worries that it will further

FROM TOP: QILAI SHEN/BLOOMBERG/GETTY; DOMINICK REUTER/AFP/GETTY; JAAP ARRIENS/NURPHOTO/GETTY

A BIGGER POND: Silicon Valley has been the center of the tech universe for years, but the progressive policies of several countries are helping them build out their tech industries and challenge the U.S. for dominance.

discourage talented foreigners from coming to the U.S.

Other countries have begun pursuing international talent like sharks circling surfers at dusk. "I myself hope that many of these engineers will come to China to work for us," said Robin Li, CEO of Chinese tech giant Baidu. Canada's minister of innovation, Navdeep Bains, launched a recruitment program, saying, "We want to be open to people." French President Emmanuel Macron announced tech talent can "find in France a second homeland."

Even more detrimental to U.S. tech are two other Trump decisions: pulling out of the Paris climate accord and dumping the Trans-Pacific Partnership (TPP) agreement on trade with Asia.

Clean energy technology and innovations that solve climate change will be among the greatest business opportunities of the next two decades. Trump signaled that the U.S. won't welcome new energy innovations, which, again, clears the way for overseas competitors and makes it less likely American companies will develop energy solutions for their home market. A Trump America will just keep mining coal nobody else wants.

As political pundits point out, abandoning the TPP decreases the leverage for U.S. companies in the exploding tech markets in Asia and instead hands those opportunities to China's ever more powerful tech industry. The U.S. has nurtured monoliths like Apple, Google, Facebook and Netflix. But China's big three tech companies—Baidu, Alibaba and Tencent—are chasing down Silicon Valley much the way Toyota, Honda and Nissan reached out from Japan in the 1970s and sucker-punched Detroit. Alibaba and Tencent are more than twice as valuable as Intel or IBM.

THE UN-INTELLIGENT APPROACH

FOR DECADES, the home market has been one of the great advantages to starting a tech company in the U.S. Nowhere else on earth could you find a single market with so many people with means hooked to the internet.

China now has nearly 750 million internet users, more than double the size of the entire U.S. population. India, with 1.3 billion people, boasts the fastest-growing internet population, now at about 300 million, and it still has less than one-third of its people connected. So Silicon Valley's advantage of a big home market for launching products is over.

How about its advantage in scientific research and technical wizardry? That's looking shaky as well.

The Chinese government is investing in an AI plan, spending billions of dollars on research and startups. A report last October from the Obama administration found that China overtook the U.S. as the world's most prolific producer of research papers in deep learning publications sometime in 2013—and the gap continues to widen. China's vice minister of industry and information technology, Liu Lihua, reported that China has applied for 15,745 AI patents. A report by American consulting company PwC predicts that by 2030 AI-related growth will increase global gross domestic product by $16 trillion, and nearly half of that growth will accrue to China.

The key to creating the best AI is being able to feed it massive amounts of data from the ongoing behavior of users. The AI learns from the data and gets better. In that realm, whoever has the most and best data usually wins. Now that China has two or three times more users just in its home market, it will have the most data by a big margin.

China's tech companies attracted a record-high $56 billion in disclosed investments last year, according to Tech in Asia. Beijing-based Didi Chuxing, China's Uber-like company, has raised about $10 billion and bought Uber's Chinese operations last year after Uber realized it could not compete in that country.

At least the burgeoning Chinese startup scene may have woken up Silicon Valley. In September, a major San Francisco tech conference, TechCrunch Disrupt, will give over its main stage to interviews with

GETTY

countries are increasingly playing to their cultural and market strengths while pointing to the dysfunctional political climate in the U.S. and the high cost of running a company in Silicon Valley. "I want France to attract new entrepreneurs, new researchers and be the nation for innovation and startups," France's Macron told CNBC. He has taken bold positions that stand in contrast to the U.S., like laying out a plan to ban fossil fuel cars by 2040.

Finland now hosts the highest-profile startup conference outside the U.S., called Slush. It attracts 20,000 people to Helsinki in December, when nobody should want to be in Helsinki. Canada has a growing AI community and committed $100 million this year to develop AI companies, and Canada is home to D-Wave, the best-known startup working on the difficult but potentially world-changing technology of quantum computing. Israel spits out 1,000 startups a year and ranks second in the world in innovation, behind Silicon Valley, according to the World Economic Forum.

The fact that technology companies get created all over the globe is not new. But the momentum has shifted. Silicon Valley and its sister U.S. regions—Seattle, Boston and Austin, Texas—used to win all the time and march their software and services out to every corner of the planet. Today, that kind of total victory is not so certain.

It's possible the momentum shift is temporary. Maybe the developing cultural backlash in Silicon Valley will root out discrimination, and Trump's immigration stance will get reversed, and the world's talent will again dream of working in an open office in Atherton, California. Maybe a financial downturn will reset tech's business practices and make America sane again. Maybe all that will happen before it's too late, and Silicon Valley will prove resilient.

"My reading is optimistic," says Enrico Moretti, author of *The New Geography of Jobs* and a University of California, Berkeley, professor. "Current administration policies, however incompetent, aren't likely to make a big dent on the concentration of tech-

OTHER COUNTRIES HAVE BEGUN PURSUING INTERNATIONAL TALENT LIKE SHARKS CIRCLING SURFERS AT DUSK.

top tech companies from China, including bike-sharing company Ofo, education startup VIPKid and investment company ZhenFund.

And if you want a fun fact with spooky historical echoes, consider that Chinese companies will be making 49 of the 103 all-electric cars expected to be on the market in 2020.

While China will throw up the most likely challengers to Silicon Valley, dozens of other countries are right behind it. For years, other nations have tried to emulate Silicon Valley, even adopting some version of its name, like Silicon Roundabout in London. Now,

nology jobs and firms in Silicon Valley, at least for the next five to 10 years." Yet, Moretti notes, it's probable that Silicon Valley will find itself in a new era of sharing the tech industry with others.

No one in the late 1960s would've thought Detroit was going to have to face a harsher future. In 1965, GM, Ford and Chrysler sold 90 percent of the cars on America's roads, according to Ward's Automotive. That's now down to about 40 percent. So in years to come, don't be surprised if you're in Kansas City or Phoenix or Baltimore, and you get a ride in a Didi while using apps from Tencent. You might even, if things get really crazy, depend on software from some company in France that was started by someone the French might call an *entrepreneur*.

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WHO'S FOR DINNER?

Archaeologists find clues about the purpose of ancient cannibalism

MEAL DEAL: At Gough's Cave, left, Paleolithic humans engaged in cannibalism. Bones found there, above, imply this eating had a ritualistic purpose.

BY **HANNAH OSBORNE**
@hannah_osborne

ARCHAEOLOGISTS HAVE long known that humans have been eating humans for thousands of years, but they aren't always clear on why. A newly discovered human bone engraved 15,000 years ago has fleshed out the incomplete picture of this ancient practice, providing persuasive evidence that some Paleolithic humans engaged in cannibalism as part of a mysterious ritual.

In August, a team led by Silvia Bello, of the Natural History Museum in London, found an engraved zigzag pattern on a right arm bone found at Gough's Cave in Somerset, England. Added to bones from several people found there previously that were scarred with cuts and modified into drinking vessels, the new artifact supports their theory that the practice was in part ceremonial.

From the detailed image described in the study, published in PLOS One, Bello and her team deduced that the engraving was made after the meat was removed but before the bone was broken to extract the marrow. "They took some time. They paused," says Bello. That break in the feast implies the act of etching had meaning, says Bello.

The purpose of the ritual is unknown. Based on studies of cannibalism elsewhere, Bello believes it was part of a funeral practice, although the evidence is too scant to be certain.

She hopes DNA analysis will determine if the individuals whose bones have been found at the cave were related and if the engraved forearm belonged to any of them. Such details could provide clues about the eating ceremony. "We want to know more about what this group was," says Bello. "Were they eating someone external or someone from within the group?" They also want to compare the engravings with bones found at other Paleolithic sites in Europe where evidence of cannibalistic rites has been found.

Locating similar artifacts is crucial for understanding these ancient humans, says James Cole, an archaeologist from the University of Brighton, who studies cannibalism. "There is a deep social and cultural behavior embedded within this act."

In other words, ritual cannibalism may have been the ancient equivalent of an after-dinner drink after a special meal.

I STINK, THEREFORE I AM

The human sense of smell, long denigrated, can finally hold its head (and nose) high

AN EXTRAORDINARY human superpower has long been hidden in plain sight, a secret weapon as easy to spot as the nose on your face...because it *is* the nose on your face. Contrary to popular belief, humans have an excellent sense of smell. And the story behind why we ever thought differently is an incredible illustration of how facts can be buried by bias.

In a newly published paper in *Science*, neuroscientist John McGann, who studies sensory perception at Rutgers University, explains how religious politics in 19th-century France spurred the misconception that humans have a poor sense of smell. The Catholic Church objected to what it deemed the teaching of atheism and materialism, particularly the courses taught at the University of Paris Medical School by an anatomist named Paul Broca whose work focused on the brain.

The criticism, writes McGann, worried Broca, who needed to find evidence to support his view that the mysteries of life could be reduced to simple scientific facts. For example, McGann explains that Broca, who subscribed to Charles Darwin's theories about evolution, first published in 1859, did not think the human soul existed separately from the human body. Based on his observations that humans have larger frontal lobes—the portion of the brain behind our forehead—than other mammals and that damage to this region could impair speech and cognition, Broca concluded that this mass must be where the soul resided. That conclusion went against the beliefs embraced by strong and powerful religious leaders at the time, who held that the soul was created by God, was the seat of consciousness and freedom, was not confined to any single part of the body and did not die with the body.

Enter our sense of smell. In humans, the olfactory bulb—the portion of the brain that registers odors—appears comparatively smaller than that of some other animals. But, explains McGann, that difference is just the result of the bulb's location. In rodents, the olfactory bulb is relatively bigger and sits right at the front of the brain. Human olfactory bulbs are smaller, squashed flat and tucked under the frontal lobe. Broca inferred that the smaller size meant a less powerful olfactory system.

He then leapt to the conclusion that the human sense of smell was diminished in exchange for its powerful intellect. "It is no longer the sense of smell that guides the animal: It's intelligence guided by all the senses," Broca wrote in 1879. He believed that free will stemmed from the frontal lobe and that the physical space required for this development meant the olfactory bulb had to shrink. This explanation provided Broca with the scientific justification he needed for views that the church, powerful both culturally and politically, did not support.

McGann explains that making this case had the unexpected consequence of shaping how we think about our ability to detect and identify scents. The shrunken human olfactory bulb and the observation that humans weren't as preoc-

BY
JESSICA WAPNER
@jessicawapner

WHIFF OF TRUTH: Religious politics led to the misconception that humans have a poor sense of smell. The human olfactory system is actually extraordinarily sensitive.

SOLENT NEWS/REX/AP

cupied with odors as, say, rodents led Broca and others—through what McGann describes as "a chain of misunderstandings and exaggerations"—to conclude that humans have a poor sense of smell.

That mistake had widespread impact. McGann cites the example of Sigmund Freud, who theorized that our loss of smell led to sexual repression. Furthermore, Freud said, a person who was particularly delighted by smell probably had a mental disorder. All of this, McGann explains, was tied to the view that a better sense of smell was somehow anathema to our distinguished role as humans in the world of animals. To err may be human, but to smell was beneath us.

TO ERR MAY BE HUMAN, BUT TO SMELL WAS BENEATH US.

Richard Doty, who directs the Smell and Taste Center, part of the Perelman School of Medicine at the University of Pennsylvania, says Darwin also dismissed the power of our olfactory system. In 1871, in a pronouncement infused with racism, Darwin wrote in *The Descent of Man* that smell "is of extremely slight service, if any, even to savages, in whom it is generally more developed than in the civilized races. It does not warn them of danger, nor guide them to their food; nor does it prevent the Esquimaux from sleeping in

the most fetid atmosphere, nor many savages from eating half-putrid meat."

McGann transforms that view. First, it turns out the human olfactory bulb has about the same number of neurons as that of species traditionally thought to have a strong sense of smell. In fact, human males have more olfactory neurons than mice, hamsters and guinea pigs. Human females have somewhat fewer neurons but still beat out rats. And it's the neurons that matter when it comes to detecting and responding to odors.

It is true that human smell differs from that of other species. In particular, humans can smell only odors that waft through the air. Other species do not have this limitation. "Dogs can smell odors that stay in liquid form," says McGann. "That's why they put their nose on things." And while we can detect all manner of odors, we can't identify the individual chemicals creating them. "Coffee is about 150 chemical compounds," says McGann. "But you don't smell 150 things, you smell coffee." Unlike our sense of hearing, which can isolate the flute in an orchestra, our sense of smell does not zero in that way, he says.

Still, McGann emphasizes that our sense of smell is much better than we usually acknowledge. The human olfactory system can identify an odor from just an atom or two of a fragrant chemical. One recent study estimated that humans can detect more than 1 trillion distinct compounds. "It's widely, and incorrectly, believed that humans are primarily visual, that we lost our olfactory prowess when we became a bipedal species with our noses far from the ground," says Leslie Vosshall, who studies sensory perception at Rockefeller University in New York. This investigation by McGann, says Vosshall, "shows convincingly that the human sense of smell is incredibly powerful."

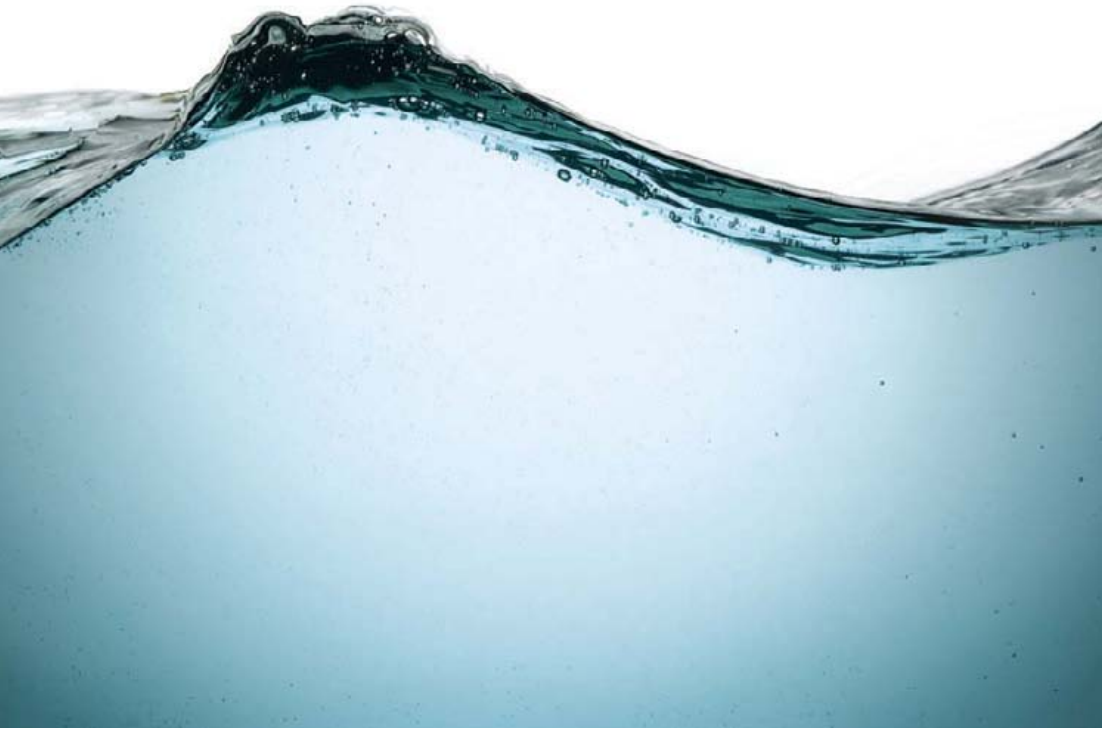
The influence that odors have on us also hints at the importance of this sense. Fragrances wafting through our noses and reaching our olfactory bulbs can change thoughts and feelings in an instant. We respond to one another's "body odor cocktail," as McGann puts it, and decide whether a person, place or thing is safe or dangerous partly based on smell. According to one recent study, we unconsciously smell our palms after shaking hands with strangers.

The myth that humans have a poor sense of smell has had consequences. About 1 to 2 percent of people in the U.S. suffer from an olfactory disorder, including complete loss of the sense or smell hallucinations. Chemotherapy can also diminish or alter smell as a side effect. The change, which can be permanent, leaves many patients depressed and can also pose nutrition problems because taste is closely tied to fragrance. A change in olfactory abilities can also indicate an underlying neurodegenerative disease. But research to understand why these conditions occur and how to treat them has been slow to progress, partly because of how smell has been minimized by this history. No remedies exist for these conditions. "Because for 100 years we've had this idea that our sense of smell is an afterthought," says McGann, "loss of smell as a medical problem has gotten the short shrift."

Doty cautions against overestimating the proficiency of our olfactory system. "This system is overlooked and taken for granted," he acknowledges. "However, anyone who has owned a dog knows that humans clearly do not have the same capabilities." He notes that humans don't rely on this sense in the same way as many other mammals do and are able to survive without it. The same is not true for many other species: a hamster's odor, for example, is a priority for mating.

McGann is continuing to study smell, particularly how our olfactory system changes as our brains accrue information about odors. He often recommends to his students that they blindfold themselves and crawl around in the backyard as a way to begin understanding the power of their olfactory system, an experience he found revelatory. "Partially, I never paid attention," he says, "and partially, I never put my nose where the good stuff was."

THE MYTH THAT HUMANS HAVE A POOR SENSE OF SMELL HAS HAD CONSEQUENCES.



JOSEPH CLARK/GETTY

H²OUCH

A NEW TOOL HELPS AMERICANS KNOW WHAT HARMFUL CHEMICALS LURK IN THEIR DRINKING WATER

THE ENVIRONMENTAL Working Group recently released a new online tool that allows users to check the safety of their drinking water. With just a ZIP code, the database delivers information about the contaminants in the water utility serving that region. EWG has also issued a guidebook and a summary of the state of drinking water in America.

Many kitchen sinks across the U.S. pour water with chemicals that may pose health risks. Investigations by the nonprofit EWG found that many water utilities are delivering industrial and agricultural contaminants in every glass of tap water. Whether the amounts of these chemicals are reason for concern is a matter of debate. The levels that federal and state regulatory authorities deem safe do not always match the scientific data on health risks.

To assess the safety of drinking water throughout the country, the EWG obtained data from state agencies and the Environmental Protection Agency for testing conducted from 2010 to 2015. A total of 48,172 utilities from all 50 states were included in the study.

In the EWG analysis, water samples from across the country tested positive for 267 of the 500 contaminants in the search. The chemicals included 93 the EWG says are linked to an increased risk of cancer, 78 that have been tied to brain and nervous system damage, 63 associated with developmental harm to children and fetuses, and dozens of others that may be implicated in fertility or hormonal problems. The levels of the contaminants in our everyday water supply are not necessarily high enough to cause this potential harm, however. And scientists aren't sure whether all of these chemicals are directly responsible for the ailments to which they're linked or if the connection is looser.

But there is reason to be concerned. As is well known, high levels of lead in the drinking water for residents of Flint, Michigan, caused a widespread and long-lasting crisis. Lead is unsafe at any level. According to the EWG, nearly 19,000 public water systems it surveyed contained lead exceeding 3.8 parts per billion, which is considered risky for formula-fed babies.

Some of the lesser-known compounds found in the tested water include the industrial chemical chromium-6; 1,4-dioxane, an industrial solvent and byproduct of some detergents and shampoos; and nitrates, which are used in agricultural fertilizers.

The EWG also found a correlation between income levels and water quality. Areas with a higher average income often had fewer contaminants than lower-income areas. The East Los Angeles Water District had the highest number of contaminants of all the regions tested. It serves 115,000 people and has a median income 20 percent below the national average. Those wishing to find out how safe their drinking water is can enter their ZIP code online at **EWG.org/TapWater.** N

BY **JESSICA WAPNER** @jessicawapner

Five Potentially Dangerous Contaminants in Your Tap Water

Scientists generally agree that most of the nation's 53,000 community water systems provide relatively safe drinking water, but there's still reason for concern in some areas. Here are five widespread and troublesome pollutants found in tap water around the country.

ARSENIC

A carcinogen, arsenic is responsible for thousands of cases of cancer each year in the U.S. The Environmental Protection Agency has set the drinking water standard at 10 parts per billion, though research suggests exposure to lower levels is unsafe.

ATRAZINE

This widely used herbicide is an endocrine disruptor that may interfere with the body's hormones and glands. It also causes liver, kidney and heart damage in animals, and the same might be true in humans. Maternal exposure has been linked to low fetal weight, as well as heart, urinary and limb defects in babies. Low concentrations of atrazine can turn male tadpoles into female tadpoles.

CHROMIUM-6

This carcinogen was made notorious in the film *Erin Brockovich,* a true story about a clerk who helped bring Pacific Gas and Electric Co. to its knees for dumping chromium-tainted wastewater near the town of Hinkley, California.

LEAD

There is no known safe level of lead, a heavy metal contaminant in water that devastated Flint, Michigan, and continues to flow at unsafe levels in cities throughout the country. Because it leaches from lead in old pipes, it can be difficult to control, as one house may be safe, while the next is not.

PERFLUORINATED CHEMICALS

These substances, similar to Teflon, are toxic. A growing body of research shows that they disrupt the endocrine system, harm the immune system and brain, and raise a person's risk of cancer and obesity. *—Doug Main*

MOVIES

How Deep Was His Love?

MARK FELT IS ABOUT THE FBI AGENT WHO TOOK DOWN PRESIDENT NIXON—THE REAL HERO OF WATERGATE

BY **JEFF STEIN**
@SpyTalker

THE STANDARD Watergate narrative goes like this: Two young *Washington Post* reporters take down the president of the United States with the help of a wacko government source code-named Deep Throat who likes to meet secretly in underground parking garages.

Wrong, says former journalist Peter Landesman, the writer and director of *Mark Felt*, a powerful new film about the secret FBI source who led Bob Woodward and Carl Bernstein to the larger story of President Richard M. Nixon's dirty tricks behind the Watergate break-in.

"It's one of the greatest films of all time," grants Landesman, speaking of *All the President's Men*, the 1976 film based on the Woodward and Bernstein book of the same name. "And it's an important book. It's just not the whole truth."

Landesman's film, the third he has written and directed (including 2015's *Concussion*), aims to set the record straight, and it provides Liam Neeson with his best role to date. Neeson plays FBI lifer Felt, the bureau's then–second in

command, the guy who almost singlehandedly forced Nixon to resign on August 9, 1974. "And nothing was ever the same in American politics," says Landesman. *Newsweek* talked with him about that and much more.

I agree with you that the mythology of Woodward and Bernstein and *The Washington Post* taking down Nixon needs a correction. A Democratic-controlled Congress and the role of Felt and the FBI deserve equal if not more billing.
That's taking nothing away from Carl or Bob. I think Bob, especially, appreciates the fact that it wasn't only about them. They know that. They'd be the first to say it. But, you know, look, the power of Hollywood, especially the star power of the biggest movie star in the world at the time [Robert Redford, who played Woodward], that in itself creates a life and a mythology of its own. Once the book and the movie came out, other people in the Watergate [investigation] realized it was pointless to raise their hand and tell their story.

There are obvious comparisons to be made between the Watergate leaks and the skulduggery going on now. Did Donald Trump's rise inspire the film in any way?
I started on this right after Felt confessed [to being Deep Throat] in 2005, finished the screenplay in 2008 and shot and wrapped the film before last year's Republican Convention. So the coincidence is supernatural. It does confirm that human behavior doesn't change. There's always going to be some level of corruption and rot at the top, and there's always going to be somebody with integrity and self-sacrifice at the bottom who's willing to do the right thing at his own peril.

Does Jim Comey, the FBI director Trump fired, remind you of Felt?
I know Jim a little bit. Jim, to me, displayed the same kind of integrity that Felt does. While I don't agree with everything Comey did, I do believe he was well intentioned. Like Felt, he always intended to be protecting the FBI. And Comey was similarly beloved inside the FBI. The difference, of course, is the anonymity [of Felt] versus [Comey] showing up at a committee hearing and telling the world.

Comey did leak the notes of his meetings with Trump.
Yes, but I don't think even he thought that was going to be kept a secret—not these days, right? There's complete transparency. You can't get away with anything. To me, the true sign of philanthropy or heroism is building a building and not putting your name on it. Felt's anonymity is proof of his selflessness. I think he was ashamed that he betrayed the FBI's code of confidentiality, but he knew he did it in the name of the greater good. I believe Comey felt the same. I'm a huge fan of his. I hope he's going to run for president.

Really? President?
I think Comey's considering running for office in Virginia in a couple years and then the nomination two years after that.

What makes this film relevant for people who weren't alive during Watergate?
The story of self-sacrifice and integrity is universal and timeless. The myth of David versus Goliath endures for a reason, and I can't think of a better David than Felt—as opposed to Edward Snowden or [WikiLeaks founder Julian] Assange, who's a sociopath. These are guys who are playing God. They're not whistleblowers; they're sowers of chaos. Releasing unmediated information—data and information are not narrative; they don't tell a story. They just send out ones and zeros that allow anybody to create a narrative. Felt leaked the information in a way that would create the narrative that would lead the reporters to the White House. He was a very different kind of whistleblower.

What was your reason for making the film, and for focusing on Felt?
I'm an old investigative reporter for *The New York Times Magazine*. I used to write long investigative cover stories, and for one of them I went back and re-reported Watergate, with access to new FBI material and to Felt's people. I sat down with Ed Miller, Felt's right-hand man [played by Tony Goldwyn], in Washington. He looked at me and said, "You know, Watergate is really a love story."

MAKING AMERICA GREAT AGAIN: Neeson, left, as Mark Felt, who was interviewed on *Face the Nation* in 1976, below, 29 years before he revealed that he was Deep Throat.

FROM LEFT: COURTESY OF SONY CLASSICS; CBS PHOTO ARCHIVE/GETTY

I said, "What the hell do you mean by that?" He says, "Well, Mark Felt was as motivated by his family, his wife—his Lady Macbethian, alcoholic firebrand of a wife—and his missing daughter. Mark Felt is a complicated man and an emotional man and a man of enormous distress."

That's when the movie became clear to me. I realized all I had to do is look at this new library of information through the keyhole of Felt's very subjective point of view. I got inside the heart and mind of the man who had, in many ways, been more responsible for changing the course of American history than maybe any single one person. It was a version of Watergate that nobody had ever seen before.

One thing surprised me. You give the investigative reporter Sandy Smith, then of *Time* magazine, as much or more of a role than Bob Woodward. What's that about?

Smith was a contemporary of Felt's. They considered each other to be colleagues and friends. Felt had been talking to him for probably 10 years, though never on the record. J. Edgar Hoover [the longtime FBI director] had really looked the other way and allowed Felt to manage the media in this way. [Hoover died a month before the Watergate break-in, and Nixon placed a straw man above Felt to control the investigation.] Woodward was a rookie, and Felt was like a cat with a ball of yarn; he could manipulate and nudge him around really easily. Woodward was just one of a number of people Felt was in constant touch with about leaks.

In many ways, Smith's work, which was not as directly Watergate-related, was as important, and certainly the last push. It was after January [1973]. Nixon had won re-election, and he looked like he was going to get away with [the Watergate cover-up]. Felt went to Smith and dropped the wiretap story that's in the movie. That was the story that forced L. Patrick Gray [the Nixon-nominated acting FBI director after Hoover] to fall apart in [his confirmation] hearings. Felt knew Gray was weak, that he would fold and give up John Dean [Nixon's White House lawyer], and that it would lead back to the Watergate files [that Gray had given Dean]. It was a brilliant piece of misdirection. He used Smith to do it, not Woodward, probably because Woodward was not sophisticated enough, and not in as deep in Washington.

Yeah, I was surprised that you portrayed Gray's meltdown in the committee hearing as the pivotal moment.

There are a lot of pivotal moments, and by no means is this movie a compendium about Watergate. But in the narrative of Mark Felt and his relationship with Nixon, it was the pivotal moment, the climax of his efforts. It was his last-ditch effort to manage the [Nixon] administration enough that it could crumble from the inside. There's that operating metaphor that he gives Smith, about the rhythm of things and how molecules assemble and electrons dissemble. Felt understood institutions, understood what would happen if he kept the pressure up.

Did you learn anything new about Watergate in your research?

Everything I've just said is brand-new to me. But I also learned that Felt was probably identified by people within the FBI. There's that scene where Felt's underling, Charlie Bates [Josh Lucas], figured it out. Felt is laying covering fire everywhere, including taking down some of his own people—which is in some sense heartless, but in the other sense, it's for the greater good. He would have done anything to protect the FBI from the return of Bill Sullivan [an infamously corrupt agent and Nixon loyalist, played by Tom Sizemore]. Sullivan represented everything bad in Washington as far as Felt was concerned.

When I first read about the casting of Neeson as Felt, I thought, Oh no, he's all wrong. But he nails the guy. How did you come to pick him?

Liam's integrity as a man is, to me, similar to Felt's. As an artist too: He played Oskar Schindler, another guy who was flawed and complex and did the right thing at his own peril. And he looked the part. Felt's daughter thought Liam really captured her father.

You describe Felt's wife, Audrey—who is played by Diane Lane, superbly—as being integral to finding your way into this story.

Felt was in servitude to that marriage. He was really in love with her but had no way to control her. This was the '50s, '60s, '70s. She was probably bipolar—certainly an alcoholic. A man like that, as powerful as he was, was powerless against her ferocity and obvious mental illness. She drove their daughter out of the house, to run away to a commune. She eventually killed herself with Mark's FBI gun.

I find her crucial to understanding him. That marriage—all these powerful men have marriages that define what they are and what they become. N

Mark Felt: The Untold Story of the Man Who Took Down the White House opens September 29.

COURTESY OF SONY CLASSICS

MOVIES

From the Jaws of Steven Spielberg

THE MOST SUCCESSFUL AMERICAN FILMMAKER ALWAYS KNEW WHAT HE WANTED. HERE'S HOW HE GOT THERE

FOR MOST well-known artists, success comes in waves. For director Steven Spielberg, it has continued, nearly unabated, for close to half a century. A pioneer of the summer blockbuster (beginning with *Jaws*), he is, at this point, the ideal of a Hollywood director, with a career total of nearly $10 billion at the box office—roughly $3 billion more than his nearest competitor. In a new HBO documentary, *Spielberg*, directed by Susan Lacy, he reveals a bumpy start.

He almost gave up after seeing *Lawrence of Arabia*. Spielberg started making films when he was 13 but nearly quit three years later, after seeing David Lean's 1962 epic. "The bar was too high," he says in the documentary. "I had such a profound reaction to *Lawrence of Arabia*." Instead of giving up, he learned from the movie, revisiting the theater multiple times, absorbing Lean's masterful mix of stunning visuals and emotional impact. He decided, "This was going to be the rest of my life."

The college dropout was rejected from the University of Southern California's film school. It didn't stop him. Though an exaggerated legend has persisted that he snuck onto the Universal lot, found an empty office and put his name on it, he did sneak onto the lot and onto sets so he could observe and educate himself. When Universal President Sid Sheinberg, saw a short film Spielberg had made, *Amblin*, he professionally adopted Spielberg, giving him a seven-year contract to direct TV shows. "I had a very strong feeling that this was not your average young filmmaker," Sheinberg says in the doc. He championed Spielberg throughout his career, giving him his first big directing break, *Jaws*, in 1975. *In* 1982, he shared a book called *Schindler's Ark,* ripe for adaptation. (*Schindler's List* netted Spielberg his first directing Oscar, in 1993; it also won best picture.)

George Lucas thought Spielberg was too flashy. Spielberg was considered a prodigy when he started directing TV at Universal, but some of the rougher up-and-coming filmmakers, like Lucas and Francis Ford Coppola, thought he was too Hollywood. That changed in 1971, after Lucas reluctantly went to see the 25-year-old's debut film, *Duel*, a thriller starring Dennis Weaver as a driver terrorized by a huge truck. Lucas, who had expected to leave after 30 minutes, told Coppola, "This guy is amazing. You've really got to look at this film."

***Jaws* nearly ended Spielberg's filmmaking career.** The horror wasn't just on the screen: Spielberg nearly got canned when the film came in late and over budget; during the shoot, there were also near-drownings, boating mishaps and a malfunctioning mechanical shark, which Spielberg was forced to shoot around. But he learned that "what you don't see is generally scarier than what you do see." In the documentary, Spielberg recalls driving around L.A. with director Martin Scorsese on opening night; seeing the long lines stretched around blocks, he knew he had a filmmaking career. *Jaws* would go on to become the highest-grossing film of all time—until *Star Wars* opened in 1977.

Aside from Lucas, only Spielberg believed in *Star Wars*. Directors Spielberg, Lucas, Coppola, Scorsese and Brian de Palma became a tight-knit crew, challenging and advising one another. Together, they would revolutionize the film industry. When Lucas finished a rough mock-up of *Star Wars,* he showed it to the group. "It was basically a children's film," says Lucas. "Steven was the one person who was enthusiastic about it. He said it was going to be a huge smash." But it was de Palma who came up with the film's iconic scrolling prologue. Spielberg remembers that de Palma "went off" on Lucas for the film's lack of context, then suggested it begin with a forward, to explain "what the hell you're looking at and why you're in the theater and what the mythology is."

Studios initially weren't interested in *Indiana Jones*. Looking to bounce back from one of his few flops, 1979's *1941*, Spielberg jumped at the chance to helm Lucas's new project, about an archaeologist who hunts for supernatural artifacts. But Spielberg's reputation for going over budget had every studio turning them away; some suggested Lucas find another director. Spielberg promised his friend he would be more economical and he'd do two sequels if the film was a hit. It was, adding up to three more blockbusters for Spielberg and Lucas.

***E.T.* didn't start as a film about an alien.** "It was going to be about how divorce affects childhood and how it kind of traumatizes children," says Spielberg, who was a child of divorce (a topic he explores in several films). "The overall theme was going to be about how to fill the heart of a lonely child," he says of the 1982 hit. "What extraordinary event would it take to fill Elliott's heart after losing his dad?" Eventually, Spielberg realized that "it would take something as extraordinary as an extraterrestrial."

Spielberg discovered CGI, sort of. *Jurassic Park* producer Kathleen Kennedy says Spielberg told her he wanted 30-foot dinosaurs that could run and that the actors could interface with. All the experts she spoke with said dinosaurs were no problem, but getting them to run would be impossible. Enter computer-generated imagery, via a company called Unix. This is the future, Spielberg thought after a demonstration. And so it was.

—*RYAN BORT*

AF ARCHIVE/ALAMY STOCK PHOTO

FROM LEFT: RICK DIAMOND/MSBB14/GETTY IMAGES FOR BLACKBIRD PRODUCTIONS; MICHAEL LOCCISANO/GABB14/GETTY IMAGES FOR BLACKBIRD PRODUCTIONS

MUSIC

Gregg Allman's Last Song

IN THE FINAL YEAR OF HIS LIFE, THE SOUTHERN ROCK LEGEND DID WHAT HE LOVED MOST: HE PLAYED

IN 2012, Gregg Allman learned that he had a recurrence of liver cancer. The news was bleak: The disease was terminal. He was told he had 12 to 18 months to live. Allman's best friend of nearly 50 years, Chank Middleton, was puzzled by Allman's reaction. "Gregg didn't complain," he says. "He didn't worry. If they had told me that, I would've gone into straight shock."

Instead, Allman, who founded the Allman Brothers Band in 1969 with his brother, Duane, rededicated himself to what he loved most. "Music was his life," says Middleton. "It never was about the money. It was always about the music." That's why, when faced with the option of radiation treatment, Allman said no. It might have affected his vocal cords, and there didn't seem much point in extending his life if he couldn't sing.

Allman, who died on May 27, outlived that initial prognosis by five years, enough time to make a final album. *Southern Blood*, released September 8, is spirited, often moving and rooted in the Southern rock—a fusion of rock, blues, jazz and country—that he and Duane helped pioneer, a sound immortalized on their albums *Eat a Peach* and *Brothers and Sisters*. The

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new album was recorded at FAME Studios, in Muscle Shoals, Alabama, a place that reminded Allman of his older brother. In the late '60s, Duane was the primary session guitarist there, recording with, among others, Aretha Franklin, King Curtis and Wilson Pickett. (Duane taught "Hey Jude" to Pickett, and they recorded it together in 1968.)

Southern Blood is all covers, except for one original song by Allman, with Don Was, of Was (Not Was) fame, serving as producer. The sessions, which lasted just a little more than a week, were a joyful affair, says Middleton, who was constantly by Allman's side. The two became close friends in 1969, the year the Allman Brothers Band formed. By that time, they had settled in Macon, Georgia, to be closer to Capricorn Records, and Middleton was working at a barbershop next door to the studo. Recalling the brothers, he says with his deep Georgian drawl, "When they go into the studio, they were dogs, all them tails would be waggin'." Middleton would go on to become, according to a 2013 profile, an Allman "muse, crisis responder, aide-de-camp, valet, wingman and confidante."

Was learned of Allman's health problems while participating in a 2014 tribute concert in the rocker's honor. After overhearing a conversation that wasn't intended for him, "I got a sense of how serious his illness was," he says. "When we started the record, I was aware that he probably wouldn't be around to do these kinds of [promotional] interviews."

Was recalls the recording process. "It's weird, man. There was a lot of duality to it. Clearly, we were doing something important that had overtones of gravitas—and a kind of somber [mood]. Even if he'd lived another 20 years, he was very focused on getting that sound, and the group of songs that we'd settled on was making the statement that he wanted to make as a farewell. But at the same time," Was adds, "we had a great time making the record. He was very upbeat."

Among the highlights are a gorgeous cover of Bob Dylan's "Going, Going, Gone" and a cathartic "My Only True Friend," an ode to life on the road, co-written by Allman and guitarist Scott Sharrard. "You and I both know this river will surely flow to an end/Keep me in your heart and keep your soul on the mend," Allman sings, a line that recalls Warren Zevon's wrenching farewell ballad "Keep Me in Your Heart." Then, as the acoustic chords rise, he sings, "I hope you're haunted by the music of my soul when I'm gone."

The song reminds Middleton of Otis Redding's "(Sittin' on) the Dock of the Bay," which was also released posthumously. "It's like Gregg saw something we didn't see at that point," says Middleton, his voice heavy with emotion. He remembers hearing it in the studio and being unimpressed. "That song didn't register until he had passed."

The album's final track, a vulnerable rendition of "Song for Adam" by Jackson Browne, made the deepest impact on Was. Browne, who duets with Allman on the recording, wrote the song in memory of a friend who had died. But Allman sang it with his brother, Duane, in mind.

Browne and Gregg were quasi-roommates in the late '60s, crashing on the floor of the same house in Los Angeles. "Song for Adam" appeared on Browne's 1971 debut album, released a few months after Duane's fatal motorcycle crash, when he was just 25. "Gregg always loved that song," Was says. "Once Duane passed away, I think it really reminded him of his brother. He'd always wanted to record it." During the *Southern Blood* sessions, Allman had a hard time singing it through. "When we got to the third verse, it seemed like he stopped singing in the middle of the song. You can hear it on the record. Gregg got choked up. It was pretty heavy."

That silence remains on the album: Allman's voice grows hoarse and abruptly trails off. The producer figured he would eventually sing those two missing lines. "But that time never came," Was says. "His health deteriorated shortly after that. Gregg stopped singing in the middle of the song literally and figuratively. We just left those two lines open."

It was the last song recorded. Allman's illness soon progressed, and he never visited the studio again. Country singer and songwriter Buddy Miller, a friend of Allman's, was eventually recruited to do the harmony overdubs that Allman had intended to sing.

"All the way up to the very end of his life, Gregg was not afraid of death," Middleton says. "He sat up on the sofa every day. He never was bedridden. He never complained. He never did seek any sympathy from nobody."

Speaking about the record, Allman told Was, "You know what to do. You got it. I trust you to finish this thing." He was pleased with the final mixes he heard, some of them on May 26, the night before he died. "Me, him and [his wife], we sat up until 3:30, 4 in the morning listening to some cuts," says Middleton. "We listened to 'Song for Adam' about three times. He was so proud of it." Allman was 69 when he died; he'd outlived his friend Butch Trucks, the original drummer for The Allman Brothers, by four months.

Middleton misses his friend, and he misses the music. "To me, losing Gregg is one thing. Losing his music is twice the hit." N

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MIDNIGHT RIDERS: Allman with producer Don Was, left, and with his old friend Jackson Browne, below, recording "Song for Adam."

TWO QUESTIONS

Liam Gallagher VOCAL DISCORD KING

ENGLISH BAND Oasis created massively popular and influential rock music, a supersonic brand of guitar-heavy Brit-pop. Their debut album, 1994's *Definitely Maybe*, made the Gallagher brothers overnight stars: Older brother Noel wrote the songs, and frontman Liam—the ultimate bad boy—delivered them in classic rock star fashion.

But it was the siblings' famously combative relationship that eventually did Oasis in. Noel quit in 2009. Liam and the rest of the band went on as Beady Eye until 2014, after which Liam took a boozy sabbatical. He describes a typical day in 2015 as going to the pub for lunch and, before you know it, "it's fucking 2 in the morning." Once that was out of his system, he began writing songs for a first solo album, *As You Were*, to be released October 6. Of his new backing band, he says pointedly, "We're having a good time. I don't miss anything. I don't miss yesterday, and I don't miss tomorrow."

Liam and Noel still don't talk, though Liam claims that nasty tweets about his brother shedding tears at a benefit concert in Manchester, England (Noel became emotional while playing "Don't Look Back in Anger") were the result of someone hacking his account. "I wouldn't say stuff like that. Can you believe it?" Yet, on a recent call with *Newsweek*, it was clear Gallagher is still a champion trash-talker.

You did a bunch of Oasis songs at your recent show in Brooklyn. How did it feel to play them again?

It feels good. I mean, listen, man, I'm Oasis through and through. If people are coming to our gigs, my head's not that far up my own ass where I think they're just coming to hear a load of new songs. They work hard every day of the week, and they're parting with their money. If they wanna hear "Wonderwall" and "Rock 'n' Roll Star," I'm gonna do it. The last thing I want is people at my gigs on their phones saying, "Ah, I'll wait for the next album to come out, I'm not sure about this one." I want people to go off their fucking tits.

Noel's got all these little fanboys going, "Oh, well, [Liam] didn't write the songs." So fucking what? I fucking sang them, you little cunt. It's about the songs, and it's about the fucking voice. When I've heard Noel's versions of Oasis songs, it nullifies them a bit, makes them really kind of boring. Noel's rendition of "Wonderwall" is a bit like Ryan Adams, innit? Who the fuck wants to hear "Supersonic" acoustic? Should be fucking ashamed of yourself, mate, know what I mean?

When you were in New York, you tweeted that you got carded buying cigarettes.

I don't really smoke that much—I've definitely calmed down a lot—but I was having a bit of a day and I thought, You know, I could do with a fucking cigarette. So I went in the shop and the geezer says, "Have you got any ID?" I said, "Are you taking the piss?" He went, "Well, that's the way it is." I said, "I'm 44, mate. Look at the fucking state of me." He said, "No, you've got to go and get your ID." He didn't have no idea who I was, see. There's a lot of work to be done, mate. —*ZACH SCHONFELD*

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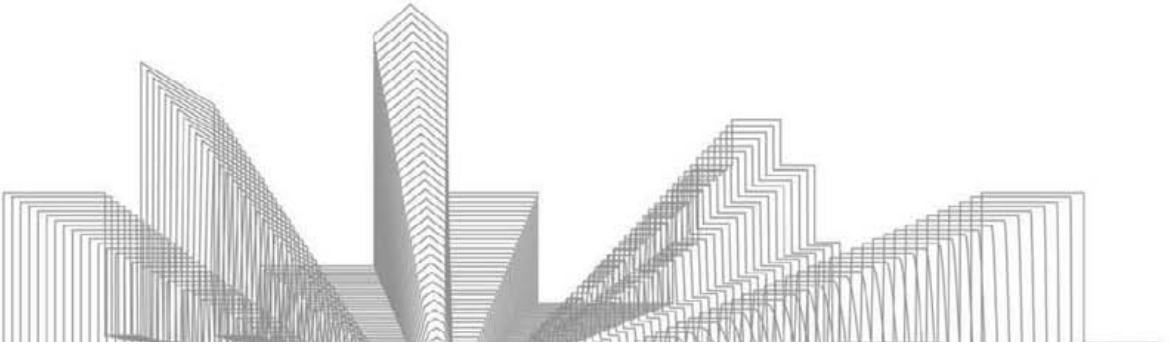

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