

Bloomberg Businessweek

SPECIAL
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“There are
always a
lot of good
choices, and
then there’s
the one
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A HUB FOR ALL THINGS TALENT ACQUISITION

ONE CENTRALIZED ONLINE MARKETPLACE IS CHANGING THE WAY COMPANIES RECRUIT, HIRE AND ONBOARD NEW EMPLOYEES

There's a revolution happening in the recruitment technology used to hire and onboard talent. And it's not only because savvy recruiters are using social media, Big Data and other tech innovations to help find and screen candidates. No, the latest revolution is in the solution that's emerged to allow all the tools, services and technologies used in recruitment to work together seamlessly on one easy-to-use platform.

While businesses have long been able to take advantage of Salesforce's cloud-delivered CRM (Customer Relationship Management) platform to unify all aspects of sales and marketing into a centralized system, nothing similar has been available in the talent acquisition sphere.

In fact, according to iCIMS, a leading provider of Software-as-a-Service (SaaS) talent acquisition solutions, when it comes to using technology to help with hiring, 61 percent of CEOs have no idea where to start. For the most part, all they have to work with are subpar, "check-the-box" ATS (Applicant Tracking System) add-ons from a plethora of vendors.

"Recruitment has always been complicated because it entails background checks, drug testing and many other components to get the job done," says Susan Vitale, Chief Marketing Officer for iCIMS. "But with social media, mobile and all the other new technologies being as pervasive as they are, it's been clear for some time that what was needed was one centralized hub that would bring together all aspects of the hiring process. Basically, talent acquisition needed its own platform."

iCIMS set about creating that hub. In June, it launched the first phase of its solution, UNIFi, a Platform-as-a-Service (PaaS) framework that enables developers to integrate third-party applications with its signature Talent Acquisition Software Suite, build new applications that work with its recruiting software and market these to its customers via an online marketplace.

"We set out to create a groundbreaking model for the talent acquisition industry," Vitale explains. "And we're the first ATS software company to take the same approach as Salesforce did, and create a large partner ecosystem with the vision of having other companies further build onto our platform."

According to Vitale, the UNIFi platform empowers companies with a best-to-market talent acquisition suite, plus a robust marketplace of hiring apps from leading software and service providers that are integrated into the system.

The first phase of the UNIFi launch gives developers the tools to build and integrate applications that work with the iCIMS Talent Acquisition Software Suite, and enables customers to use these and other

third-party human resources products to process applications, candidate data and hiring analytics on the single platform.

"For instance, employers who are looking for a partner that does background checks, or enables text messaging with a candidate, can find one in our marketplace, and they can manage those aspects of the process from the same easy-to-use platform they're using to manage all the other facets of onboarding a candidate," Vitale explains.

The UNIFi Marketplace launched with more than 90 partners offering 100-plus HR-related products, and iCIMS' long-term vision is to accelerate product innovation by outside developers building next-generation apps, and to add more third-party services.

"There is a huge opportunity for a hub for all things talent acquisition," Vitale explains. "We believe that by building out UNIFi, and having integrated dashboards within the platform for everything from assessment to video interviewing, and all the other recruitment process needs, executives will be able to have a more holistic view of all aspects of their talent acquisition and onboarding without having to log in to other, separate systems—and be able to have it faster and more cost-effectively." — *John O'Mahony*





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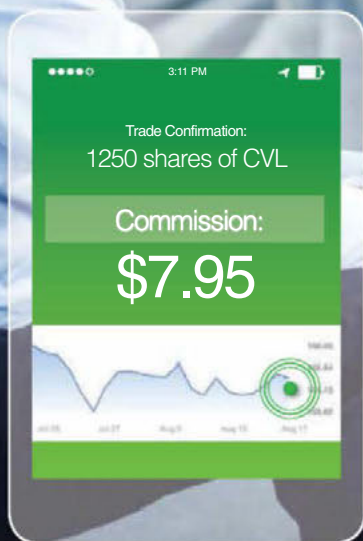
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**Bloomberg
Businessweek
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**"I like
games**

that are very

aggressive.

If you're behind,

you can catch **up,**

and **if** you're

ahead, you can

press

your

advantage."

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"The cover is our third Interview Issue."

"Who's in it?"

"We've got 39 fascinating people from fields including business, design, activism, writing, tech, and also Ringo Starr."

"Can we do 39 covers?"

"I think five is our max."

"So restrictive."





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Opening Remarks

Is Banking Better in Bed?

By Peter Coy

Your money might retain more value in a mattress if central bankers turn to negative interest rates to revive growth

Interest rates are the lowest ever—lower than zero in Japan and parts of Europe. Records go back only to Mesopotamia in 3000 B.C., but it's unlikely anyone before then would have dreamed up something as weird as negative interest. Today some banks routinely charge for accepting cash instead of paying depositors for the use of their money. German railroad Deutsche Bahn can issue a bond with an ironclad promise to pay back investors less than it borrowed from them.

As envisioned by central banks, negative interest rates boost growth by encouraging people to borrow for consumption or business. They induce investors to finance promising ventures by suppressing the return they get on safer investments, such as Treasury bills. And they can give countries an edge in trade by suppressing the value of their currencies.

There are side effects, though. Negative interest rates hurt savers. They can inflate asset bubbles, since bond prices rise when interest rates fall. When used to depreciate currencies, they can be a “beggar-thy-neighbor” ploy that buys growth in one country at the expense of others. Very low but positive rates also have these drawbacks, but negative rates run the extra risk of starving financial institutions. You can't force people to earn less than zero on their money. If customers are punished for saving, they will stash their cash in zippered mattresses. Banks and other institutions will be deprived of the funds they need to do business.

Are negative interest rates painful but necessary, like a tooth extraction, or painful and unnecessary, like getting hit on the head with a mallet? Either way, is this really the best idea for encouraging economic growth an advanced post-Sumerian civilization can come up with?

Legendary bond investor Bill Gross made the case against negative rates in his March newsletter to customers of Janus Capital Group. His words were adorned with a depleted-looking sun, perspiring and lolling out a big red tongue. Central banks, he wrote, are like the sun in that both will eventually run out of fuel—but the central banks' mojo will end much, much sooner. Using another energy metaphor, he wrote that “central banks plumb deeper and deeper depths, like drilling rigs expecting to strike oil, if only yields



could be lowered another 10, 20, 50 basis points." Except there's no oil to be found.

Mega-investor Larry Fink said in April that efforts to stimulate the economy by making rates superlow or even negative are self-defeating, because savers will become even thriftier to reach their nest egg targets. "A monetary policy intended to spark growth, then, in fact, risks reducing consumer spending," he wrote in his chairman's letter to shareholders of BlackRock, the world's largest asset management firm.

Negative interest rates are reviled on the right by the likes of David Stockman, Ronald Reagan's budget director, who accuses central banks of inciting "lunatic speculations" on Wall Street, and on the left by economists such as Nobel laureate Joseph Stiglitz, who points out that they haven't noticeably boosted growth or jobs. "Large corporations are sitting on hundreds of billions of dollars—indeed, trillions if aggregated across the advanced economies—because they already have too much capacity," he wrote in the *Guardian*. "Why build more simply because the interest rate has moved down a little?"

In Europe negative rates are squeezing pension funds, annuity providers, and life insurers by reducing the difference between what they owe customers and the very little they can earn on investments. For now, life insurers have been able to bridge the gap by selling some bonds or other assets for big gains, since bond prices rose in tandem with the drop in rates. But selling bonds worsens their long-term financing problem because the sales prematurely end the attractive income the bonds were producing, says Charles Graham, a senior analyst for Bloomberg Intelligence in London.

"Allianz does not support the ECB's negative interest rate policy," Maximilian Zimmerer, a member of the board of management of Europe's largest insurer, said of the European Central Bank in a March statement. "Instead of upping the dosage, it would be wiser to gradually withdraw."

Negative rates also send a signal that the economy needs life support. "If people think negative rates are bad, then they become bad," says Ethan Harris, head of global economics research at Bank of America Merrill Lynch.

So that's the case against negative

interest rates. The case for them is made with less conviction. Former Federal Reserve Chairman Ben Bernanke wrote on his blog in March that "the anxiety about negative interest rates seen recently in the media and in markets seems to me to be overdone." He wrote that "economists are less put off" by negative rates than the general public because they're accustomed to thinking in real terms—that is, after adjustment for inflation. It's fairly common for interest rates to turn negative on an inflation-adjusted basis; a 5 percent interest rate is negative in real terms if inflation is 6 percent.

But even Bernanke couldn't get too excited about the use of negative rates. In certain circumstances, he wrote, it "might be a reasonable compromise between no action and rolling out the big QE gun." The "QE gun" refers to quantitative easing, or bond purchases by a central bank to lower long-term interest rates.

European Central Bank President Mario Draghi acknowledged the problems of pension funds and insurance companies at an April news conference. But, he said, "I would urge all actors in this sector to resist the temptation to blame low interest rates as the cause of everything that went wrong and [has] been going wrong for years with this sector." His argument is that the ends justify the means: Eventually negative rates will ignite borrowing, spending, and growth. Rates will normalize, and the pension funds and insurers will be able to breathe. "As I said before," Draghi said, "if we want to return to higher interest rates, [first] we have to return to higher growth and higher inflation."

The bottom line is, negative rates aren't as bad as Gross, Fink, and others would have you believe. As long as rates are only mildly negative, big institutions are willing to pay for the convenience of what's essentially cash storage. (Rates for retail customers have generally remained at or above zero.) Another positive: Low lending rates make it easier for borrowers to keep up with payments, so default rates are superlow. In Denmark, which has had negative rates the longest (since 2012), the four major banks passed the European Banking Authority's recent stress tests with flying colors.

Yet neither are negative rates especially

A "fiscal flip" could lead to increased infrastructure spending to fuel economies

effective. As Stiglitz argues, low rates don't induce borrowing. A survey of chief financial officers from around the world by Duke University's Fuqua School of Business found that almost 90 percent said they could stomach an increase of 1 percentage point or more in interest rates before they'd consider cutting back on investment plans.

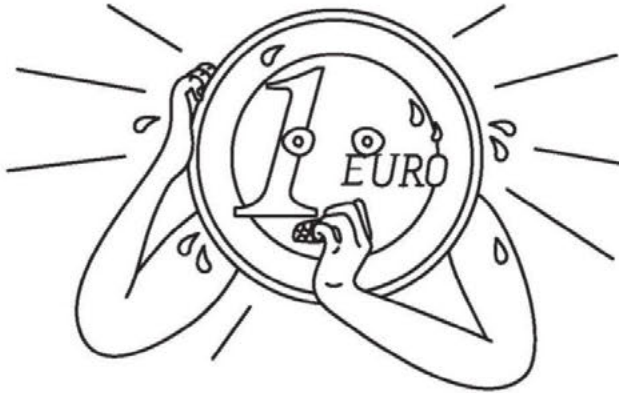
What the world needs now, aside from love, sweet love, is fiscal stimulus, which would be more effective in present circumstances than the monetary stimulus that central banks can supply. It's been known since the 1930s that cutting interest rates loses effectiveness below a certain threshold. Taxing and spending conversely become more effective because there's a huge surplus of lendable funds. The government can increase its deficits, without pushing up interest rates and crowding out private borrowers.

Central bankers themselves say they can't do it alone, and that fiscal policy needs to be part of the solution. There are signs that legislatures and heads of government are coming around to the idea. Analysts at Bank of America Merrill Lynch recently dubbed this trend the "fiscal flip," which they said is part of a global "war on inequality." In Japan, a new supplemental spending plan includes money for cruise ship port facilities and a high-speed maglev train line. The European Commission on July 28 refrained from fining Spain and Portugal for running excessive budget deficits. And in the U.S., Donald Trump said on Aug. 2 that if elected he would "at least double" Hillary Clinton's \$275 billion infrastructure plan.

Government spending isn't wasteful if it's for things that have to be done eventually anyway, like repairing roads and bridges, or for things that increase the productive capacity of the economy and its people, like education and research and development. Even better, these measures have a positive ring to them. Negative interest rates are just so... negative. **B**

Europe Once Again Fails Its Stress Tests

The banking system is undercapitalized and may be vulnerable in a real emergency



In its latest round of bank stress tests, Europe has missed another opportunity to undertake the honest reckoning its financial system requires. If the leaders of the continent want to strengthen their faltering economies and avoid future crises, this charade must end.

The exercise, the first since 2014, is supposed to ensure that Europe's banks can weather a severe crisis. This means probing their main weakness: a shortage of loss-absorbing equity capital. Lack of capital has hindered lending, undermined the European Central Bank's stimulus efforts, and made the whole financial system vulnerable.

The problem is that regulators, in effect, continue to turn a blind eye. They have to: There's no clear way to remedy any big shortfalls the tests might expose. Europe's banking rules—thanks in large part to Germany's reluctance to share risks—limit regulators' ability to recapitalize banks, particularly with euro area taxpayer funds. Flunking too many banks could therefore start a panic.

The new tests' worst-case scenario imagined a prolonged recession and commodity rout, but included no defaults on sovereign debt. The tests ignored Greek and Portuguese banks, which were among the weakest last time. The new tests didn't even say which banks passed or failed—or how much capital they'd need to meet their (unduly permissive) regulatory minimums.

Nonetheless, the results announced on July 29 aren't quite worthless. The troubled Banca Monte dei Paschi di Siena burned through all its capital in the adverse scenario, confirming that the European Union must give the Italian government some leeway in shoring up its banks.

One of Europe's largest banks, Germany's Deutsche Bank, was among the worst performers. Its capital fell to less than €3 for each €100 in assets in the stressed scenario, hardly enough to maintain market confidence in a crisis.

Maybe the vulnerability of its national champion will help Germany to see that recapitalization ought to be a priority. This means letting some institutions fail, setting higher standards for the rest, and promising that they will get the capital they need—from public euro area funds if all else fails. If that message comes through loud and clear, confidence will improve, perhaps allowing the banks to raise equity mostly from private investors (as U.S. banks did in 2009).

Four years ago, Europe's leaders envisioned a banking union in which they'd be jointly responsible for the health of the euro area's financial system. They have backed away from that promise, but the idea remains essential. They must try again, and the place to start is with an honest accounting of the problem.

Asia Has to End Its Coal Addiction

China, India, and Japan have plans to increase their use of heavy-polluting coal plants

Asian nations lead the world in new investment in wind, solar, and nuclear power. And all that clean energy should help them meet their commitments to cut greenhouse gases. Standing in the way, however, are plans to build thousands of coal plants, even though the market for coal power is shrinking fast.

In China, demand for coal appears to have peaked in 2014, far earlier than expected. In India, electricity from coal plants coming online in 2020 is expected to cost more than solar energy does today. Yet both countries—and also Japan, the region's third big economy—continue to add capacity.

More coal burning means tens of thousands more people dying from air pollution and much more carbon dioxide flowing into the atmosphere. In India and China, coal also crowds wind and solar power off the grids. Already some 15 percent of China's wind power goes unused.

Given these realities, one might hope that market forces would derail any new coal construction. Yet in China especially, there's institutional resistance to changing course. While the government has put a cap of sorts on new coal capacity, this doesn't cover all provinces and all types of coal-fired plants. Closing these loopholes will take some political will, given that local governments too often view new plants as an easy way to generate economic growth and preserve mining jobs.

In China, India, and Japan, plans haven't been adjusted to account for the rapidly falling costs and additional capacity of wind and solar power. Governments need to push harder to get utilities to make room for renewable energy—by either setting minimum operating hours for the grid to use solar and wind or, as China has, forcing utilities to pay for unused renewable energy. Operations should be transparent, so the public can see when and why utilities choose coal over wind and solar. **B**

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Movers

By Kyle Stock



▲ Goldman Sachs has forecast an **Olympic rout by the U.S.** It expects the country to win **106** medals in Rio; it has China in second place with 89 medals.

▲ The U.S. Air Force declared Lockheed Martin's F-35 jet ready for combat. The Pentagon has bought 2,443 planes so far, at a cost of \$379 billion, making it the country's **most expensive weapons system.**

▲ Startup Moon Express became the first commercial venture to win **U.S. approval to fly to the moon.** It plans to launch an unmanned craft in the second half of 2017.

▲ A pocket-size U.S. Constitution became the **No. 2 best-seller on Amazon.com** after grieving dad Khizr Khan, speaking at the Democratic National Convention, brandished one while criticizing Donald Trump.

▲ **Yuriko Koike** became the first woman elected governor of Tokyo, in a landslide over a candidate backed by Prime Minister Shinzo Abe's party.

▲ Raf Simons was named **chief creative officer of Calvin Klein.** Most recently, the Belgian designer was women's artistic director at Christian Dior Couture.

Time Warner buys 10 percent of Hulu
\$583m

Emerson Electric sells two divisions
\$5.2b

Tesla acquires SolarCity
\$2.6b

Verizon buys Fleetmatics
\$2.4b

AT&T stores bought by GameStop
507



Downs

"I don't like bonds; I don't like most stocks; I don't like private equity."

▼ Janus investing savant **Bill Gross** explains why he's all in on land, gold, and other "real assets."

Year-over-year change in U.S. restaurant sales in June
0%

Median loss for U.S. university endowments in fiscal year 2016
-0.7%

After ticket discounts pinch revenue, Delta shares on Aug. 2 swoon
-7.5%

On Aug. 1 oil enters a bear market as the price per barrel dips below
\$40.00

▼ Warm temperatures have **released zombie anthrax from long-frozen Siberian reindeer** carcasses. Dozens of people have been hospitalized, and more than **2,300** deer have died.

▼ Bitcoin plunged 5.3 percent against the dollar, after one of its largest exchanges was hacked and **thieves made off with \$65 million** of the digital currency.

▼ After an outbreak of Zika in South Florida infected at least 14 people, the U.S. Centers for Disease Control and Prevention issued an unprecedented travel advisory and **warned pregnant women to avoid Miami.**

▼ Tea Party darling **Tim Huelskamp**, a fifth-generation farmer, **lost the Republican primary** for Kansas' Big First congressional district to obstetrician Roger Marshall.

▼ Embattled Theranos founder Elizabeth Holmes unveiled a **new blood-testing device** at a chemistry conference in Philadelphia. The crowd, however, wanted details on the company's other products, which are at the heart of a federal criminal probe.

▼ Facebook's **Instagram screen-grabbed a strategy from Snapchat** with its new Stories feature, which lets users post vanishing content, complete with laser and rainbow filters.

18%

▼ Share of Didi Chuxing that Uber owns after selling its China operations to the ride-hailing rival. **Uber lost \$2 billion** in the country over two years.



August 8 — August 21, 2016

A Russian Tycoon Grows in Brooklyn

► The balance of the billionaire's empire is shifting from Russia

► "Uncertainty is rising, and that's not Prokhorov's element"

On April 13, as his Brooklyn Nets wrapped up a dismal season with a drubbing by second-stringers from the Toronto Raptors—their 61st loss in 82 games—owner Mikhail Prokhorov left his box before the final buzzer. That may have been the high point of his evening. Hours later, the Russian billionaire got word from staff in Moscow that masked agents of the Federal Security Service had raided his headquarters—an apparent sign of dissatisfaction at the highest levels of the Russian government.

Early the next morning, Prokhorov boarded his private jet for the nine-hour flight to Moscow. Within weeks, top editors were gone from **RBC**, his media company, which had angered the Kremlin with investigative reports on the business interests of relatives and friends of President Vladimir Putin. Soon after, Prokhorov sold his main Russian asset, a \$2 billion stake in fertilizer company **Uralkali**. Today his 17 percent share of aluminum giant **Rusal**, worth about \$900 million, is on the block.

If that sale goes through, Prokhorov's most valuable investments would no longer be in Russia but in and around Brooklyn, N.Y. In addition to the Nets and the Barclays Center arena, Prokhorov holds leases on several other entertainment venues there. Bloomberg estimates the combined value at \$2.2 billion; Prokhorov's staff puts it at \$3 billion, according to two people close to the company. His remaining Russian assets—some of which, such as the Rusal stake, are likely to be sold—are worth \$2.3 billion, according to the Bloomberg Billionaires Index, and he has some \$5.7 billion in cash, though it's

unclear where that is held.

The shift highlights the difficulty even the most experienced and powerful Russian business leaders face as they try to stay on the right side of the ever-shifting line that the Kremlin defines as loyalty. Some billionaires, such as Roman Abramovich and Mikhail Fridman, years ago moved substantial holdings to Europe or the U.S., where the rules are more predictable. Others, such as oil tycoon Mikhail Khodorkovsky, have gone to prison and been forced to surrender their assets. Such risks are a big reason local businesses remain reluctant to commit capital even as Putin exhorts tycoons to help revive the economy. "Prokhorov has always stayed within the boundaries" and has benefited from close ties to the authorities, says Gleb Pavlovsky, a former Kremlin adviser who heads a consulting firm called the Effective Policy Foundation. "But uncertainty is rising, and that's not Prokhorov's element."

Prokhorov declined to be interviewed for this story. Dmitry Razumov, the chief executive of his **Onexim** holding company, said in an e-mail that the recent sales had long been in the works and that some proceeds will be reinvested at home: "We have no plans to sell off all our Russian assets. Quite the opposite is true," he said. A spokeswoman said Prokhorov spends most of his time in Russia and doesn't even own a home in the U.S., staying at the Four Seasons when he's in New York. The Kremlin has said that neither Prokhorov nor his companies have faced any pressure.

With moves aimed at winning favor in the Kremlin, Prokhorov "thought he could play a good game."
—Yevgeny Chichvarkin





The next French president could be a name from the '90s 18

Big Macs, iPhones, and a purchasing power paradox 19

Prokhorov, 51, got his start selling jeans in the twilight of communism and built his fortune with Vladimir Potanin, an acquaintance who worked in foreign trade. The pair started a bank and later bought control of Arctic metals giant **Norilsk Nickel** in a con-

Mikhail Prokhorov

Age 51

Net worth \$10.2 billion

Height 6-foot-8

2007 Detained in France on suspicion of facilitating prostitution; never charged

2010 Buys control of the NBA's Nets and arena in Brooklyn

2012 Mounts hopeless presidential candidacy against Putin

2016 Cashes out of Uralkali. Mulls unloading Rusal stake

troversial privatization auction. Their partnership ended bitterly in 2007 after Prokhorov was detained on suspicion of facilitating prostitution during a lavish holiday party in the French Alpine resort of Courchevel. He and about two dozen guests were held after early-morning raids at their luxury hotels, and Prokhorov

spent two nights in jail. He was never charged, but Potanin used the scandal to push for splitting their holdings. In 2010 the 6-foot-8-inch Prokhorov bought an 80 percent stake in the Nets, becoming the NBA's first owner from outside North America. Promising to bring Brooklyn a championship within five years, he spent millions acquiring new players—and soon started hanging out with celebrities, including Jay Z and Beyoncé.

Back in Russia, he moved his legal residence to a remote Siberian town so his hundreds of millions of dollars in tax payments would help the impoverished region. When the Kremlin was promoting Russia's high-tech prowess, he backed a hybrid-powered car. Putin took it for a test drive, but the project was ultimately scrapped. Prokhorov mounted a deliberately doomed presidential campaign that lent a veneer of competitiveness and legitimacy to Putin's 2012 reelection. "He thought he could play a good game," says Yevgeny Chichvarkin, an acquaintance of Prokhorov who fled to London in 2008.

But there was no way to get away from the risks of Russian business. The

prominent journalists he'd installed in 2013 to turn money-losing RBC around started probing themes the Kremlin had made taboo: multibillion-ruble projects involving one of Putin's daughters, the deaths of Russian military personnel in the war in Ukraine, and the wealth of Putin's close friends. Kremlin officials repeatedly told Prokhorov and the editors they were crossing the line, according to people familiar with the conversations. Pro-government protesters marched outside RBC's offices, denouncing staff as foreign agents.

By late last year, Prokhorov had concluded it was too difficult to track the Kremlin's ever-changing rules for oligarch behavior and that only those from Putin's inner circle could succeed, according to people close to him. Anton Krasovsky, who served as his spokesman in the 2012 campaign, recalls a December visit to the billionaire's mansion outside Moscow. While showing off his gym, Prokhorov was downbeat about his prospects in Russia but enthusiastic about the Nets. After decades of navigating the delicate politics of Russian business, Krasovsky says, Prokhorov "had had enough and wanted to get out."

—Yuliya Fedorinova and Alex Sazonov, with Ilya Arkhipov and Irina Reznik

The bottom line Mikhail Prokhorov, a Russian tycoon who got his break in the 1990s and had remained active at home, is selling assets.

Defense

Beijing Cuts the Military With Big Buyouts

▶ **Xi Jinping seeks to revamp the army without risking instability**

▶ **Veterans "may not have the skills that the job market wants"**

Chinese President Xi Jinping is trying to reduce the size of the world's largest army without creating an army of disgruntled veterans. Military personnel have been getting generous incentives to retire early, according ▶

China's military by the numbers

1.6m Army 235k Navy

398k Air force 100k Strategic missile forces

-300k

Troops to be eliminated by 2017

to people with knowledge of the matter. Packages include severance payments worth tens of thousands of dollars and, for some, the promise of getting as much as 80 percent of their pre-retirement wages, say the people, who asked not to be identified because the plan hasn't been publicly announced.

Xi has announced plans to cut 300,000 troops from the 2.3 million-strong People's Liberation Army (PLA) as part of China's biggest military shakeup since the early days of the Cold War. He's unifying the army, navy, air force, and strategic missile corps under one command, thinning the ranks of officers and traditional ground forces, and elevating the role of the navy and air force. Xi has purged dozens of senior officers for corruption, securing a life sentence last month for former top general Guo Boxiong for accepting bribes. In an Aug. 1 commentary marking the 89th anniversary of the PLA's founding, the *People's Daily*, the newspaper of the Communist Party, noted the next round of changes "will challenge more vested interests and the reform process will be even more painful."

The leadership is wary of stoking labor unrest, which has increased amid an economic slowdown. The Hong Kong-based activist group China Labour Bulletin recorded more than 1,450 worker actions in the first six months of the year, a 19 percent increase from last year. One concern is that retiring soldiers will have a particularly hard time finding jobs. "Soldiers are less adapted to society, because they may not have the skills that the job market wants and not

be familiar with workplace culture," says Yue Gang, a retired colonel who served in the PLA's General Staff Department. "That's why they need more support from the government." The defense ministry in Beijing didn't respond to a request for comment.

How much the military buyouts will cost and how many of the 300,000 demobilized troops will qualify for them is unclear. Under the plan, a senior colonel who agrees to do his own job search could be eligible for a one-time payment of about 1 million yuan (\$150,500), in addition to as much as 80 percent of his salary, according to the people with knowledge of the matter. Chinese media have reported that PLA officers earn from 4,000 yuan to 20,000 yuan a month. The plan provides compensation for relocation. Soldiers would also be exempt from business and income taxes if they're self-employed.

The PLA, formed in 1927, has been the ultimate guarantor of party rule since the nation's founding, and the government is particularly sensitive to demonstrations or grievances involving former soldiers. "Soldiers have a deterrent and destructive power once they unite to do something together, and they could cause some social stability issues easily," says Yue.

Xi, who also leads the party's Central Military Commission, told a meeting in November that authorities must "provide special measures and favored policies to proactively help ex-soldiers settle down," the official Xinhua News Agency reported. Yizheng, a city in the eastern province of Jiangsu, warned on its website last year that local officials would be punished if ex-soldiers petitioned or demonstrated over grievances and caused "serious consequences and damage to social stability."

State-owned enterprises have been directed to hire former officers. Some private companies are also joining the effort: **Didi Chuxing**, the ride-hailing service that just agreed to absorb **Uber's** operations in China,

had as of May trained 179,000 former soldiers to become drivers, according to Zhang Bei, the company's head for policy research. The job pays as much as 10,000 yuan a month.

—*Bloomberg News*

The bottom line To ensure social stability, some Chinese military officers who retire early will still be eligible for 80 percent of their pay.

Elections

The Mayor of Bordeaux Leads French Polls

▶ **Alain Juppé, a former prime minister, could be president**

▶ **"We have to do deep reforms, and it won't always be pleasant"**

Twenty-one years ago, French Prime Minister Alain Juppé tried to curb retirement benefits for public employees. In response, labor unions staged a general strike that paralyzed France for weeks. Juppé had no choice but to drop the plan. Less than two years later, the fatally weakened center-right government was defeated in a snap election. Juppé was out.

Today, French unions are again flexing their muscles, forcing Socialist President François Hollande to water down his proposals for labor reform. Presidential elections are set for April 2017, with a runoff in May, and Hollande's reelection chances look bleak. The candidate who appears in the best position to replace him? Juppé, now 70, who for most of the past two decades has been mayor of Bordeaux. This time, he says, he'll take on the unions and win.

A June Ipsos survey put Juppé's approval rating at 49 percent, compared with 16 percent for Hollande, 25 percent for right-wing National Front leader Marine Le Pen, and 31 percent for former center-right President Nicolas Sarkozy, who's seeking a comeback after his 2012 defeat. Voters see



Juppé as “a consensual figure,” says Yves-Marie Cann, an analyst at the Elabe polling group in Paris. “Even people on the left like him.”

Juppé is pushing to bolster his support among conservatives before the center-right Republican primary on Nov. 20. Although mainstream politicians in France have traditionally been reluctant to criticize the government during an emergency, Juppé lashed out at the Socialist administration after the Bastille Day terror attack in Nice, telling RTL radio on July 15: “If all measures had been taken, the tragedy would not have happened.” Sarkozy, who’s expected to face Juppé in the primary but hasn’t formally announced, was even quicker to pounce following the latest terror attack, which took place in a church in Normandy. Hours after the incident, during which a priest was murdered, Sarkozy enumerated measures he would take to fight terrorism. He suggested the government should disregard legal checks on its power in the pursuit of potential attackers.

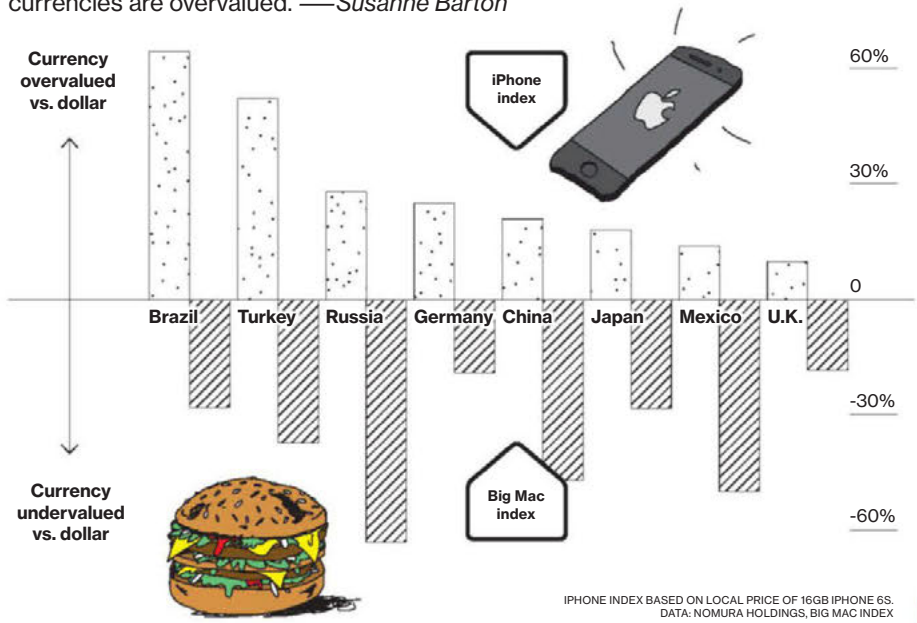
Juppé is campaigning on a pro-market, business-friendly platform. To improve French competitiveness, he wants to abolish the maximum 35-hour workweek, cut taxes, and make it easier to hire and fire. He’d let companies negotiate directly with employees, rather than allowing national unions to negotiate industrywide contracts as is now the case, even though only about 8 percent of French workers belong to a union. “We have to do deep reforms, and it won’t always be pleasant, but we’ve waited too long,” Juppé said at a campaign rally in the southern city of Perpignan last month.

Hollande failed to pass reforms because he was elected with the unions’ support and then blindsided them, Juppé told a business group at a July 6 campaign stop in the Mediterranean resort town of St. Cyprien. “I am going to be clear about it from the beginning,” he said. Asked about his defeat at the hands of the unions in 1995, he replied: “It doesn’t do much good to talk about the past.”

Voters seem less impressed by Juppé’s program than by his calm demeanor and discreet style, a contrast to Sarkozy, 61, who struggles to control his temper and while

Indicators A Tale of Two Indexes

The *Economist* has long used an index to compare the purchasing power of currencies using local prices of Big Macs. In July, Nomura introduced its own index using the iPhone 6S. They clash. In the countries shown, Big Macs cost less than in the U.S. at today’s exchange rates, which indicates their currencies are undervalued. But iPhones cost more abroad, indicating those same currencies are overvalued. —Susanne Barton



president was criticized for his nouveau riche tastes. Arnaud Lepart, an unemployed resident of Perpignan who turned out to cheer for Juppé at the rally there, says, “I agree with some of his proposals, but most of all it is the man I like.” Sarkozy, Lepart added, “is a divisive figure.”

A major selling point for Juppé is his stewardship of Bordeaux, a city of 240,000 where he’s spruced up the downtown and waterfront, dramatically boosting tourism and business. “Our economic signals are all strong now,” says Sylvie Cazes, a leading Bordeaux winemaker who has worked with Juppé on the city’s newest tourist attraction: an €81 million (\$91 million) museum devoted to the wine industry that opened on June 1. Cazes says Juppé visited local vineyard owners and other businesses, persuading them to contribute some €20 million toward the project—a rarity in France, where almost all cultural projects are publicly financed.

Staunchly pro-European, Juppé is trying to counter the populist, Euroskeptic message of Le Pen’s National Front and the fallout from

Brexit. “We must admit that people are unhappy with the political establishment,” he told reporters in Perpignan. “National governments should reclaim some of the powers now exercised by the European Union.”

Sarkozy has used similar rhetoric. Recent polls suggest he’s gaining some traction, as Juppé’s lead among likely primary voters has shrunk from 12 points in January to 8 points in June, according to Ipsos polling data. French weekly *Paris Match* has dubbed Juppé “The Fragile Frontrunner.” Says Cann, the analyst: “Even if Alain Juppé has an advantage now, the game is still open.”

Juppé, meanwhile, has been churning out position papers on subjects such as agriculture and education. He says he’ll have a detailed legislative program ready to introduce immediately after the May 2017 runoff. “I will be ready on the first day.” —Carol Matlack

The bottom line With Hollande the most unpopular president in French history and Sarkozy still a divisive figure, Juppé could win the election.

“I agree with some of his proposals, but most of all it is the man I like.”
—Arnaud Lepart, an attendee at a rally for Juppé

August 8 — August 21, 2016

The Treasure of Iron Mountain

▶ **MTV, with the help of the document storage company, is bringing old hits back to life**

▶ **“We can create digital franchises out of this material”**

MTV, the network that brought a revolution to television, is betting big on nostalgia. In an art deco building in Hollywood, Calif., engineers at document management company **Iron Mountain** are feverishly digitizing old Beta tapes filled with live performances and interviews with the musicians who've graced the network's studios over the past 35 years, assembling a huge on-demand library of American pop culture.

MTV, owned by media giant **Viacom**, in the early 1980s all but defined the cutting edge of pop culture through the emerging technology of cable. But the network over the past decade has fallen behind the easy-access expectations of a tech-driven world. The digitization is part of an effort to make up ground by embracing the network's past and more efficiently mining it for opportunity. Much of the footage will find its way to MTV Classic, a just-launched channel for old hits such as *Beavis & Butt-head*, *Daria*, and *Jackass*.

“There are great things that happened on MTV that are valuable and merit consideration,” says Erik Flannigan, a former music journalist who joined Viacom as an executive in 2006. But until five years ago, the network's footage sat in boxes at storage facilities around the country—on Beta, old analog tapes, and other outdated technologies that made it impossible to call up a clip or performance quickly. The night Michael Jackson died in 2009, as the network covered

the news live for two hours, MTV's then-chief executive officer, Judy McGrath, requested a clip of Jackson kissing Lisa Marie Presley during the 1994 MTV Video Music Awards. The clip was deep in storage in a library that had closed for the day by the time Jackson's death was confirmed.

To transfer its archives to digital files that can be called up on demand, MTV turned to Iron Mountain. The Boston-based document shredding and records management company owns more than 1,350 records storage facilities around the world and manages several collections of American cultural memorabilia. It was already providing MTV with storage services.

Iron Mountain expanded into digital services, especially for the entertainment industry, in 2007. It worked with such companies as **Universal Music Group** and organizations like the Los Angeles Lakers. Much of MTV's archive resides in Iron Mountain's 14,000-square-foot Hollywood building, spitting distance from Viacom's new offices and its Paramount Pictures studio. The same facility holds Universal's master recordings of Miles Davis and the Beach Boys and an archive from the University of Southern California's film school, including student films by George Lucas and Ron Howard.

With more than 1,600 entertainment clients—and about 220,000 clients total, including some of the biggest law firms and financial institutions

globally—Iron Mountain has positioned itself over the past nine years to bring those clients into the Digital Age. The company owns and maintains about 70 different kinds of obsolete machines to play the tapes and recordings it's transferring. Executives often patrol **EBay** for parts to keep their equipment in peak condition.

Jeff Anthony, the head of entertainment services at Iron Mountain, says MTV is moving fast in digitizing its assets. Most of Iron Mountain's media company clients have updated less than 10 percent of their holdings, while MTV has transferred more than 20 percent of its library. “They are digitizing almost everything,” he says. “There are a lot of companies

looking at them saying, ‘If it works for you, we're going to do it, too.’”

Digitizing the old footage presents benefits beyond preservation. MTV can more effectively license its library to filmmakers for their productions, creating additional revenue. Jeff Jacobs, a senior vice president in Viacom's music and entertainment group, says digitizing its library of more than 2 million files dating to the network's 1981 inception—known as the vault—will pay for itself. He oversees the work for MTV, and it was he who went to MTV senior executives to push for updating the archives with Iron Mountain's help. Jacobs declines to say what the project has cost the network. ▶

“If someone is making a rock documentary, we can send them these files instead of tapes. It's all searchable thanks to metadata.”
—Jeff Jacobs, Viacom



PHOTOGRAPH BY CAROLINE TOMPKINS FOR BLOOMBERG BUSINESSWEEK



Iron Mountain's Hollywood archive contains decades of film and music history

An editorial committee at MTV, led by Flannigan and including Jacobs and several senior staffers, sets the priorities for transferring the footage. Videos deemed high priority are added to an internal online database, while less popular fare, like every episode of the 2004-06 series *Date My Mom*, hasn't left the warehouse. MTV researchers and Iron Mountain's archive specialists have spent the past several years combing through the 2 million files, flagging, tagging, and digitizing the clips the committee has selected.

"It's easier to license your footage if it's digitized and logged," Jacobs says. "If someone is making a rock documentary, we can send them these

files instead of tapes. It's all searchable thanks to metadata."

Another possible revenue boost, Jacobs says, will come from repurposing old MTV footage for TV news shows, articles, Snapchat stories, and the network's YouTube channel. MTV produced a documentary in 2014, *R.E.M. by MTV*, based on footage from old interviews with the band, which disbanded in 2011. It's begun to use classic moments from both MTV and VH1 on various social media channels, tagged as "#TBMTV"—for Throwback MTV.

"We can create digital franchises out of this material, whether it's bits for

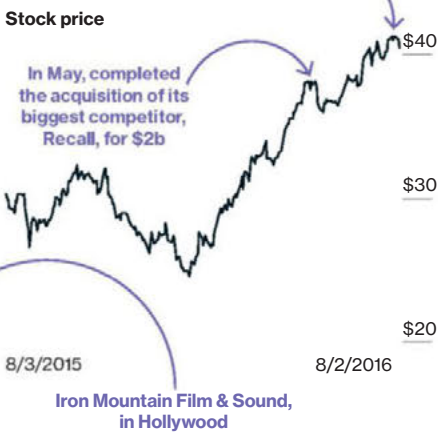
Snapchat, YouTube, or Instagram," says Alex Pappademas, managing editor of MTV News. "Young people are really interested in nostalgia and the past." Pappademas's team turned old footage of Bob Dylan walking along the beach into a brief comedy sketch called *Bob Dylan on the Beach*, an MTV News Original Movie available online.

MTV Classic replaced VH1 Classic on Aug. 1 with a rebroadcast of MTV's first hour of programming, followed by a documentary on *Total Request Live*—the once popular music video countdown show—and an *MTV Unplugged* marathon. Movies, concerts, and even music videos will also figure into the rotation.

Announced on Aug. 2 plans to acquire the European and Asian information management operations of Santa Fe Group for \$30.2m

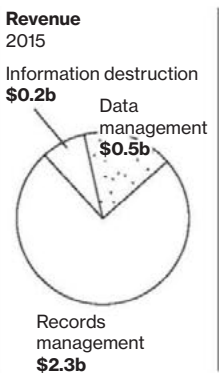
Iron Mountain

Founded 1951
Location Based in Boston; owns 1,350 facilities around the world, with 80 million square feet of space
Services Data and records management; information destruction



More than **220k** customers in **45** countries

530m cubic feet of stored hard-copy records including microfiche, film, and X-rays



In Its Vaults

The wills of Charles Dickens, Charles Darwin, and Princess Diana

Video archive for World Wrestling Entertainment

Complete collection of Corbis photo archive

Original Frank Sinatra recordings



Accelerating potential

Cloud solutions from Hewlett Packard Enterprise gives college students the tools to learn, discover and apply knowledge to solve the world's most enduring problems.

The digitized vault has already passed a major test. When David Bowie died, MTV executives quickly found a clip of the singer chiding MTV VJ Mark Goodman for the channels' lack of diversity. The video went viral online within hours. "That's an amazing success right there," Jacobs says. —*Lucas Shaw*

The bottom line A digitization project several years in the making is presenting Viacom's MTV with new revenue streams.

Airlines

Southwest Tries to Squash Its Tech Bugs

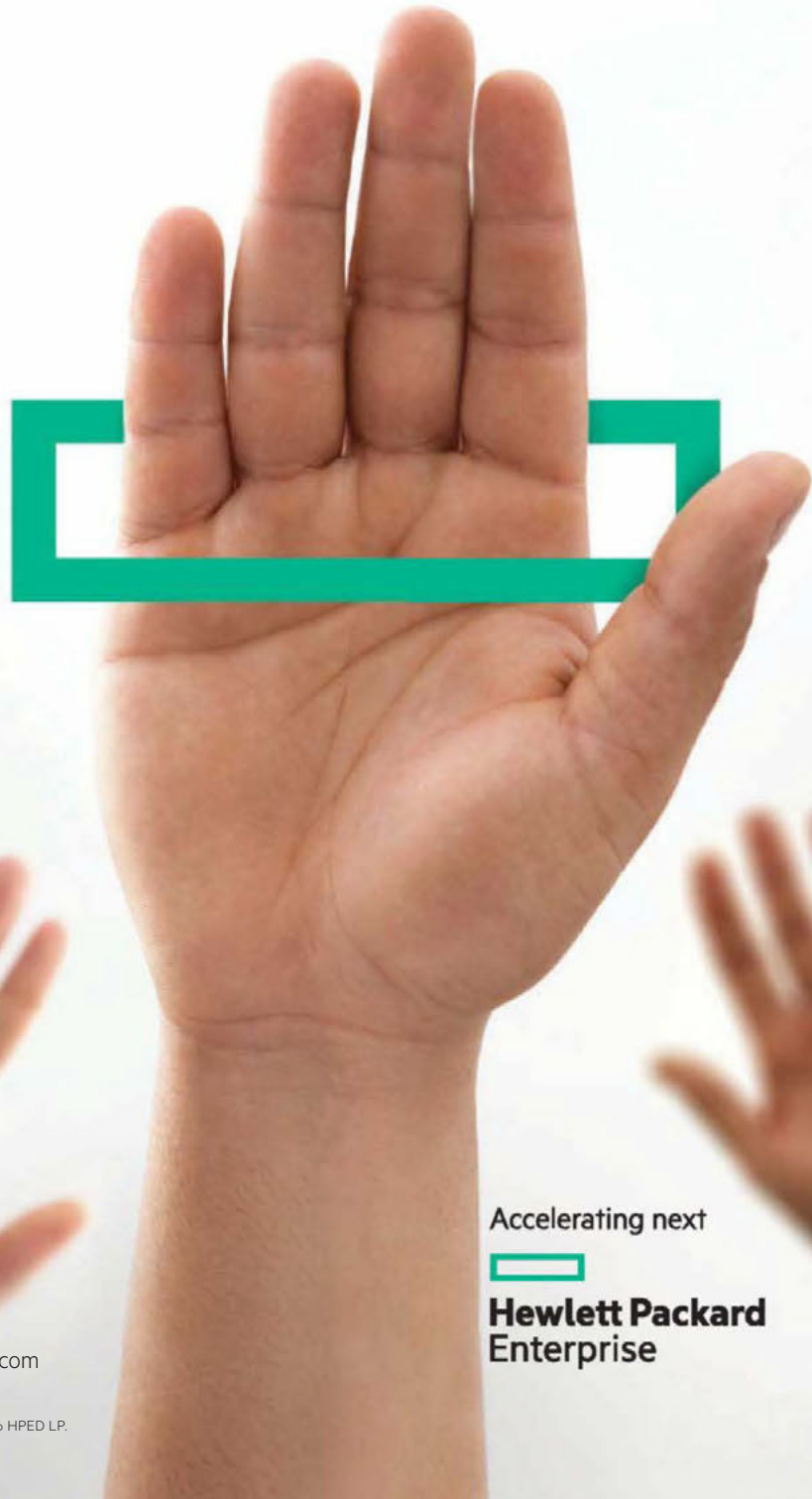
- ▶ A new IT platform will catch the carrier up to its rivals
- ▶ "We need to be really thoughtful about how we tinker with it"

A new reservations system can't arrive soon enough for **Southwest Airlines**. The partial failure of a data router on July 20 led to an operational meltdown that caused the airline to cancel 2,300 flights over four days. "When the router failed, the data... piled up like a freeway traffic jam," Chief Executive Officer Gary Kelly wrote in a July 29 employee memo. "Like it or not, we live with some old technology." Other systems then shut down. Southwest fixed the glitch in about 12 hours, but the outage displaced aircraft and crews nationwide and stranded thousands of passengers.

The incident will cost "into the tens of millions" of dollars, Bob Jordan, the company's chief commercial officer, told the Associated Press on Aug. 1. A Southwest spokeswoman says the airline has no further comment about the cost.

Southwest's systems are a hodge-podge built internally and adapted to the airline's needs over much of its 45-year history. Most large airlines use information technology platforms from outside vendors to manage everything from reservations to crew scheduling systems. For many years, Southwest had no need for such commercial platforms, given that its network differed greatly from those of larger carriers.

The operational glitches, plus what ▶



Accelerating next



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◀ Southwest pilots in a statement called a “misguided focus” on stock performance, led pilots and mechanics on Aug. 1 to call for the airline to replace Kelly and Chief Operating Officer Mike Van de Ven, following a no-confidence vote on July 29. “As tenured employees and frontline leaders of this company, we can no longer sit idly by and watch

\$500
million

Cost of Southwest's IT overhaul, including a new reservations system

poor decision after poor decision deeply affect our customers and Southwest Airlines,” Jon Weeks, president of the Southwest Airlines Pilots’ Association, said in the statement.

Three other labor groups, representing mechanics, flight attendants, and airport ground workers, joined the no-confidence vote, which singled out the IT problems. That meant about 36,000 of the airline’s 52,000 full-time workers backed the resolution. The pilots, flight attendants, and mechanics are in contract talks with Southwest.

The carrier’s leaders have “an inability to prioritize the expenditure of record-breaking revenues toward investments in critically outdated IT infrastructure and flight operations,” the pilots’ association wrote in a news release. Southwest’s senior vice president for labor relations, Randy Babbitt, called the union move an effort to pressure the airline. The move, Babbitt said in an e-mailed statement, is an “attempt to gain leverage in negotiations.”

The company is in the midst of a three-year, \$500 million overhaul that will take it off its homegrown technology and onto a platform used by airlines around the world. The system, called Altéa, is sold by Madrid-based **Amadeus IT Holding**, an information technology company, and will allow Southwest to take advantage of scheduling and pricing techniques its larger rivals have been using for years. The airline will start rolling out the platform later this year, first with ticket sales. Its operations, including new automation for booking passengers during major storms and more mobile tools, will move onto the system in the first half of 2017, followed by additional enhancements later that year.

The Altéa system will allow for improved airport connection times—it will have more flexibility in how it schedules flights, eliminating long connections, for example—and additional seat inventory. It will also increase the carrier’s scheduling options. Red-eye flights, which current in-house technology can’t support, will likely be available in 2018, says Dave Harvey, Southwest’s managing director for business development.

The new capabilities could boost Southwest’s annual profit \$500 million by 2020 and improve customers’ experience, executives said at an investor briefing in June. In a current domestic air environment where higher capacity and lower demand are pushing fares down, the revenue benefits of such large projects are often overestimated, says George Ferguson, an industry analyst with Bloomberg Intelligence.

Once the Altéa system is fully installed, the airline will be mindful of avoiding things that could alienate customers, Kelly told investors. But anyone watching shouldn’t expect Southwest to adopt industry norms it has long avoided, such as assigned seating and fees for bags.

“We think we’ve got a really great brand,” Kelly said at the June event. “We need to be really thoughtful about how we tinker with it.” —*Justin Bachman, with Mary Schlangenstein*

The bottom line Southwest Airlines says a planned upgrade of its IT systems could boost annual profit \$500 million by 2020.

Automobiles

China’s City Dwellers Learn to Love Pickups

▶ **The government is easing restrictions on the trucks**

▶ **“My friends... never saw a real pickup until they sat in my F-150”**

China’s aspiring urban cowboys are finally getting their moment. Pickup trucks, long used in remote regions by farmers, are being allowed in select cities in China for the first time. In February, China’s Ministry of Industry and Information Technology and

two other agencies lifted restrictions on pickup trucks in four provinces—Liaoning, Henan, Hebei, and Yunnan. The rule changes started to take effect on May 1 and will be fully in place in all four provinces by Oct. 1.

“We applauded the good news in our WeChat group of pickup fans,” says Wei Chenglin, who bought a Ford F-150 last year for 700,000 yuan (\$105,000). Wei joined a pickup truck fan group on WeChat in June that has more than 100 participants. “Quite a few of them have reached out to importers to place orders in the past couple of months,” he says.

For domestic and foreign truck makers, the hope is that adventurous, middle-class city slickers will discover the joys of going off-road or going on a weekend getaway with fishing gear and barbecues stowed in the truck bed. The state China Passenger Car Association says the regulatory change already has increased sales: Pickup truck sales by China’s 15 biggest manufacturers rose 11 percent in May and 36 percent in June from a year earlier, vs. a 16 percent decline in 2015.

Pickup trucks were banned from many of China’s cities for decades, in an effort to control congestion and pollution. Now other concerns may outweigh cleaner air, says Zhang Zhiyong, a Beijing-based independent auto analyst. “What they want is to help the auto industry prosper when the market is relatively gloomy,” he says. Sales of passenger and commercial vehicles in China have slowed over the past year as the economy grew at the slowest pace in a quarter-century.

Domestic pickups made by **Great Wall Motor**, which has factories in two affected provinces, Hebei and Henan, and companies such as **Jiangling Motors** dominate the Chinese market. A small number of Toyota Tundras and Ford F-150s can be imported in free-trade zones.

Great Wall

DALIAN
3 MILES



Accelerating cures

Hewlett Packard Enterprise hybrid infrastructure is transforming 95% of Fortune Global 500 Healthcare and Life Sciences companies.

says sales of pickup trucks in Henan increased 20 percent in the second quarter from a year earlier. Its signature model is the Wingle 6, available in “Fashionable Orange” and other colors. The truck’s name translates loosely as “a steed running at the speed of the wind.” The company plans to design and develop more truck models because of the new policy and to cater to city drivers. “If China lifts the restrictions on pickups to enter cities, it will have a profound impact on the market,” the company said in an e-mail.

Ford said in April that its F-150 Raptor will be available in China starting next year. “By introducing it to the world’s largest auto market, we hope to inspire a new generation of off-road enthusiasts,” John Lawler, chairman and chief executive officer of **Ford Motor China**, said in a statement. Still, the size of the market is minuscule compared with the U.S.—328,933 pickups were sold last year in China, according to the passenger car association; more than 2.5 million were sold in the U.S., according to researcher Autodata.

Wei, who lives in the coastal city of Dalian, has joined in long-distance pickup drives to Tibet for the WeChat fan group. He also uses his truck to commute within Dalian, though restrictions on main streets add 15 minutes each way to his travel. “I lived in the U.S. for two years and noticed that pickups were everywhere,” Wei says. “But my friends in China never saw a real pickup until they sat in my F-150. After that, they all want one.”

Chinese regulators may find it difficult to extend the policy across the country, particularly to wealthy cities such as Beijing and Shanghai, where governments limit vehicle registrations and driving days. “It’s a tricky dilemma,” says Yang Zaishun, deputy secretary-general of China’s car association. “If it works well in boosting pickup sales, that could add a huge burden to the urban traffic and deteriorate the air quality in cities. Then Beijing will be cautious in promoting it nationwide.” —*Bloomberg News*

The bottom line While sales of passenger cars in China have slowed, sales of domestic and foreign pickup trucks are rising.

B Edited by Dimitra Kessenides
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Accelerating next



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August 8 — August 21, 2016

'It's Jill Freaking Stein!'

► The Green Party candidate offers Sanders fans a protest vote

► "I'm not holding my breath that we're going to win"

On a sweaty Sunday afternoon in late July, John Griffin happened upon Jill Stein, the Green Party's presumptive presidential nominee, in his North Philadelphia neighborhood. Joined by a couple dozen people, Stein was pointing out the economic inequality and environmental degradation in the area, which she referred to as an "open-air prison." Griffin, 37, who works security and facilities maintenance at a church, had a Bernie Sanders button pinned to his white T-shirt. "I love Bernie," he told Stein.

"I love Bernie," Stein repeated. Then she ticked off areas where she was promising more than Sanders had: guaranteeing a living-wage job to every American who wants one; canceling all student debt; cutting military spending in half. "She's awesome," Griffin said afterward. "No one else is in the middle of the ghetto, in the middle of the hood, trying to campaign."

Stein, a physician, is expected to become the Green Party nominee on Aug. 6 at the party's convention in Houston. When she ran in 2012, she won less than 0.4 percent of the popular vote—more, her Wikipedia page notes, than any other woman running for president has so far. "I'm not holding my breath that we're going to win the White House, but I'm not ruling it out," she says.

She does, however, have other goals in mind. Stein has yet to break 5 percent in national polling averages. She'll have to get to 15 percent to secure a spot at the presidential debates alongside Hillary Clinton, Donald Trump, and possibly Gary Johnson, the Libertarian candidate, whose polling averages lie south of 10 percent. The better Stein does in November, the more states will guarantee the Green Party's 2020 nominee a spot on the ballot. If she reaches 5 percent of the national popular vote, the party will get millions in federal campaign funds in the next election. As of June 30, Stein's presidential campaign had taken in \$859,000.

The closest the Greens have come to reaching that 5 percent goal was in 2000, when Ralph Nader won 2.7 percent of the popular vote. That included more than 97,000 votes in Florida, where Republican George W. Bush was ultimately declared to have won by a few hundred ballots. Democrats worry about history repeating itself. "Vote for Jill Stein, you might as well get fitted for a Make America Great Again hat," says John Fetterman, mayor of Braddock, Pa., a Sanders supporter who implored Sanders fans at the Democratic National Convention in Philadelphia to get behind Clinton. "You're helping elect Donald Trump."

"Trump is uniquely dangerous and





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focuses people's attention in a way that, say, Jeb Bush probably wouldn't have," says Bob Master, a regional political director for the Communications Workers of America union and a co-founder of the Working Families Party. He backed Sanders in the primary and now supports Clinton.

Stein says Democrats have always tried to deter people from voting Green by making Republicans sound scary. "Trump is a completely reprehensible demagogue with despicable policies," she says. "On the other hand, Hillary Clinton's track record is devastation." She cites Clinton's support for welfare reform as first lady and her Senate vote in favor of authorizing the Iraq War. Stein's 2012 running mate, Cheri Honkala, says: "It's time for us to leave our abuser and get something better."

That message appeals to Roberto Ojeda, president of the Young Democrats at Eckerd College in St. Petersburg, Fla., which he's considering reconstituting as a Green Party group. "We don't have time to wait another eight years with another Democratic president that's not going to do anything," he says. "Meanwhile our planet is dying, people are dying on the streets, there is abject poverty."

Ojeda took a selfie with Stein at a rally outside Philadelphia's City Hall during the Democratic convention and immediately Snapchatted it to his friends.

Asked why he was so excited to share it, he seemed confused by the question: "It's Jill Freaking Stein!"

Yet Stein has run into trouble with some public comments. In a July 29 interview with the *Washington Post*, she said people had raised "real questions" about vaccine safety and suggested the U.S. Food and Drug Administration and the Centers for Disease Control and Prevention had been unduly influenced by the pharmaceutical lobby. Stein subsequently clarified her position on vaccinations, asserting on Twitter that she was "not aware of evidence linking autism with vaccines."

Melissa Byrne, who was Sanders's digital director for the New Hampshire primary, says Clinton's embrace of some elements of Sanders's platform has given many of his backers hope ▶



◀ that they can achieve some of their policy goals if she wins. “You can see we have a power block, and we can move this,” she says. “We can move things forward.”

Lev Hirschhorn, a former Sanders organizer, made a similar case at a Socialist Convergence panel in Philadelphia the night after Clinton was nominated. “Bernie Sanders has demonstrated that we actually can take over the Democratic Party,” Hirschhorn told the crowd. He cited the failure of German communists to unite with Social Democrats against Adolf Hitler and announced, to a chorus of cheers and boos, that he would vote for Clinton to block Trump.

When Stein’s turn came to respond, she started hesitantly. “I don’t pretend to be a historian or a political philosopher,” she said. “I am just a mother on fire.” She launched into a stemwinder on the urgency of averting climate catastrophe; the similarities between Sarah Palin’s “drill, baby, drill” motto and Obama’s policies; Clinton’s and Trump’s record unpopularity; and the massive number of voters who’d benefit from her student loan debt-relief plan. She declared: “We don’t have to split the vote. We can flip the vote.” The room erupted in cheers, and she got a standing ovation. —*Josh Eidelson*

The bottom line Presumptive Green Party presidential nominee Jill Stein says voters should reject both Clinton and Trump.

Immigration

A Vermont Town Splits On Syrian Refugees

▶ **Rutland’s mayor runs into trouble after rolling out a welcome mat**

▶ **“They won’t be a drain. I think they’ll be a shot in the arm”**

In April, Rutland, Vt., Mayor Christopher Louras held a celebratory news conference announcing plans to welcome 100 Syrian refugees to town by October. The grandson of a Greek immigrant who’d settled in Rutland more than a century ago, Louras says resettling Syrian exiles won’t only serve a humanitarian purpose but also provide

“They could be 100 people from Québec, and we’d still have to make accommodations for them, and it would fall to Rutland city taxpayers.”
—*Timothy Cook of Rutland First*

a cultural and economic jolt to an area that’s losing population and seeing young people flee. Not everyone agrees.

In late June, opponents of Louras’s plan submitted a 171-page petition to the U.S. Department of State to block any arrivals until a public referendum can be held. The petition cited the town’s challenges with opiate addiction and a weak local economy. “To bring in 100 Syrian refugees is absolute lunacy,” says Timothy Cook, an urgent-care physician who helped found the opposition group Rutland First. “They could be 100 people from Québec, and we’d still have to make accommodations for them, and it would fall to Rutland city taxpayers.”

The controversy in Rutland, a Green Mountain town of 16,000, is only the latest flareup of opposition across the U.S. to helping the millions of Syrians displaced by civil war and the rise of Islamic State. While Canada resettled about 25,000 people over four months starting last November, President Obama’s goal of accepting 10,000 this year has been hindered by political opposition, especially in the wake of recent terrorist attacks in France and Germany. About 5,000 Syrian refugees have been approved for resettlement, according to the U.S. Department of Homeland Security. An additional 5,000 to 6,000 are awaiting the completion of background checks.

Rutland was a leading marble producer in the 19th and 20th centuries. The industry attracted a significant number of immigrants, many of whose descendants populate the city today. “What people were saying about Italian immigrants a long time ago mirrors what’s said today,” says William Notte, president of Rutland’s Board of Aldermen and a fifth-generation Italian American. “Just take out terrorists and put in Sicilian gangsters.”

The quarries are gone; the dominant commercial building downtown is a Walmart. The population has dropped almost a quarter since 1970. The city’s economy trails the rest of the state; 18 percent of residents live in poverty,

compared with 12 percent statewide.

That’s what prompted Louras to get involved in bringing refugees to Rutland. Vermont Governor Peter Shumlin, a Democrat, said last fall his state would welcome Syrians, even as many governors publicly said they wouldn’t. Louras approached Shumlin and the State Department about being the state’s first community to accept refugees. “We need to find, just like 100 years ago, immigrant families with a strong work ethic,” Louras says.

Resettlement supporters hosted a presentation in late June by the city manager of Winooski, a northwestern Vermont town of 7,300 that was aging and losing population until it started accepting refugees from Cambodia, Laos, Vietnam, and other countries—more than a thousand in the past three decades. “It’s hard to deal with the unknown, but we now have a growing population and we’re younger,” says Winooski city manager Katherine Decarreau.

Tom Huebner, president and chief executive officer of the Rutland Regional Medical Center, which employs about 1,500 people, says he welcomes fresh prospects; he has about 120 jobs available at any given moment. “We’re always hiring,” he says. “The issue of job availability is not at all insurmountable.”

For Dave Trapeni, a two-time mayoral candidate and opponent of the resettlement, the risk of giving terrorists a toehold in Rutland is too great. “Look at Orlando, San Bernardino,” he says. “People are scared.”

Opponents of the resettlement program collected more than the minimum 500 signatures required to ask the city council to authorize a referendum on the plan. Even if it is approved, the result wouldn’t be legally binding. “That’s not going to happen,” says Louras. “We don’t get to vote on who our neighbors are. That’s objectionable and offensive.” The council has sent a letter to the State

Department saying it cannot support the resettlement of the refugees.

The spectacle of a public vote on resettling Syrians would make Rutland



Louras

Settlements

JPMorgan spokesman Joseph Evangelisti declined to comment on the settlement

JPMorgan Chase agreed to pay **\$446,822** plus as much as **\$250,000** in attorneys' fees to settle a class-action lawsuit filed on behalf of almost **55,000** former federal prison inmates who say the bank ripped them off with fees on debit cards containing the balance of their prison accounts. They'd been given the cards upon release.

—Erik Larson



Lead plaintiff Jesse Krimes, a Philadelphia artist convicted of cocaine distribution

- \$10** to withdraw money at a teller window
- \$2** to use non-Chase ATMs
- 45¢** for balance inquiries
- \$1.50** inactivity charges

“look petty and backward” to the rest of the nation and the world, says Notte. “We’re going to be getting people who in four or five years will be buying homes and being productive. They won’t be a drain,” he says. “I think they’ll be a shot in the arm.” He adds: “There will always be people opposed to immigration, but now we need to move on and stop the circus.” —*Tim Jones*

The bottom line A plan to settle 100 Syrian refugees in a Vermont town has run into opposition from people worried about jobs and terrorism.

Economy

The Theory Behind Clinton’s Wage Push

- ▶ Economists see higher pay as a lever for unlocking capital
- ▶ “Companies don’t see the consumer demand”

In the past few weeks, Hillary Clinton has incorporated an idea in her speeches that suggests a shift in thinking for the Democratic Party: Wage growth may be good not only for the people who get a raise. It may be good for economic growth, too. “It’s really simple,” she said at a June 22 rally in Columbus, Ohio. “Higher wages leads to more demand, which leads to more jobs, which leads to higher wages.”

Standard models of economic growth are based on the work of Nobel laureate Robert Solow, who argued that

growth is a function of the supply of labor, the availability of new technologies, and the supply of savings to invest in technology.

Since the end of the recession in 2009, economists and central bankers have puzzled over weak growth in gross domestic product and almost no growth in wages. In its June appraisal of the U.S. economy, the International Monetary Fund pointed out that U.S. businesses have plenty of capital on hand but aren’t investing it in new plants or more efficient technology. Solow’s engine, in other words, is missing a gear.

As it has for the last generation, the Republican Party proposes in its platform to encourage business investment. The GOP wants to make it easier for businesses to take deductions on new equipment and to lower taxes on corporations and investors.

Alan Krueger, former chairman of the White House Council of Economic Advisers and an informal adviser to the Clinton campaign, argues that tax incentives haven’t worked. “A lot of investment’s been on the sidelines because companies don’t see the consumer demand,” he says. According to the Bureau of Economic Analysis, consumer spending, adjusted for inflation, grew 3.5 percent on average from 1980 to 2000 and 2.3 percent since.

Krueger, a labor economist, has long been a proponent of a limited increase in the minimum wage. “I think the time could be right for a more virtuous growth model, which is driven by stronger wage growth,” he says. Other countries are experimenting with pushing up wages: In Japan, Shinzo Abe’s government announced on July 27 a fiscal

stimulus package specifically to spur growth. Among other steps, it raises the minimum wage by 3 percent per year.

“I think it’s a very marginal way of promoting economic growth,” says Robert Gordon, an economist at Northwestern University. He prefers a massive investment in infrastructure but agrees that a shift in business income from profits toward salaries would create growth. Workers are more likely to buy things from their paychecks than businesses are to invest out of their profits.

For Gordon, “the question is, how do you get this increase in wage income?” He says the best way for a president to raise wages is to let the Federal Reserve do it, by keeping unemployment low.

Raising incomes is the subject of the first section of this year’s Democratic Party platform. Along with its long-standing support for unions, the party is supporting a \$15 minimum wage and federal help for companies that pay a “living wage.” But the platform’s language is about justice, not growth.

Senator Cory Booker of New Jersey got the hint. “When workers make a fair wage, it doesn’t just help their families,” he said in his Democratic National Convention address. “It builds a stronger, more durable economy that expands opportunity and makes all Americans wealthier.” —*Brendan Greeley, with Michelle Jamrisko*

The bottom line A Democratic line about reducing economic inequality gains steam as labor economists look for ways to goose growth.

August 8 – August 21, 2016

Every move
you make

Every click
you take

Every game
you play

Every place
you stay

I'll be
watching you

politicians you donate to, what you spend on groceries, and whether it's weird that you ate in last night, to create a portrait of your life and predict your behavior.

IDI, a year-old company in the so-called data-fusion business, is the first to centralize and weaponize all that information for its customers. The Boca Raton, Fla., company's database service, idiCORE, combines public records with purchasing, demographic, and behavioral data. Chief Executive Officer Derek Dubner says the system isn't waiting for requests from clients—it's already built a profile on every American adult, including young people who wouldn't be swept up in conventional databases, which only index transactions. "We have data on that 21-year-old who's living at home with mom and dad," he says.

Dubner declined to provide a demo of idiCORE or furnish the company's report on me. But he says these personal profiles include all known addresses, phone numbers, and e-mail addresses; every piece of property ever bought or sold, plus related mortgages; past and present vehicles owned; criminal citations, from speeding tickets on up; voter registration; hunting permits; and names and phone numbers of neighbors. The reports also include photos of cars taken by private companies using automated license plate readers—billions of snapshots tagged with GPS coordinates and time stamps to help PIs surveil people or bust alibis.

IDI also runs two coupon websites, allamericansavings.com and samplesandsavings.com, that collect purchasing and behavioral data. When I signed up for the latter, I was asked for my e-mail address, birthday, and home address, information that could easily link me with my idiCORE profile. The site also asked if I suffered from arthritis, asthma, diabetes, or depression, ostensibly to help tailor its discounts.

Users and industry analysts say the addition of purchasing and behavioral data to conventional data fusion outmatches rival systems in terms of capabilities—and creepiness. "The cloud never forgets, and imperfect

▶ **IDI's databases give PIs and others a new set of tools to snoop**

▶ **"You may not know what you do on a regular basis, but I know"**

Forget telephoto lenses and fake mustaches: The most important tools for America's 35,000 private investigators are database subscription services. For more than a decade, professional snoops have been able to search troves of public and nonpublic

records—known addresses, DMV records, photographs of a person's car—and condense them into comprehensive reports costing as little as \$10. Now they can combine that information with the kinds of things marketers know about you, such as which

pictures of you composed from your data profile are carefully filled in over time,” says Roger Kay, president of Endpoint Technologies Associates, a consulting firm. “We’re like bugs in amber, completely trapped in the web of our own data.”

When logging in to IDI and similar databases, a PI must select a permissible use for a search under U.S. privacy laws. The Federal Trade Commission oversees the industry, but PI companies are largely expected to police themselves, because a midsize outfit may run thousands of searches a month.

Dubner says most Americans have little to fear. As examples, he cites idiCORE uses such as locating a missing person and nabbing a fraud or terrorism suspect.

IDI, like much of the data-fusion industry, traces its lineage to Hank Asher, a former cocaine smuggler and self-taught programmer who began fusing sets of public data from state and federal governments in the early 1990s. After Sept. 11, law enforcement’s interest in commercial databases grew, and more money and data began raining down, says Julia Angwin, a reporter who wrote about the industry in her 2014 book, *Dragnet Nation*.

Asher died suddenly in 2013, leaving behind his company, the Last One (TLO), which credit bureau **TransUnion** bought in bankruptcy for \$154 million. Asher’s disciples, including Dubner, left TLO and eventually teamed up with Michael Brauser, a former business partner of Asher’s, and billionaire health-care investor Phillip Frost. In May 2015, after a flurry of purchases and mergers, the group rebranded its database venture as IDI.

Besides pitching its databases to big-name PIs (**Kroll**, **Control Risks**), law firms, debt collectors, and government agencies, IDI says it’s also targeting consumer marketers. The 200-employee company had revenue of about \$40 million in its most recent quarter and says 2,800 users signed up for idiCORE in the first month after its May release. It declined to provide more recent figures. The company’s data sets are growing, too. In

December, Frost helped underwrite IDI’s \$100 million acquisition of marketing profiler **Fluent**, which says it has 120 million profiles of U.S. consumers. In June, IDI bought ad platform **Q Interactive** for a reported \$21 million in stock.

IDI may need Frost’s deep pockets for a while. The PI industry’s three favorite databases are owned by **TransUnion** and media giants **Reed Elsevier** and **Thomson Reuters**. “There’s no shortage,” says Chuck McLaughlin, chairman of the board of the World Association of Detectives, which has about 1,000 members. “The longer you’re in business, the more data you have, the better results.” He uses TLO and **Tracers Information Specialists**.

Steve Rambam, a PI who hosts *Nowhere to Hide* on the Investigation Discovery channel, says marketing data remains a niche monitoring tool compared with social media, but its power can be unparalleled. “You may not know what you do on a regular basis, but I know,” Rambam says. “I know it’s Thursday, you haven’t eaten Chinese food in two weeks, and I know you’re due.” —*David Gauvey Herbert, with Olga Khariif*

The bottom line IDI’s marketing databases may help PIs predict people’s moves or digitally peek into their cars or medicine cabinets.

Research

The Internet of Very Expensive Things

► **Equipment makers and startups vie to make labs more efficient**

► **Even in high-tech facilities, “there’s a lot of manual typing-in”**

In her work as a drug researcher, Ulrike Rieder uses some of the most sophisticated and sensitive lab equipment available. But when it’s time to collate the results, she often shuttles from machine to machine gathering information. “I have to go to each piece of

equipment individually to transfer the data or access each device remotely,” says Rieder, a biologist at **Philochem**, a Swiss biotechnology company. “It would help if all the lab equipment were somehow connected.”

There is, as they say, an app for that—and soon there will be many, as pharmaceutical companies, lab-equipment makers, and startups seek to solve

the problem. While the technology in machines such as gene sequencers, centrifuges, and bioreactors keeps advancing, individual devices rarely communicate with one another. In many labs, technicians rely on screen shots, pens, and paper to share

data, an inefficient process that increases the risk of mistakes. “There’s a lot of manual typing-in,” says Dana Vanderwall, an executive at drugmaker **Bristol-Myers Squibb**. Researchers should be able to “focus on doing science and not on the idiosyncrasies of this or that piece of equipment or this or that data format.”

Germany’s **Merck KGaA** is developing software that automates experiments and predicts when machines are about to run out of chemicals or other materials, then allows one-click ordering of supplies—“the Amazon of life science,” as Merck executive Udit Batra puts it. **GlaxoSmithKline**, **Bristol-Myers Squibb**, and more than a dozen other companies are collaborating through the nonprofit Allotrope Foundation to develop common standards for lab data. Proponents say these could one day organize scientific results much as HTML provides a lingua franca for websites, no matter the browser used.

Efforts to smooth the research process are hampered by the large number of companies that make lab equipment. They all have their own software, and for complex experiments each machine may need separate instructions. Allotrope is developing standards intended to be device-agnostic, allowing scientists ►

“I have to go to each piece of equipment individually to transfer the data or access each device remotely. It would help if all the lab equipment were somehow connected.”
—Ulrike Rieder, a *Philochem* biologist

Technology

◀ using different equipment to collaborate seamlessly. Equipment manufacturers are working on proprietary systems optimized for devices they sell. **Thermo Fisher Scientific** offers a web platform for uploading data and analyzing it using a suite of apps, with the ability to monitor experiments remotely from a smartphone. The goal is “driving the inefficiencies of the currently cobbled-together data analysis out of the system,” says Joe Beery, Thermo Fisher’s chief information officer. “The researchers just want the answer.”

London startup **Synthace** seeks to foster communication with what it dubs an operating system for lab equipment. The system, called Antha, lets scientists specify what they’re trying to study, suggests experiments, and controls lab hardware, pausing when necessary to prompt a human to, for example, insert a new plate of liquid samples. The experimental steps and data are recorded in a common format. Synthace has developed “drivers”—not unlike those a computer uses to communicate with printers—for a dozen devices from about 10 manufacturers, including **Roche** and **PerkinElmer**.

Eventually, Synthace says, use of **Antha** could become widespread enough that compatibility with the system will be a selling point for a device, encouraging manufacturers to create drivers themselves. The company in October announced a partnership with **Merck** (no relation to Merck KGaA), and it’s in negotiations with four other major pharma companies to bring Antha into their labs. **Dow Chemical** is using Antha to design crop chemicals. “It’s taken me about five years of associating with computer programmers to realize they’ve got much more sophisticated tools” than many scientists, says co-founder Markus

Gershter, a biochemist and Synthace’s chief scientific officer. “That’s not a hardware problem—the hardware’s fantastic. It’s a software problem.”

—*Matthew Campbell and Johannes Koch, with Doni Bloomfield*

The bottom line Equipment makers and startups are racing to streamline scientific research by enabling lab machines to communicate.

Hardware

Undersea Drones Take a Breather

▶ **Operators’ workloads have shrunk along with oil prices**

▶ **“Everyone is just trying to stay alive at the moment”**

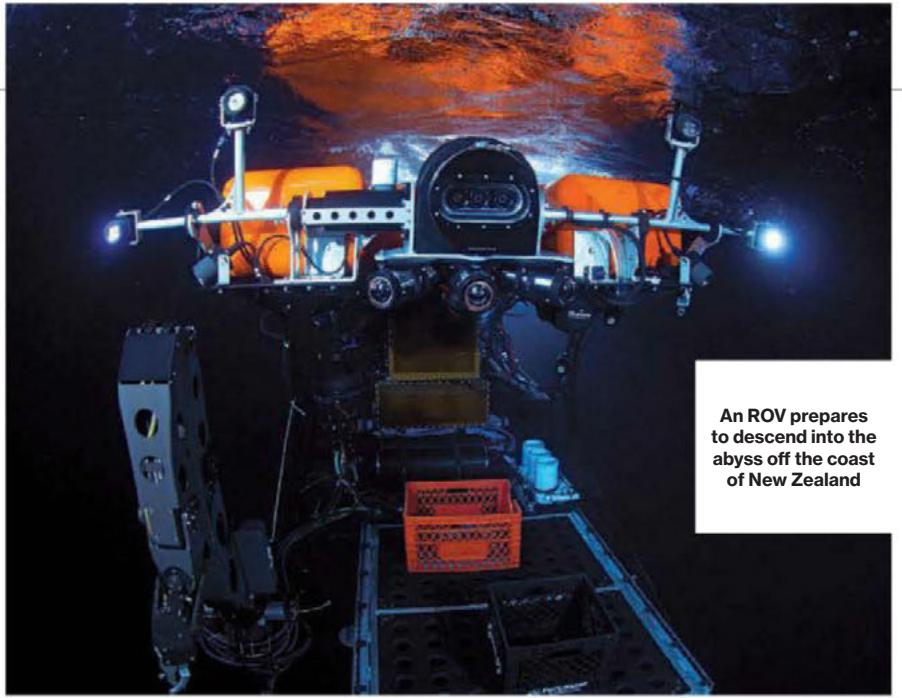
Until recently, oil and gas kept robots moving in more ways than one. Fossil fuel companies looking to speed up exploration, drilling, construction, and maintenance work turned to heavy-duty underwater drones known as remotely operated vehicles, or ROVs, to keep their wells afloat. By last year the global market for ROV operations—mostly contract work done by companies such as **Oceaneering**

International, **Subsea 7**, and **Fugro**—topped \$3 billion, according to energy researcher InField Systems.

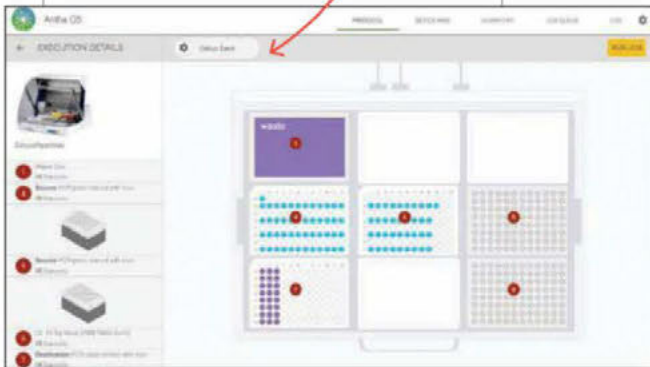
But with oil prices having their worst slump in decades, investments in many offshore projects have been postponed or canceled, and the ROV business is likewise cutting back. Together, the Big Three drone operators are laying off thousands of workers and leaving hundreds of their seafaring robots “sitting on the beach,” says InField analyst Kieran O’Brien, who estimates that one-quarter to one-third of the 1,200-plus vehicles in service around the world are idle. “The largest driver for ROVs has always been the offshore-rig markets,” O’Brien says. “Everyone is just trying to stay alive at the moment.”

Fugro’s director for investor relations, Catrien van Buttingha, says her company is working to diversify its income, 75 percent of which came from oil and gas last year. Subsea 7 declined to comment for this story ahead of its quarterly earnings; Oceaneering didn’t respond to a request for comment.

Because of the specialized expertise required to operate and maintain ROVs—and the oil companies’ desire to keep liability at arm’s length— independent contractors lead the field. Typically, one of the small-car-size robots is connected to a ship or rig by a tether that supplies power and hydraulic fluid. Fiber-optic cables send operators on the surface environmental data and live video, helping them guide the vehicle and its manipulator arms, which can grab valves or pipes.



An ROV prepares to descend into the abyss off the coast of New Zealand



Innovation

Pill Robot

"The idea that you could repair a human body by swallowing something, instead of making cuts, is amazing."

With fewer rigs to hook onto, it's not just the drones that are out of a job. Fugro, which has 11,597 employees, says this year's layoffs have totaled 363 (following 1,577 last year), and more are coming. In June, Subsea 7 said it would let go of about 1,200 of its 9,200 employees by yearend, on top of 2,500 cut in the second half of last year. In April, Norwegian newspaper *Aftenbladet* reported that Oceaneering's local operation had cut 650 of its 1,750 jobs in a year and a half; the company had 11,000 employees globally at the end of last year. "In 2016 we're expecting to see, basically, the bottom of the market," InField's O'Brien says.

The markets that operators are now trying to push into include the installation and repair of undersea telecom cables and offshore wind farms, as well as marine salvage, says Ben Wilby, an analyst at researcher Douglas-Westwood. That's a switch from years past, when renewable-energy companies were low priorities compared with the stream of work from fossil fuel businesses. "There were years where we were so incredibly busy with oil and gas that anything else we would only do if we would have the opportunity," says Fugro's Van Buttingha.

Oil and gas operators still need drones to handle inspection, repair, and maintenance of existing projects, says Justin Manley, the president of Just Innovation, a marine-technology consulting firm. Monitoring requirements for rigs in the North Sea are especially stringent, he says: "That's an ongoing service business that's not going to go anytime soon." And though demand for ROV operations has been falling, both InField and Douglas-Westwood predict average annual growth of 4 percent to 5 percent from now to 2020, driven by work in Asia, Africa, and Australia.

"Obviously, this is all dependent on the oil price," O'Brien says. "If the oil price doesn't do what the offshore market needs it to do, then these forecasts will come down." For now, hundreds of ROVs will be parked on the beach, working on their tans.

—Matthew Braga

The bottom line With the \$3 billion market for undersea drone work shrinking, operators are looking beyond oil and gas clients.

Form and function

Squeezed into a pill, this robot unfolds like an origami after it's swallowed. It can be guided with a tiny magnet to remove a foreign object from the stomach or treat a wound by administering medication.

Innovator Daniela Rus

Age 53

Director of MIT's Computer Science and Artificial Intelligence Laboratory



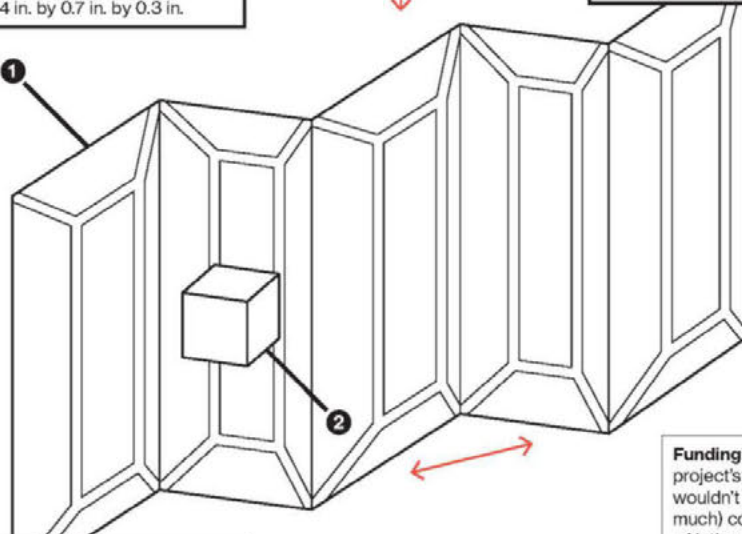
1. Insertion Rus's team places the accordion-shaped robot into an inch-long, 0.09-ounce pill, which dissolves in the stomach in a minute or two. The robot then expands to 1.4 in. by 0.7 in. by 0.3 in.



Origin Last summer, Rus and her colleagues began working to adapt an earlier foldable robot for medical use.

2.

Navigation Doctors can generate magnetic fields near the patient to guide the robot through the stomach, where they can manipulate it to perform tasks.



3. Aftercare The biodegradable robot breaks down in the stomach like food.

Funding The project's money (Rus wouldn't say how much) comes from a National Science Foundation grant.

Cost The equipment to manipulate the robot is pricey, but its own components cost less than \$100, Rus says.

Next Steps

Rus and her team have tested the robot in a silicon-molded prototype stomach and are seeking approval from MIT's animal care committee to try it in pigs. She says they're also looking to raise more money. "The experiments they've been doing are very promising," says Ken Goldberg, a robotics professor at the University of California at Berkeley. Until now, he says, "nothing has been able to essentially walk inside the body." —Olga Kharif



WHEN THE MARKET CALLS, ANSWER IT.

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Warren Buffett makes getting rich look like good clean fun. Nowhere is the image more complete than during the shareholder meeting his conglomerate, **Berkshire Hathaway**, holds each year in Omaha. He fills a convention hall full of the products Berkshire sells—Dairy Queen bars, rubber duckies, mobile homes—and then yucks it up onstage with his sidekick, Vice Chairman Charles Munger, in front of thousands of adoring fans. Amid the celebration, it's easy to lose sight of the grind at some of Berkshire's operations.

At the 2016 meeting in April, Buffett made his way through the hall, TV reporters in tow, to some hulking pieces of metal displayed at a booth for **Precision Castparts**. “What did we buy?” Buffett asked a broad-shouldered man in a pinstripe suit. It was a warm public introduction for Mark Donegan, the chief executive officer of one of Berkshire's latest acquisitions.

Buffett paid \$37 billion in January for the Portland, Ore.-based company, which makes the guts of aircraft engines and other complex metal parts. During the previous 13 years, under Donegan's leadership, the value of Precision stock climbed twentyfold, and annual revenue quadrupled, to \$10 billion. The company bought dozens of businesses and attained cult status among investors for its ability to squeeze out costs. “They have a pristine reputation,” Buffett said as cameras rolled. “And this is the guy that's done it.”

Behind the numbers is a bruising form of management at odds with Buffett's image as the folksy billionaire who downs cans of Cherry Coke. Donegan sometimes bullies staff during reviews at Precision plants. Interviews with 15 current and former employees—some at the most senior levels of the organization—as well as a half-dozen people with knowledge of how Precision is run create a picture of Donegan's managerial style. Most of the people asked not to be named. One person

▶ Warren Buffett is cuddly. Not all his managers are

▶ “At the end of the day, it's about money”

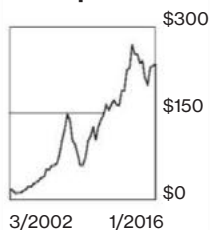
◀ heard him threaten to stab someone in the eyes with a pencil. Another heard the CEO suggest he might rip an employee's arms off so he could hit the person with the bloody stumps. On more than one occasion, he's called male employees "c-ts," the people say.

Some current and former employees say they respect Donegan and that he is ultimately fair. Precision declined to answer questions about his behavior. In a statement, it said, "There are numerous things that are factually wrong with these anecdotes," without elaborating. Buffett didn't respond to repeated requests for comment.

Donegan took the reins at Precision in 2002, after 17 years with the company. He came up in a business that was already focused on producing its parts at a low cost, and he took that system and went on an acquisition spree. The company was so effective at pushing its factories that margins often expanded after it bought a business. "They're maniacs about operational improvement," says Kevin Michaels, an aerospace industry consultant with AeroDynamic Advisory.

Managers would go to great lengths to hit budget targets. Working on weekends and holidays was common.

Precision Castparts stock price



At one factory, the receiving dock was shut at the end of some quarters to avoid booking extra inventory, an ex-employee says. Buildings were scoured for scrap metal to raise a few thousand dollars, and unused equipment

was auctioned on eBay.

Precision's empire expanded to more than 150 factories. Donegan flew in a corporate Gulfstream G650, which lists at \$65 million, to review many of them in person. Each quarter, managers braced themselves for the routine.

For a morning review, Donegan typically showed up by 9 a.m. and headed to a small conference room. Every factory was required to produce the same set of 26 charts that highlighted productivity, earnings, market share, and fixed costs per employee, among other things. Donegan usually didn't receive copies of the presentation

beforehand, but he could quickly spot what had gone wrong or any missed opportunity.

He could be funny, people who attended some of these meetings say. Mostly, Donegan was intimidating. His yelling could be so loud that sometimes staff would avoid that area of the office during reviews, they say.

Precision's business fascinated investors. During a 2009 conference, an analyst asked Donegan how he sustained such high margins. "We're kind of a blue-collar, in-your-face, slug-it-out, down-in-the-trenches type of company," he answered. "And I take great pride in that."

Todd Ittershagen managed several Precision plants over two decades before he says he was fired in 2011 for failing to meet what he describes as overly ambitious budget targets. He remembers being on the receiving end of Donegan's fury. "It really drives you," he says. "You don't want to have him do that to you."

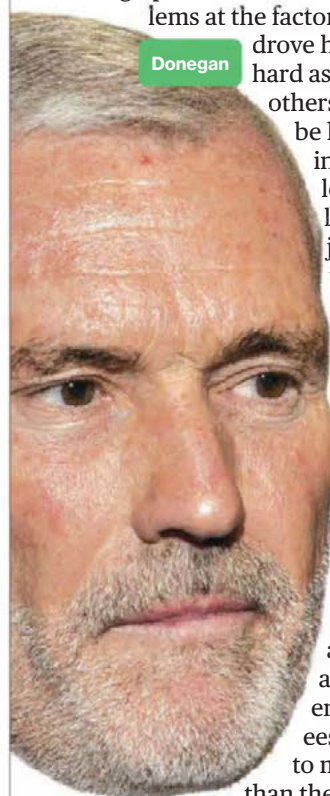
The tone Donegan set trickled down to other managers, say current and former employees. Martin Quigley, who was a vice president for sales in Cleveland, described the culture in a wrongful termination lawsuit filed in New Hampshire this year against the company and several executives. Donegan wasn't named as a defendant or mentioned in the complaint, but Quigley alleged that managers condoned verbal and physical abuse and considered Precision a "full contact company." Precision has denied the abuse allegations and says it doesn't comment on pending litigation.

In a room in a Portland-area plant, the company has posted guidelines for meetings for at least a few months, two employees say. It asks supervisors not to "publicly humiliate or verbally attack" co-workers or make comments that could be "perceived as harassing, threatening, or violent in nature." The employees say the rules were in response to allegations of such behavior.

Despite the hard-charging culture,

Donegan's yelling could be so loud that sometimes staff would avoid being nearby

there are few employment lawsuits against Precision, and some current and former employees offer praise for Donegan. One person says he was good at coming up with ideas to solve problems at the factories and



drove himself as hard as he pushed others. He could be kind, offering colleagues a lift on the jet or listening to workers' complaints.

Others say they put up with a lot, because the pay was generous. Hourly and salaried employees tended to make more than they could

elsewhere, these people say. The company had a stock plan that allowed employees to benefit from Precision's soaring share price. Including bonuses and options, there have been years when a general manager could make \$1 million, Ittershagen says.

These incentives diminished in recent years as Precision's share price fell. The company missed earnings estimates for two straight quarters in 2014. Donegan told analysts that customers were drawing down Precision parts in inventory. The company also had expanded to supply the energy industry, and as oil prices plunged, that business slumped. By June 2015, Precision shares had slid 27 percent, from a peak of \$275 in 2014.

Buffett saw an opportunity. In August 2015, his conglomerate agreed to buy Precision for \$235 a share. Donegan was set to receive \$51.8 million for his options. By working for Buffett, he'd be able to run the company for the long haul, free from Wall Street's quarterly expectations.

Buffett has long been attracted to hard-edged CEOs. David Sokol, who

Digits

\$430b

Insurers have been investing more in loans as banks scale back

Value of mortgages held by insurance companies, a 50 percent increase from 2006, according to data from the Federal Reserve

The industry is also branching out into small-business lending and car loans

\$14b

Property loans made in 2015 by MetLife

built Berkshire's energy unit before resigning in 2011, once wrote that he carried around a notebook ranking his aides in the order he would fire them if forced to do so. Buffett has also partnered with **3G Capital**, a buyout company known for slashing costs. Over the past three years, its managers have fired thousands of workers and shut factories as they used Berkshire's cash to buy H.J. Heinz and merge it with Kraft Foods to form **Kraft Heinz**. "At the end of the day, it's about money," says Jeff Matthews, who wrote three books about Berkshire. "The tension has been there. It just never had a \$37 billion price tag on it."

This embrace of the tougher side of capitalism has caused angst among some Buffett fans. At last year's annual meeting, he faced questions about 3G's methods. His defense, delivered then and expanded on this year, has been an argument for efficiency. Productivity gains have been "the all-important factor in America's economic growth over the past 240 years," he wrote in his most recent annual letter to shareholders. Left out of this analysis is the toll managers such as Donegan can take on people. That will be part of Buffett's legacy, too, along with his investment success and his love of Cherry Coke. —*Noah Buhayar*

The bottom line Warren Buffett loves Precision Castparts' performance, which is led by a hard-driving, controversial CEO.

International Investing

How Brokers Become Dissidents

► Turkish regulators warn against publishing negative research

► "Everything ... will now be taken with a pinch of salt"

After the failed coup of July 15 in Turkey, which left more than 200 dead, the government has intensified a crackdown on dissent. That includes comments by investment analysts: The head of research at one of Turkey's largest brokerages has been stripped of his license over a

report published the Monday after the coup attempt.

The Capital Markets Board, Turkey's securities regulator, said Mert Ulker failed to "fulfill his responsibilities" in publishing his analysis for **Ak Investment**. The report summarized recent events and offered forecasts for the Turkish lira, stocks, and the economy. It also analyzed Turkish politics, saying developments had "resulted in more power being concentrated" in the hands of President Recep Tayyip Erdogan.

One section of the 2,750-word report outlined various explanations of who was behind the attempted overthrow, addressing speculation that it could have been "stage-managed to give Erdogan an opportunity to purge the military of opponents and extend his grip on Turkey." The report downplayed that explanation as not being the most "rational" possibility.

Ulker declined to comment. Mert Erdogmus, chief executive officer of Ak Investment, says Ulker's contract has been canceled and he's no longer an employee of the company.

The investment strategist is only one casualty of a sweeping purge that's cost tens of thousands of bureaucrats, educators, and security personnel their jobs. Officials are asking banks to submit for review their analyses of the putsch. Mehmet Ali Akben, chairman of the banking regulator, has warned against publishing "reports that would turn expectations and the atmosphere negative." Vahdettin Ertas, chairman of the Capital Markets Board, said in an interview on the Turkish channel Bloomberg HT that "we haven't

intervened in any analyst reports" that are within the limits of law. Before the coup attempt, rights groups criticized Erdogan's government for suppressing media criticism.

"Everything that comes out of Turkey will now be taken with a pinch of salt," says Ghanem Nuseibeh, founder of risk consultant Cornerstone Global Associates in London. "If this environment persists, Turkey will reach a point where confidence in its financial sector and economy will crumble, as far as foreign investors are concerned."

In a speech to a group of international investors on Aug. 2 in Ankara, Erdogan said the economy was poised to recover from the putsch. He also criticized the international response to the crisis. "In some European airports, unfortunately, there are ads that say, 'Don't go to Turkey. Your trip would strengthen Erdogan,'" he said, without naming them. "I am asking now, are they supporting terrorism or not?"

Economists including Istanbul-based Atilla Yesilada at GlobalSource Partners have said the crackdown on people and companies accused of sympathizing with the plotters may worsen an expected economic slowdown this year, and S&P Global Ratings has raised its risk assessment for Turkey to high from moderately high. The Borsa Istanbul 100 stock index is down about 10 percent since July 15.

The ruling against Ulker will reinforce an already widespread self-censorship, says Nathan Griffiths, a money manager at NN Investment Partners in The Hague. "It means I have little interest in reading research

◀ from local brokers, because they are effectively unable to offer balanced commentary,” he says. “It’s terrible for the integrity of the Turkish brokerage community.” —*Tugce Ozsoy, Ercan Ersoy, and Maria Levitov, with Selcan Hacaoglu and Firat Kozok*

The bottom line Regulators in Turkey are scrutinizing investment research that seems too negative.

Endowments

A Shake-Up at Harvard's Giant Investment Fund

▶ A star stock trading desk unravels after less than two years

▶ “I’m really surprised they would dismantle it that quickly”

In 2014, **Harvard Management Co.**, the stewards of Harvard’s vast endowment, embarked on an ambitious plan to build a new hedge fund-style team of stock traders and analysts. Now, HMC has largely taken apart the group and will shift more of its \$37.6 billion in assets to outside managers. And it’s once again confronting a question that has dogged it for years: Why can’t the world’s richest university make smarter investments?

Stephen Blyth stepped down as HMC’s chief executive officer on July 27 for personal reasons after 18 months on the job. His resignation follows the departure in June of Michael Ryan and Robert Howard, the two former Goldman Sachs partners he’d brought in to guide the equity strategy.

Although Blyth’s exit was said to be unrelated to those of his star hires, much of the talk inside HMC’s offices in Boston was about why management had pulled the plug on the equity team. According to people familiar with the matter, some traders in Ryan’s group posted losses in 2015 significant enough to trigger internal temporary stop-loss orders. Ryan also lost money in a portfolio he traded himself. The extent of the losses is unclear, however, and they came at a time when most hedge funds were struggling to beat market indexes. Ryan, who declined to comment, left to

pursue other opportunities, according to an internal memo in June from Robert Ettl, the interim CEO.

“I’m really surprised they would dismantle it that quickly,” Verne Sedlacek, former chief financial officer of HMC, says of the equity team. “That’s not a good sign for what the strategy is.”

HMC decided to lean more on hiring outside money managers “who have the resources, skill, and experience,” Paul Finnegan, chairman of HMC’s board, said in a statement. Harvard declined to comment beyond its statement. The about-face is the latest in a long series of setbacks for HMC, now on its sixth CEO since 2005.

In terms of investment returns, Yale, with its \$25.6 billion endowment, left Harvard in the dust years ago. Indeed, Harvard has lagged most of the Ivy League for the five years ended June 2015, the most recent period for which data were available.

HMC was once considered among the best money managers. Jack Meyer, who ran it from 1990 to 2005, pursued a strategy of expanding into new asset classes such as private equity and timberland. He developed an internal staff that traded in markets directly. In his last decade there, Meyer presided over average annual returns of almost 16 percent. He also rewarded talent with hedge fund-like pay.

News that HMC was paying some staff millions of dollars annually—paychecks reached as high as \$36 million—set off a campus outcry. Some alumni called the rewards excessive. Meyer left and opened a hedge fund, as did many others on his team.

After an almost yearlong search, HMC hired Mohamed El-Erian, the investment strategist from bond giant Pacific Investment Management Co. He turned to using outside managers—standard practice for most university endowments—because of the exodus of internal talent. El-Erian, who writes a column for Bloomberg View, returned to Pimco after less than two years.

His successor, Jane Mendillo, was upended by the financial crisis, presiding over a 27 percent loss in 2009. The university scaled back a campus expansion and reduced such perks as hot breakfasts in most dorms.

Blyth joined HMC in 2006 from Deutsche Bank. He took over as CEO in 2015, promising better returns. He saw an opportunity to shift more money to an internal trading team that as of last year oversaw about \$9 billion.

Ryan was a key part of Blyth’s plan. He had spent almost two decades in equity sales at Goldman Sachs before leaving in 2008 to run global securities at Credit Suisse. He later co-founded a hedge fund that was wound down after two years, then ran another investment firm. Ryan brought in Howard, who had run a proprietary trading group at Goldman Sachs, and then a fund at private equity group KKR. Howard’s \$510 million fund was liquidated in

2014. Howard didn’t return calls seeking comment.

HMC hired at least nine analysts and portfolio managers, many with experience in long/short equity trading, which

involves betting on some stocks falling in value and others rising. A number of the new portfolio managers stumbled and saw their trading shut down, but they were told they would be free to trade again in July, say two people familiar with the matter. Instead, eight learned in May that their job was being eliminated, the people say.

Two weeks later, Harvard President Drew Faust visited HMC to announce that Blyth had taken medical leave. Ettl, the chief operating officer, stepped in as interim leader. In June, HMC eliminated four more positions.

An endowment can be the ultimate long-term investor, “so it’s unusual to see them shut down something of that size in such a short amount of time,” says Brad Balter, CEO of Balter Liquid Alternatives, which invests in hedge funds. “Clearly, it did not go as planned.” —*Michael McDonald and Sabrina Willmer*

The bottom line Harvard’s investment arm tried to reclaim its glory days with its own trading desk. Now it’s shifting money to outside managers.

11.7%

Five-year annual return on an index portfolio of 60 percent stocks and 40 percent bonds

Five-Year Average Annual Return

As of June 2015

1 Yale	14.0%
2 Princeton	13.6%
3 Dartmouth	12.6%
4 Columbia	12.2%
5 Penn	11.7%
6 Brown	10.6%
7 Harvard	10.5%
8 Cornell	9.9%

If You Purchased Freight Forwarding Services Providing domestic and international shipping, *You Could Get Benefits from a \$53.55 Million Settlement*

If you or your company used the services of certain freight forwarders, you may be entitled to a potentially significant cash payment from class action Settlements. Settlements have now been reached with the final two Defendants. Settlements were previously reached with 29 Defendants.

The Settlements involve a lawsuit claiming that certain freight forwarding companies secretly agreed to prices for their freight forwarding services worldwide, including on routes in the U.S. and between the U.S. and China, Hong Kong, Japan, Taiwan, India, Germany, the U.K. and other parts of Europe. The Settling Defendants deny that they did anything wrong.

Freight Forwarders provide transportation, or logistics services for shipments relating to the organization or transportation of items via air and ocean, which may include ancillary rail and truck services, both nationally and internationally, as well as related activities such as customs clearance, warehousing, and ground services.

Who is Included

You may be included in one or more of the Settlements (as a Class Member) if you: (1) Directly purchased Freight Forwarding Services; (2) from any of the Defendants, their subsidiaries, or affiliates; (3) from January 1, 2001 through January 4, 2011; (4) in the U.S., or outside the U.S. for shipments within, to, or from the U.S.

What Do the Settlements Provide?

DHL and Hellmann will establish a \$53,550,000 Settlement Fund. The amount of your benefits will be determined by the Plan of Allocation, which is posted on www.FreightForwardCase.com.

How to Get Benefits?

You need to submit a Claim Form, online or by mail, by **April 3, 2017** to get a payment from the Settlements. You can obtain a Claim Form by calling one of the numbers below or visiting the website. **If you already submitted a Claim Form for the first or second round of Settlements, you do not need to file a new claim.** You will automatically be paid from this third round of Settlements.

Your Other Rights

Even if you do nothing you will be bound by the Court's decisions. If you want to keep your right to sue DHL or Hellmann yourself, you must exclude yourself by **September 20, 2016** from that Settlement. If you stay in a particular Settlement, you may object to it by **September 20, 2016**.

The Court has appointed lawyers to represent you at no charge to you. You may hire your own lawyer at your own cost. The Court will hold a hearing on **November 4, 2016** to consider whether to approve: (1) the Settlements, (2) a request for attorneys' fees up to 33% of the Settlement Fund, plus interest, and reimbursement for litigation expenses; and (3) a request for Class Representative service awards of no more than \$75,000 each. You or your own lawyer may appear and speak at the hearing.

This notice is only a summary. For detailed information:

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*2017 MKZ equipped with available 3.0L engine and AWD.
Horsepower rating achieved with 93-octane fuel.

The Interview Issue

“This is a weird thing to say, but I’m going to ask anyway”

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Interviews have been edited and condensed for space and clarity
Edited by James E. Ellis

Satya Nadella

CEO
Microsoft

Microsoft's chief says he wants to turn a PC-centric company into one focused on the promise of cloud computing

Interview by
Dina Bass

Photo by
Christopher Gregory

As Microsoft enters middle age, what do you want this company to be?

I think any company that has had tremendous success should be mindful that early success or big success can get in the way of creating new success. Somebody said to me a long time ago that the worst thing that can happen to anybody growing up is early success, because after that you really don't understand what it takes to actually drive and strive and persist.

We've been tremendously successful. So we need to remind ourselves that every new business that's going to grow at Microsoft is not going to grow in multibillion-dollar chunks. In fact, one of the big decisions I had to make even before I became CEO was to prioritize Azure [Microsoft's cloud computing platform] as the future of our server business when it was a cumulative \$5 billion business and to say, "Oh, this is going to be the future of the \$20 billion server business." That is what companies like ours who have had success need to be able to do.

If tech companies don't move to focus on the cloud, do they risk becoming obsolete?

I think all tech companies that do not catch and capitalize on technology waves with a good average will. It's not about catching every wave. But if you don't catch enough of them and don't have a high batting average, then you will be obsolete.

And if I look at Microsoft—the fact that you're talking to me 41 years after our formation means our batting average must be high. There are not that many 41-year-old tech companies that you're probably talking to.

Microsoft's working hard to move customers onto cloud-based computing, even though it may cannibalize some of your existing highly profitable businesses. Why?

The move to the cloud is actually not cannibalistic. There may be time frames where our business models are shifting. But in terms of total addressable market for us and our ability to add more value to our customers, it's a massive total addressable market expansion.

Take Office 365 [Microsoft's cloud-based productivity software]. We never sold Office 365-like capability to all the small and medium-size businesses. Now, guess what. We get to do that for every business, not just in the United States, but every country. That's massive market opportunity expansion.

You just agreed to buy LinkedIn, the biggest deal Microsoft's ever done. The company has not had a great

history with large deals. What's different this time?

There are key things that I'm looking at as we look at acquisitions. The first is, is the core

business that we are buying something that we feel is healthy, we're excited about, that's got momentum? When I look at both *Minecraft* and LinkedIn, they're great businesses that are growing. And so, in fact, if anything, our core job is to take that franchise and give it more momentum. In the case of *Minecraft*, it's the biggest PC game, and we are the PC company. Their growth was moving to console. We have a console. Therefore, we were a perfect owner. Same thing with LinkedIn. They're a professional network for the world. We have the professional cloud. Time will tell, but I'm very, very bullish.

You've worked very hard to overhaul the culture here at Microsoft. How is it going?

Culture is something that needs to adapt and change, and you've got to be able to have a learning culture. The intuition I got was from observing what happens in schools. I read a book called *Mindset*. In there there's this very simple concept that Carol Dweck talks about, which is if you take two people, one of them is a learn-it-all and the other one is a know-it-all, the learn-it-all will always trump the know-it-all in the long run, even if they start with less innate capability.

That is true for boys and girls in schools. It's true for CEOs in their jobs. It's true for every employee at Microsoft. I need to be able to walk out of here this evening and say, "Where was I too closed-minded, or where did I not show the right kind of attitude of growth in my own mind?" If I can get it right, then we're well on our way to having the culture we aspire to.

Is it hard to change the culture at such a big company?

All change is just hard. I mean, forget the company, just let's individualize it. If somebody says, "Hey, today you're going to have to change," it's the last thing anybody wants. It's the most uncomfortable thing.

But we also all recognize that if we don't, then the fundamental human quality of being able to adapt is not going to be exercised. If companies don't change, they're not going to be around.

What's surprised you most as CEO on a personal level?

As a CEO, you have to be very, very careful of making sure that you just don't opine without thinking through things, because the last thing you want to do is say something and then—you

“If companies are around”

going to be

don't

they're not g



know, people will take it seriously and make it happen. You'd better know that's really what you wanted done.

You've talked about learning management lessons from cricket. What's a lesson you learned?

I grew up in India, and this was pre-India becoming a cricketing power and winning even its first World Cup. We were playing a cricket match, and that was the first time we were playing a club that had some overseas players. These were Australians. We were in such awe of these overseas players, and we sort of were watching rather than competing. A business manager of the team saw that I was fielding very far away from the action and just watching. He put me right next to the action, and it was a great lesson to say, "Look, when you're on the field, you compete. You can have a lot of respect for your competition, but you should not be in awe of them."

Is the cloud the big technological change that we're going to see over the next five years?

I think the big move that is happening today for sure is the cloud move and the mobile move. They sort of go together. And when I say mobility, it's not the mobility of one device, it's the mobility of the applications and the data across all your devices, because it's about the ability of the human experience, not the device.

But I see three other broad platform shifts. One is what I've called conversations as a platform. If we can teach all our computers human language, can we democratize computers even more so than we have done today? Think about it. The model today of, "Well, I've got to learn the shell, learn to download 20 apps, and navigate between these apps to get stuff done"—what if none of that was a cognitive load on me, but I was able to simply talk, text, or voice and get my things done?

That's a much more natural way for computing to surface. It'll work for an 85-year-old person in China, and it'll work for a 5-year-old in Bellevue [Wash.]. That, to me, is the next frontier and what we're doing with [voice-enabled personal assistant] Cortana, what we are doing with our bots.

I'm also very, very bullish about making AI capability or machine learning capability available to every developer, every application, and letting any company use these core cognitive capabilities to add intelligence into their core operations. So that's something that we're doing with Azure and our Azure cognitive services.

The third one that I'm also very excited about is what's happening with mixed reality.

This is basically augmented reality?

That's right. To me, it's the ultimate computer. If you think of your field of view as a human becoming an infinite digital display—so not only do you see the analog world, but you are able to see in it digital artifacts, any screen you want, any object you want. So that's what we're doing with HoloLens [Microsoft's augmented reality goggles].

You use a software dashboard to track how much time you spend on different tasks. What are you hoping to accomplish?

The most valuable thing we have is our time. And I felt that one of the things that we should make sure we do for ourselves is to give people a sense for how are they spending their time so that they can then be more in control.

The thing that I most love to see is the amount of time I

spend with people outside Microsoft vs. inside. The other thing that I love looking at is how much time am I spending in meetings vs. what I would call focused time. You absolutely need to be in meetings, because, after all, you don't do a CEO's job by locking yourself in your room. But at the same time, there's got to be a right balance.

Are you trying to lower the number of meetings?

We have some measures [to ascertain] if you have lots of redundant layers of people attending meetings. You can in fact have a more effective meeting by having the right set of folks in there to be able to make the right kind of decision as fast as you can. So I would say it's not the number of meetings that matter, it's the effectiveness of the meetings.

We also look at the number of other meetings that got spawned because of the meeting, because one of the greatest wastes of time could be a CEO sets up a meeting, and there are 15 prep meetings in order to get to the CEO's meeting.

What's the worst piece of advice you've ever received?

The worst advice I would say is from people who have said, "OK, be either very long-term or be very short-term." And it just never is like that.

Long-term orientation can be an amazing virtue when you know you're on the right track, when you are in fact able to validate your hypothesis, when you are in fact making progress. But it can be terrible if you're not able to quote-unquote break from the past, learn from your mistakes.

You've done a lot of traveling in the spring to China, India, other countries in Asia. What did you learn from observing the way people there use technology?

Whenever I go to most countries, I visit schools just to see what's happening. And there was this school in Jakarta I went to, and what was awesome was to see the tools the kids there used—Windows, PCs, in fact, I think they were using a two-in-one tablet and using OneNote [Microsoft's note-taking software].

The same toolset that my daughter in Seattle uses is what kids in Jakarta are using. The fact that it's been democratized is amazing.

The second thing is how small and medium-size businesses that never even had PCs, never had any servers for sure, are able to go digital. The cloud is perhaps one of the most defining democratizers because it makes it possible—through its business model and by lowering the friction—for any small business to enter the world of digital without the costs.

Will the key innovations and leadership in the tech industry remain heavily centered in the West, or will we see more of that move to Asia?

I believe the world is increasingly going to be digital. That means every company is going to increasingly be more digital. And if you say that, then you have to assume that the center of technology has to be more spread out. It can't be that a few companies in the West Coast of the United States is the only set of people who are the technology providers for the world, because that's too narrow a way to look at it.

In fact, my goal at Microsoft would be to empower every person and every organization on the planet to achieve more. Central to that mission is to make businesses everywhere successful with digital technology, whether it be an entrepreneur or small business, or a bank or retailer in Indonesia or Turkey, building their own e-commerce capability. That's, I think, going to be existential for our own growth. **B**

Annualized commercial cloud revenue

Fiscal year 2014:

\$4.4b

Fiscal year 2016:

\$12.1b

Stacy Brown-Philpot

CEO
TaskRabbit

The marshal of gig labor on framing an unusually broad mission and relating to colleagues and peers when almost none of them look like you

Interview by
Ellen Huet

Photo by
Christaan Felber

is the norm and not

“I look forward to the day when this

How is it taking over from founder Leah Busque, who's still there?

The thing she did as a CEO and a founder was empower me to be successful, first when I was chief operating officer. There was no expectation that you could go around the COO and get what you want—no going to tell mommy if the other mommy said no. A lot of founders have a hard time with that.

What's different now that you're CEO and more in the public eye?

I'm making all the hard decisions, and my team gets to make the easy decisions. I was surprised by the attention and visibility on me as a black woman CEO. I look forward to the day when this is the norm and not the exception.

TaskRabbit plans to be profitable by the end of the year. Do you plan to raise venture funding again?

We don't have to raise money to hit profitability. We could raise expansion capital, but we have the freedom to make that choice. For the people in

this building, that's motivating. That can inspire in ways you can't by just saying, "Oh, we need to hit this goal and hit this target."

Before TaskRabbit, you spent nine years at Google. What moments and lessons stand out for you?

Sheryl Sandberg was a mentor and a champion for me, and she saw something in me that I didn't see in myself. In India, I went from managing a couple hundred people to over 1,000. That was a big shift. I grew up in Detroit, my mom was a single mom, and here I am running this very large team in India. It wasn't just about getting things done—I had to become more of an inspirational leader.

The way to connect to people is to relate to who they are and do something that stretches you outside of your comfort zone. I learned how to Bollywood dance and performed a popular dance—it was hard—in front of 1,000 people. And the other piece is telling good stories. I had to figure out how to string my experiences and our goals together.

TaskRabbit was one of the first companies in the gig economy. But we've seen others take that idea and run with it. How can TaskRabbit differentiate itself?



the exception”



Our focus on a broader set of services has been both a blessing and a curse. A blessing because you think of us when you need a lot of different things done, and a curse because it's been a little bit harder to market. So we've been focusing our advertising on a few categories: cleaning, handyman, moving, delivery. The competition is really the client doing it themselves. But our space is still relatively undefined. We still have to educate people about on-demand home services—that you can trust our marketplace.

TaskRabbit is 12 percent African American, which is off the charts compared to other tech companies. You've pledged to be 13 percent, to match the U.S. population. How did you get there, and what's driving you to go further?

We want to set a standard for what it means to feel like you're in a diverse environment, feel like you could always be your authentic self. I share my experience as a black woman, and I invite people to talk if they're feeling hurt or pain. I think being an African American woman helps. It's being willing to talk about the real things happening right now that might be impacting someone's ability to show up at work like they would every other day.

What were some of the most challenging aspects of breaking into tech leadership as a black woman?

Ninety-eight percent of people in my high school were black. And then I went to UPenn undergrad, which was like 6 percent black. Going from there to public accounting to investment banking, where I'm still one of the only, or the only—it wasn't easy, but it was easier because I had learned how to do it. And then coming out to Silicon Valley—again, you're one of the only, or the only. It's how I lived my life for the last 20 years. I don't really know how to do anything different. I have learned as I get older just to be who I am.

Has it tired you out at times?

It's exhausting. I remember when I helped Sheryl launch Lean In, everyone asked me, "Are you going to join a Lean In group?" And I said, "I would if I could join an all-black one," because there are times when we all need to refuel, to find space where we can get the energy to go on.

I understand what it's like to be different and therefore can empathize with someone who's different. I can be in a room and remember which person hasn't said anything in 10 minutes and invite them to speak. Having the ability to see every single individual leads, I think, to better ideas, better organizations, and greater success. **E**

Claudio Descalzi

CEO
Eni

The Italian energy executive thinks coal use should be limited and that gas can bring Egypt and Israel together

Interview by Paul M. Barrett Photo by Amy Lombard

How have you responded to the sharp decline in crude oil prices?

Fortunately we had a strategy to own conventional assets, which means a very low cost and very low break-even price. At the moment we have one of the lowest in the industry, because our technical cost is lower than \$20 per barrel. And the breakeven is now at \$27 per barrel. Last year it was \$45. We don't control the price, so we have to work on what we can control. The price of oil dropped about 60 percent to 70 percent, and costs dropped only by between 25 percent and 30 percent. So we have to work on that.

If we'd made different choices—complicated projects or tar sands or Arctic projects—life would be quite difficult.

How are you keeping costs low?

"If you want to reach the

Everything starts with your assets. We have assets—for example, our natural gas discovery in Egypt, or our discovery in Mozambique that is a giant one, or in Congo, where to drill a well takes three or four weeks. If drilling a well takes two months, three months, four months, the cost is very high. When we have to manage and run a field for 30 to 40 years—I'm talking about Africa—your operating costs play a very important role. So I think that we'll really be focused on cost, on efficiency.

You once referred to OPEC as playing the role of the central bank of oil. Has OPEC abdicated that role?

I think that OPEC still has a role, because they're deciding—when you decide to do something or not to do something, you're running things. It's clear that now the situation is changing, because the market is rebalancing. We have very low spare capacity—the lowest spare capacity ever, 2 percent, and all the spare capacity is in Saudi Arabia. The industry cut more than \$200 billion of investment, and we also cut exploration. And when you cut exploration, you break your cycle.

What does that mean for prices?

That means higher prices. That's a very scary issue, because it's an issue about energy security and also access to energy of a billion people. Africa could double its population to more than 2 billion in 2030. And Africans already don't have access to energy. Clearly we need a regulator. I mean, can you imagine that a financial system can live without the Fed or without the central bank in Europe? It cannot.

What would be the mechanism for setting up such a regulator?

I think that what they're trying to do, Russia and OPEC, is freeze the production target. That's a start. It's clear that

we have to find a price that's good for customers and for producers. Maybe \$100 per barrel is too much, but maybe \$40 per barrel is not enough to justify big investments.

Do you endorse the Paris 2015 climate goals for emissions?

Absolutely yes. I believe in the need to face climate change, reduce fossil fuel—and I put coal and oil and gas all together. We need to find the right balance.

Europe was the only one in 2008 to make a strong commitment to cutbacks

in fossil fuel use. But Europe only represents 10 percent of worldwide emissions. If you put together the U.S. and India and China, they represent the big bulk of the emissions, and there is not a clear commitment to reductions. If you look at the COP21 [the United Nations Climate Change Conference] report, nobody wants to talk about coal. Nobody wants to because India, China, the U.S., and Europe, they're using coal. If you want to reach the 2-degree target, you have to remove coal, and you have to put together renewables and gas.

That's feasible, removing coal?

Something is feasible if there's the will

Decline in Eni's exploration cost per barrel of oil produced, 2000-15:
-36%



-degree target,

you have to remove coal

to do that. If you want to transform a coal-fired power plant into a gas-fired plant, it's feasible. We cannot rely solely on the market when you think about health.

What are you doing to reduce carbon?

In our facilities in Africa, we replace the internal consumption of gas with solar, and we free up gas for the host country. Why? Because it's very easy. We are close to the grid when the grid exists. We can produce hundreds of megawatts, and the remaining electricity that we are not using for our facility we sell to the market at a reasonable price.

In parallel, we start with this huge program of renewables at our sites, and that is mainly focused in Africa. Africa is a paradox, because they have twice the reserves of the U.S. but they don't practically have access to energy. Just

50 percent, generally speaking, and in the sub-Saharan region we have 600 million people without access to energy. And they use coal, or they use wood. So cooking and eating is causing a lot of death. It's a tragedy.

Africa represents 15 percent of the total worldwide population. They use just 3 percent or 4 percent of worldwide energy.

How might your recent discovery in Egypt affect politics in the Middle East?

Egypt will be completely self-sufficient. At the end, they'll also export energy. It will create stability in Egypt. They can create cash flow selling gas and promote their own development. Then they can aggregate. They can create a hub with Israel, with Cyprus, in the future with Libya. They can be one of the solutions for European energy security.

You think it's plausible that Israel would be able to work with Egypt?

These countries need each other. They can share facilities. They can work

together. When energy puts people together, it's very positive. That could be a very positive case for friendship.

Why did you choose a career in the oil and gas industry?

That is a good question, because after 36 years you forget. *(Laughs)* I started in R&D, and then I started traveling and getting a strong passion to develop projects. It's not easy to explain what happens when you are abroad and you are in a very difficult situation. You are developing something, an offshore project or a project in the forest. Or you are drilling a well with no real probability of success. And then during the night or during the day, the reservoir becomes bigger and bigger. It is a matter of passion.

Where did you have that experience?

In Angola, in Libya, in Congo, in Nigeria and Italy, as well as with the big discoveries in U.K. You remain close to these people, because you've got something with them that is very extraordinary. You are discovering. **B**

Ed Bastian

CEO
Delta Air Lines

He left the carrier, in part because it was keeping fares too low. He explains why he won't make that mistake again

Interview by
Justin Bachman

Photo by
Christaan Felber

Why did you quit the airline in 2004 and return six months later to help manage the bankruptcy when then-CEO Jerry Grinstein called?

I was really vocal when I left about the company's strategy—they were making some really dumb decisions. The biggest one was trying to turn Delta into a low-fare airline. When you have employees making sacrifices—pilots took 50 percent pay cuts—you have an obligation to those people to use their investment in the company wisely. And to just take it and plow it into low fares was lunacy. I thought we were making really bad decisions. And Jerry called me and asked me to come back, and he said he agreed and said he was changing out the commercial leadership of the organization.

What did you think Delta was doing wrong?

We were allowing AirTran and JetBlue to define us rather than defining the market and the game on our terms. And we were losing—and losing badly at that. I was convinced that we could never win. We were flying widebodies to Florida just to keep fares low rather than flying them to Paris and keeping fares high. There was a reason why we were broke. I like to say we didn't go bankrupt by making a lot of smart decisions. We made a lot of dumb decisions. We had to own it.

How much does ex-CEO Richard Anderson, Delta's board chairman, weigh in?

I call him more than he calls me; sometimes we'll speak two or three times a week. He gives good counsel. I also give Richard a tremendous amount of credit. He left while there was still a lot of gas in the tank, which is very rare in today's corporate world. CEOs generally love to run the tank low and then hand it to someone else to go take it out and refill it. Or get the car out of the ditch and have the keys taken away from them.

Because of industry consolidation, U.S. airlines have become solidly profitable—perhaps permanently. Is it true that the red ink is over, regardless of the economy?

I know that's true for Delta. But I also don't believe that the industry is immune from volatility. Whether it's fuel, geopolitical effects, currency challenges, the Middle East carrier problem that we're all facing, there are some big obstacles that this industry still has to gird itself for, and we can't forget where we came from.

When you're making all these profits, labor wants to get paid, too. Is there a conversation about who owns the money?

If you were to talk to the line pilots, they do not want to jeopardize the momentum of the

"We didn't go

bankrupt

by making a lot of

smart decisions

Top-ranked airlines, American Customer Satisfaction Index 2016, in order:
JetBlue
Southwest
Alaska
American
Delta
United
Frontier
Allegiant
Spirit

business. They remember what it was like. They want to keep growing. They like the fact that the company is profitable and is paying big profit-sharing. I see now, more than ever in our history, that our employees and the owners of the airline are aligned in what they're trying to accomplish. We have widespread employee ownership of the stock, which is very different than any time in the past. So it's a balance between wanting to get the best contract they can get for themselves, but not if it's going to risk the future of the enterprise.

The Paris and Brussels attacks didn't deeply affect air travel to Europe. Are people getting accustomed to these types of terror events?

I don't know that you get accustomed to it as



We made a lot of

much as travel now is such a part of the fabric of our culture. You can't take it away. And it hasn't been that long. When I graduated college, I had never been on an airplane. So to my generation, it was a luxury. Today's generation, it's part of the core means by which people experience life.

What's the future of the rapidly expanding Chinese airlines? Over time, do you think those carriers take international traffic from U.S. airlines?

No, I don't. I see the U.S. and the Chinese airlines as working pretty well together. The Chinese airlines have been buying all the hardgoods, the latest airplane technology, but their [service] delivery skills are still pretty far from world-class levels. They're learning fast, and that's one of the reasons we're invested with China Eastern. [Delta bought a \$450 million stake in the Chinese airline in 2015.]

It's a big market. Chinese carriers have got to win Chinese consumers back from the international airlines. The Chinese consumers are flying Korean, they're flying Japan Airlines, they're flying Cathay Pacific, they're flying U.S. carriers. The opportunity for China is to win back the Chinese consumers, their home market, as compared to trying to go to other markets.

Some reports say Delta may have gotten its order in April of as many as 125 new CSeries aircraft for as little as \$20 million apiece [less than half of list price] because Bombardier was desperate to land a major customer and had no real leverage in the negotiations.

Wow, that's pretty good if it was. They had leverage—they didn't have to sell it. We think it's a great plane, and we got a great price. **E**

Pioneers

Four groundbreakers in their fields talk about how much things have changed

Gloria Steinem



Feminist and author

Is there anything more you'd like to see from women in business who've made it to the top?

Well, it's up to them. It tends to depend on whether they did it themselves or somebody appointed them or somebody hired them, because the ones who were hired by corporate interests were often hired because they weren't making trouble. So it depends how they got there. Sheryl Sandberg is a good example of someone who got to the top and took others with her. Carly Fiorina has, as far as I know, never represented the majority interests of women.

Do you think it matters that we have a woman president?

I think it matters in two ways. One, she'll know what it's like to be a female human being in this country, just as President Obama knows what it's like to be an African American human being in this country. But that would not be important if they didn't both represent the majority interest of their own group and the country. I mean, having Sarah Palin would be a disaster. Having Margaret Thatcher would be a disaster.

If Hillary Clinton is elected, do you think she might handle some things differently because she's a woman?

Oh, yeah, absolutely. I mean, you can see it as it is, that she focused on health care, for instance, and health care is something women use way, way more than men do, because of childbearing. She focused on violence against women and human rights for women as secretary of state. We can demonstrate in every current country that the biggest indicator of whether there's violence inside that country—or whether it will be willing to use violence militarily against another country—is not poverty, not access to natural resources, not religion, or even the degree of democracy. It's violence against females. That is the single biggest indicator.

For millennials the issues seem to be gender fluidity and campus violence. Is that what you're hearing?

I think the biggest issue is, they are graduating in debt, which didn't happen

"I wanted hi

to us to the same degree. And women are pretty aware that they're going to earn a million dollars less over their lifetime to pay back the same debt. So they're mad as hell.

You're 82 and still traveling, as you've written in your new book, *My Life on the Road*. How do you manage that?

I tell everyone my age because I can't believe it. And if there were an Olympic team for sitting still, I would be on the team. I'm very good at sitting still on planes. It doesn't bother me. And then people pick me up and tell me about a whole different world. —Carol Hymowitz

Harold Prince



Broadway producer-director

How did you get started in musicals?

I went to the theater as a kid, and I wanted to do straight plays. I didn't have a hell of a lot of respect for musicals. The scores were wonderful, but the books were downright silly, and all they were there to do was to paste together some wonderful songs. There were occasional musicals you did care for—*Show Boat*, *On the Town*, *Porgy and Bess*—but they were odd attractions in what was much more conventional musical comedy.

By sheer luck I found myself at [legendary producer-director] George Abbott's office as an office boy, with no salary at first. But you can't turn away from the place where they're doing more successful musicals than anyone else.

That was a turning point?

I learned the craft, almost inadvertently. I wanted musicals to be more serious, and there were a lot of things playing into the possibility of them being more serious. The popular music of the theater ceased to be theater music—all of that stuff the Gershwins wrote, Cole Porter, and Irving Berlin, and Rodgers and Hart. You were almost obligated to think of musicals in terms of more serious subject matter. When I met [Stephen] Sondheim when I was 20 and he was 18, we were encouraged to turn musicals into what we wanted musicals to be. Hence, you end up with a *Sweeney Todd*.

Do you see different choices being

m to have personal problems. He didn't have enough money. Nobody ever asked if superheroes had money"

made about what to produce, based on how audiences have changed?

I don't think there's as much courage as there should be, and that's completely because of escalating costs. When I started producing [in the 1950s], the cost of a musical was \$250,000. That very same musical today will cost you well over \$10 million, and the people you get the money from are a different profile. I raised all my money from dressers and stagehands. Now you have to have wealthy people, and you have to know how to get wealthy people.

Hamilton has created a huge audience of people of all ages interested in the history of the U.S., of the Founding Fathers. Is that a hopeful sign?

It starts with the idea. It is the least likely idea for a musical, from Ron Chernow's book. A lot of the shows I've done have been the least likely for a musical, *Sweeney Todd*, *West Side Story*. *Cabaret*—it's about the rise of the National Socialist Party. The big lesson is, don't underestimate audiences. —Dimitra Kessenides

Jim Wilson



Geneticist
University of
Pennsylvania

How does gene therapy work?

A new gene is inserted into a cell that either corrects a function or imposes on the cell a new function. Genes are unwieldy, since they're large, highly charged, and need to get to the right cells. If done properly, the gene will take up residence in the cell and persist for the life of the cell, setting the stage for a cure. Viruses are co-opted as gene-delivery vehicles—also called vectors—by exchanging their disease-causing genes with therapeutic genes.

When I first learned of gene therapy, it just seemed so elegant and simple. It also had the potential for treating

diseases at its root. It turned out it was much, much more complicated than I had envisioned.

In 1999 you were running a gene-therapy trial at the University of Pennsylvania. Tell me about Jesse.

We had advanced the trial through various different stages, doses. The second research subject for the highest dose was Jesse Gelsing. When the vector was administered to him, he mounted what appeared to be a much more severe and much more rapid-onset immune response than anything we had seen before. He ultimately died from the consequences of that immune reaction.

Jesse's death sparked investigations and a huge backlash. Why did you keep going?

I was incredibly disappointed that what had happened had, first of all, led to the death of a young man, but also had set the field back. That was never my intention. But this incident exposed what the deficiencies were.

And now gene therapy is back, with safer viral vectors that you've been working on for more than a decade. But treatments are also expected to be very expensive.

I've been worried about this for a long time. But if we in the field can deliver a transformative medicine that cures patients or prevents kids from dying and being disabled, then we as a society will figure out a way to get these treatments to those who are needing them. And if we don't, shame on us.

—Caroline Chen

Stan Lee



Chairman emeritus
Marvel
Entertainment

You went into the comics business when you were 17. How did that happen?

I heard there was an opening in this publishing company. I didn't know it was in the comic book department. They published movie books, sports books, romance books, and a few comics. It was only a two-man department, Joe Simon and Jack Kirby, who worked as a team.

I filled the inkwells. In those days, they used ink, and that's how I started. Little by little, I would read some of the things, and I would say, "You know, that's a mistake. It ought to be worded this way." So they'd let me change the wording. Before I knew it, I was writing some stories for them.

What was the inspiration for Spider-Man?

First of all, I wanted him to be a teenager, because there were no teenager heroes. Then I wanted him to have personal problems. He didn't have enough money. Nobody ever asked if superheroes had money or didn't. But this guy, he lived with his aunt who had no money. He had to help pay the rent and so forth.

I wanted each character to be interesting, so that the reader would care. Each had to have his or her own personality, his or her own hang-ups and quirks and problems. I thought of them as actors.

Steven Spielberg met me at a party, and we were talking. He said, "You know, Stan, you and I do essentially the same thing, except my pictures move." I thought that was kind of nice of him to say.

Why do you think it took so long for Hollywood to get Marvel movies right?

The film studios, they just didn't see it until finally Disney did. Disney has done a wonderful job. I mean, they've made these characters the biggest things in the world. They've made me seem better than I am by making the movies so good.

What's the worst advice you ever got?

Listen to what your boss tells you. My boss never liked the idea of Spider-Man. He didn't want to do it. I had to sneak Spider-Man into another book, over my boss's head. Experts really know nothing.

—Devin Leonard

Alicia Garza

Co-founder
Black Lives Matter

The activist wants Americans to understand that racism is about much more than people being mean to each other

Interview by
Josh Eidelson

Photo by
Molly Matalon

People often trace Black Lives Matter to three years ago. The night George Zimmerman was acquitted after killing Trayvon Martin, you went on Facebook and wrote...

A rant is what I called it, but it ended up being a love letter to black people. There was so much being said either about “we already knew that was going to happen,” or about what black folks need to do to prevent ourselves from being murdered—“just vote,” “just get a better education...” None of that deals with how vigilantes are grown and supported by laws, or how to eradicate systemic racism.

So I wrote a love letter, ending with, “Black people, I love you. I love us. We matter. Our lives matter.” Patrisse Cullors put a hashtag in front of it. And we started talking about building and organizing to really be a magnet for people who wanted to figure out how to fight back. And our sister Opal Tometi helped us build the platforms online to connect people. All three of us were organizers. So part of what we asked our network to do was to use “Black Lives Matter” in their work if it was helpful. Folks did.

What’s the biggest misconception people have about Black Lives Matter?

That we only care about black people. We are clear that all lives matter, but we live in a world where that’s not actually happening in practice. So if we want to get to the place where all lives matter, then we have to make sure that black lives matter, too.

In conversations about racism in American culture or politics, the

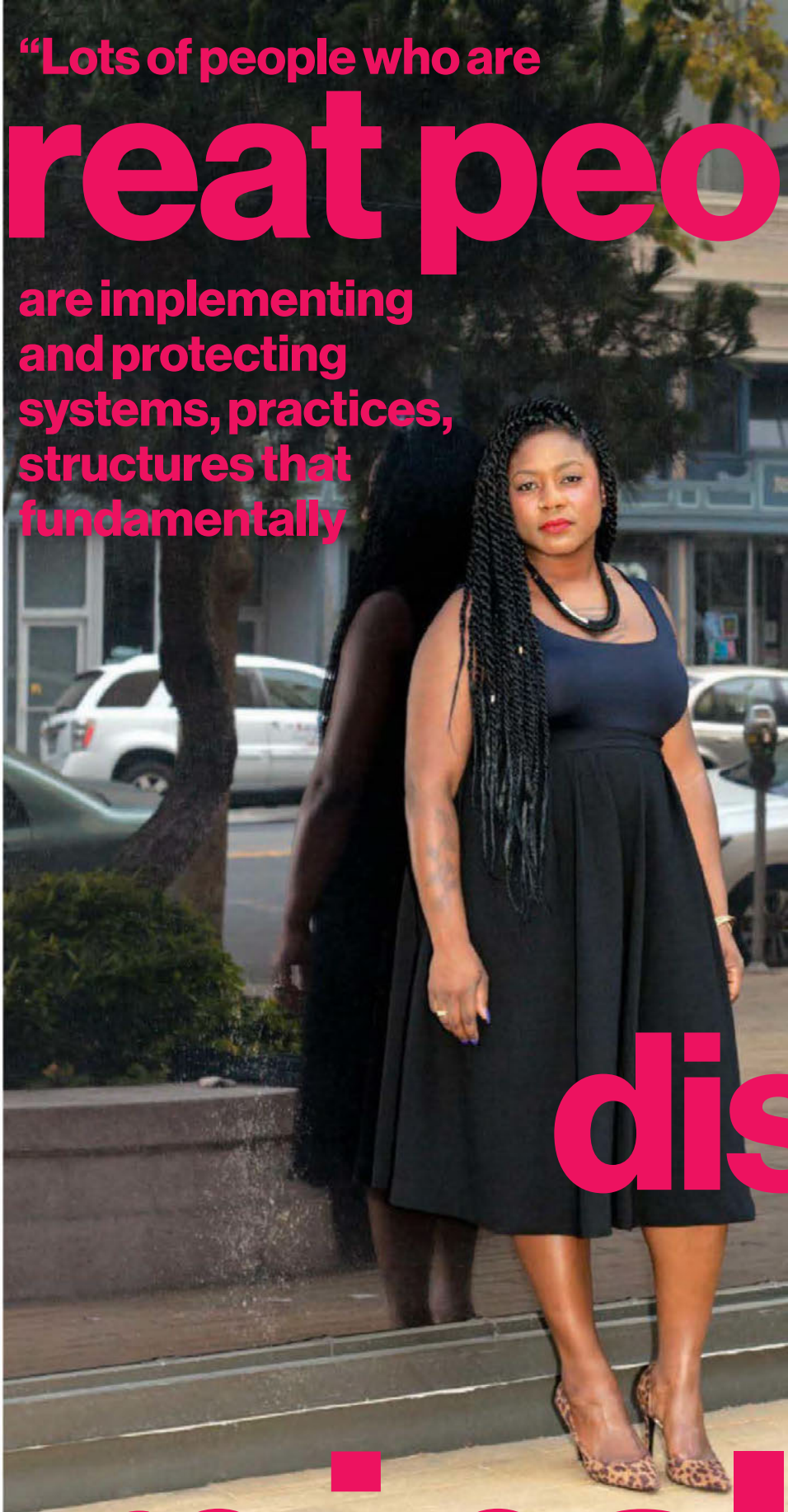
“Lots of people who are

great peo

are implementing and protecting systems, practices, structures that fundamentally

dis

marginal



ple

focus is often on racism as a personal defect or an attitude. Does that make it harder to take on systemic racism?

It's terrible. The way that people understand racism in this country is about interpersonal dynamics, like racism is people being mean to each other. That sucks, but if that's all it was, let's just sing *Kumbaya* together.

But racism is a set of interlocking dynamics: One in three black men can expect to spend some time incarcerated; women are the fastest-growing population in prisons and jails—and 30 percent are black; black folks are on the low-earning end of the economy. Lots of people who are great people are implementing and protecting systems, practices, structures that fundamentally exclude, disenfranchise, marginalize black people.

How much concrete progress has happened over the past three years?

The combination of really sharp agitation on social media and really brilliant, creative, and impactful actions in the streets has made it so that this is at the

There's a real battle. The emergence of Donald Trump, and the phenomenon around him, is really a backlash against how successful this movement has been. There's millions of people backing a fascist ideologue.

Is there a role for Black Lives Matter to play in stopping Donald Trump?

Ultimately, Donald Trump is not talking to us. He's trying to organize disaffected white folks who feel like immigrants are taking their jobs. He's trying to organize the business class. So if Donald Trump is going to be stopped, it has to be by people who he wants to organize saying, "We're not standing for that."

Do you worry that your protests will create a backlash and more support for Trump?

No. What I worry about in doing disruptive action is that because there is a set of forces that are whipping up hysteria, what it means sometimes is that there is violence rooted in that hysteria that then gets directed at my folks.

So what is there to do about that?

Black share of U.S. population



Black share of Americans killed by police in 2015



exclude, disenfranchise,

forefront of almost every conversation. In one year, there were 40 laws passed around criminal justice reform around the country. Some were good; some of them were actually pretty crappy, but it signals that even legislators are understanding that this is the moment that they're in.

Do you think America has been becoming any less racist over the past 10 or 20 or 30 years?

Organize, and hold folks accountable. Part of what's happening with this culture of vigilantism is that people are able to do it and get away with it. George Zimmerman has actually attempted to make some money off of his act of vigilantism.

What do you make of the FBI director's suggestions that scrutiny of the police may be leading to more violent crime?

It's hard to take those statements seriously, because they're not grounded in any evidence. They are used to generate distrust and to squelch dissent.

ize black people"

Have you been disappointed with President Obama on racial justice?

He obviously occupies a very difficult position. He has to be a consensus builder and a coalition builder. He's in a context where the very fact that he is a black man is to his disadvantage. You had an enormous amount of really disgusting things that were being thrown at him.

And at the same time, when he's given the opportunity to address the problem of racial inequity and racial injustice, he often uses it as an opportunity to scold black people about what we should be doing differently.

Has Hillary Clinton done or said anything as a presidential candidate that's surprised you?

Early on, she would say, "Yes, black lives matter," but she wouldn't acknowledge her role in processes that fundamentally showed black lives did not matter. She says that she is for economic justice, but she doesn't support \$15 an hour as the minimum wage.

After Bill Clinton told black protesters, "You are defending the people who kill the lives you say matter," you wrote, "My back is tired of being the path to the White House."

I was angry about that for about a month—seriously, like every single day. It's reprehensible for him to defend the impacts his policies have had on our communities. The Clintons use black people for votes, but then don't do anything for black communities after they're elected. They use us for photo ops.

So where does that leave you on a Clinton-Trump election?

I am going to do everything in my power to make sure that we are not led by Donald Trump. That being said, there's lots to be engaged in at the state level, the local level. We're going to continue to push. We're not indebted to or endeared to the Democratic Party.

How does technology help or hinder the organizing?

It connects us across boundaries. Technology is a tool to bring people into closer relationship, but the work offline is critical to making sure that lasts. The open source nature of the internet is both a blessing and a curse, because just as much as we can watch what's happening around the world, we can also be watched.

What's the worst advice anyone has given you?

"Tone it down." 

Demis Hassabis

CEO

DeepMind Technologies

The chief of Google's artificial intelligence unit on helping machines truly think—and who should control that critical technology if he's successful

Interview by
Jack Clark

Photo by
Immo Klink

What does DeepMind do?

Our stated mission is to solve intelligence, and we use the word "solve," because it can mean a few things. It means to understand intelligence, fundamentally understand it, and re-create it artificially.

If you look at how civilization has been built and everything humans have achieved, it's down to our intelligence. It's our minds that have set us apart. So it would seem if you could solve intelligence in this way I'm talking about and make machines smart, then you could do all sorts of incredible things with that.

When you talk to Larry Page or other top executives at Google, are they saying, "Where are we on this? What is the status of our understanding of the brain?"

Not quite. I update them regularly, and we talk about the overall capabilities of the systems and where we've got them to, and then I might make some analogies to brain functions. It's more that way around rather than querying about where we are on the road map. We get discussions about "at what point should we tackle language?" It's more that kind of question. Or, if we think about robotics, at what point are we ready to do those things?

Does that mean talking about technologies you're developing at DeepMind that may be ready to be used in Google products?

Yeah, that's right. We will have discussions about that when certain capabilities arrive. We think about "OK, so what does that open up?" We do that on multiple

levels when we're talking to various VPs at Google and various product areas. That's already yielded some great results, actually. I think I can talk about this now. We've used AI to save like 15 percent of the power usage in the data centers, which is huge saving in terms of cost but also great for the environment. They were very surprised, because they'd already optimized it. I think it controls about 120 variables in the data centers. The fans and the cooling systems and so on, and windows and other things,

I think, as well. They were pretty astounded. We think there might be even more; it depends on how many sensors you put in. Now that we know that works, we can maybe put more things in.

You've said it could be decades before you've truly developed artificial general intelligence. Do you think it will happen within your lifetime?

Well, it depends on how much sleep deprivation I keep getting, I think, because I'm sure that's not good for your health. So I am a little bit worried about that. I think it's many decades away for full AI. I think it's feasible. It could be done within our natural lifetimes, but

it may be it's the next generation. It depends. I'd be surprised if it took more than, let's say, 100 years.

So once you've created a general intelligence, after having drunk the Champagne or whatever you do to celebrate, do you retire?

No. No, because...

You want to study science?

Yeah, that's right. That's what I really

1998 At 22, Hassabis founds video game company Elixir Studios
2009 Earns Ph.D. in cognitive neuroscience from University College London
2010 Co-founds DeepMind Technologies with Shane Legg and Mustafa Suleyman
2014 Google acquires DeepMind for about a half-billion dollars
March 15, 2016 AlphaGo AI beats Go champion Lee Sedol 4-1



“Having more intelligence in the world

world

would be very useful”

want to build the AI for. That’s what I’ve always dreamed about doing. That’s why I’ve been working on AI my whole life: I see it as the fastest way to make amazing progress in science.

Say you succeed and create a super intelligence. What happens next? Do you donate the technology to the United Nations?

I think it should be. We’ve talked about this a lot. Actually Eric Schmidt [executive chairman of Alphabet, Google’s parent] has mentioned this. We’ve talked to him. We think that AI has to be used for the benefit of everyone. It should be used in a transparent way, and we should build it in an open way, which we’ve been doing with publishing everything we write. There should

be scrutiny and checks and balances on that.

I think ultimately the control of this technology should belong to the world, and we need to think about how that’s done. Certainly, I think the benefits of it should accrue to everyone. Again, there are some very tricky questions there and difficult things to go through, but certainly that’s our belief of where things should go.

When you were a kid, what did you want to be when you grew up?

Oddly enough, since about the age of 11 or 12, I’ve wanted to do this. To be an AI researcher. Around that age I was playing a lot of chess, and I was doing a lot of programming on my own. One

of the first big programs I remember writing around 11 years old was a program to play Othello, or Reversi maybe you call it in the U.S. It was great, although it was a much less complex game. I wrote a traditional alpha beta search. I found a book on it, and I implemented it. It was quite a good program. It could beat my kid brother.

Your brother must have been furious.

He has great memories of it, actually. He was my game tester and my guinea pig. Basically, from then on I just thought, “Wow, this would be so cool if you could get computers to think and reason and offload some of your thinking to it.” There was one interesting thing that still tickles me now—this idea of setting off your machine to do a task for you. You’re going to sleep, it continues to solve it, and you wake up, and there is the solution. It feels like an extension of your mind that you are able to continue to do work while you’re asleep or even not thinking about the problem.

It seemed obvious to me if you could solve intelligence, then you could use it. It would be like magic, like Arthur C. Clarke says. It does feel like the closest thing to magic, and I think we can use it for incredible good to solve all sorts of really pressing issues that we have, from climate to healthy aging and so on. I think that having more intelligence in the world would be very useful.

Have you ever received any notably horrific advice?

Oh, wow. I’m not sure I’ve been given any really horrific advice that stands out. I probably would have just ignored it and deleted it from my mind if it was that bad. Actually, in the past, probably during my Ph.D. when I was learning about how academia works, I remember talking to a few very senior scientists about the ability to organize science and top scientists in a different way. Everyone was saying that will be totally impossible: “You’ll never get more than 20 researchers to work together in a productive way.” I’ve been given that advice all the way as we’ve been building DeepMind. It just hasn’t held true. The sum is greater than the individual parts. **B**



Alana Feld

Executive vice president
Feld Entertainment

Keeping the circus center stage in the digital age—without elephants

Interview by
Christopher
Palmeri

Photo by
Christaan
Felber

What made you decide to take elephants out of the show?

We had to think of what was best for everyone—the elephants, the business, our family, our audiences. It was bitter-sweet, but we said, “Let’s use it as an opportunity to reimagine Ringling.”

What did that mean?

We redefined the performance space, changing what used to be just a black rubber floor to an ice surface and a dry surface. You get a fast-paced energy that you can only get from skating.

ringmaster”

The second big change was we added a story line. We have a character named Paulo, the star seeker, who has a magical telescope. We have the evil Queen Tatiana, queen of the circus of fire, who banishes all of the circus stars to distant planets. And now it’s up to Paulo and Jonathan Iverson, the ringmaster, to find them and bring them back to earth. Our third big change is the technology we’ve infused the show with. We’re able to use video projection all across the arena floor.

How much of that is because kids are tech-savvy?

There’s no substitute for live entertainment, but you have to create a show that’s appealing to them. The show is much more fast-paced than it used to be. Kids today, they don’t want to sit through a

15-minute act on the trapeze. We’ve created an app. It’s free. You can download it. We have circus selfies, so you can be the ringmaster. You can look like you’re juggling.

Which classics have endured?

The trapeze is a classic. It’s still incredible to watch people fly through the air.

Lions and tigers are still really popular, but the style of the presentation is very different. We have a very young, hands-on animal trainer, and you get to hear him speak to the animals throughout the act. At the end of his act, he has his male lion lie on top of him. That’s a testament to the kind of relationship they have.

What about the clown car?

We have a clown rocket, because we’re in outer space.

Do you get animal welfare protesters at every show?

We have a lot of critics, and, you know, they come out and share their opinions in many cities that we play. What I can tell you is that our animals are so well cared for. We have the most dedicated team of animal-care specialists that work with our animals and live with our animals, day in and day out. We made

a decision to retire the elephants and to keep a lot of other animals, and we stand by that. So many families come to Ringling because it’s really one of the only places that you can see live animals anymore. It’s something that I think families really cherish about our show. **B**

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The retired elephants bring the herd to 42 at the company’s Center for Elephant Conservation in Polk City, Fla.

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Carlos Slim

Chairman emeritus
América Móvil

Mexico's richest man on how technology has changed the workplace and the role of older workers and how we may all work fewer hours in the future

Interview by
Patricia Laya

Can you tell us about your plan for shorter workweeks?

Shorter workweeks are a solution to civilization shifts. Historically, the more technology advances and the more progress there is, people work less. What's happening now is that people live longer, in better health, and without the need for physical effort. This civilization demands more knowledge, more experience, less physical exertion. Productivity has increased exponentially—despite the denial of some economists. And we see that's why unemployment is a big problem in a lot of countries, but more specifically Europe. It's important that people don't retire at 50, 60, or 65 years old. I think people should retire later, because they'll have more knowledge and experience. And I think they should work three days a week, so that it creates space for others.

This way, there will be less need for transportation. Nations wouldn't have to face early retirements that are financially destabilizing. The quality of life and having four days a week free would encourage a lot of economic activities—more tourism, entertainment, sports, culture, and education. People can take advantage of those extra days to keep learning.

Would people earn less this way?

No, I think the companies that can take this on are those in which productivity has led to excess personnel. It's a great change to exchange fewer days of work for more years until retirement. In fact, we started this in Telmex [América Móvil's fixed-line unit] a couple of years ago. We're offering people that have a lot of knowledge to stay longer and work fewer days.

“Have you seen *Modern Times* with

And what's been the response?

About 40 percent of those offered take it.

Are there industries where a change like this would be more easily adapted?

In those industries where there is too much personnel, such as government agencies. Instead of cutting personnel, you can enter a scheme like this, where you can have more people, maybe pay more salaries, but you're avoiding having to pay when workers retire early. If I had been a regular worker in Telmex, I would have been retired for 22 years.

The exchange there is the shorter retirement, then?

If you look at it, it's been slow, but with time people have been working less. Before they worked 72 hours, six days a week. Then 60 hours. The big success was the 48-hour workweek. Then the English week, where you worked Saturday and only rested on Sundays. Then 40 hours. Instead of working five days, for 35 hours, let's just work three days to make room for others to work.

How do you persuade people to take this on, when capitalist society tells us that the more you work the further you get?

If you want to work more, then work more. You can have two jobs: one from Monday to Wednesday and another from Thursday to Saturday. That's an option. Another is to work three days and get trained on something the other days to get an even better job.

You meet with important people all the time. Have you lobbied for it?

Not lobbied. I've made it public, but it's not a decision by decree. It has to happen gradually. Suppose that half of Telmex's employees were in excess.



It would be a great solution: You'd have half working from Monday to Wednesday, the rest from Wednesday to Saturday. You have a complete schedule, services 12 hours a day for 6 days. And people would retire at 75.

More and more, people will work less in their offices. We're going to have driverless cars that will lower the number of cars and pollution. Parking lots will have new uses, because we won't use them as much. It's easier to generate wealth with less personnel and fewer costs. We have to lead a change in society so that those displaced people have activities. To create employment, you need new activities.

We've touched on the positive consequences. Are there any negative ones?

There's resistance to all change. The most profound change is this new civilization. This new civilization changes from an industrial society to a service one. There's still some politicians who praise the importance of industrial production. But they forget this is a service society. Have you seen *Modern Times* with Charlie Chaplin? He was part of the machine that has been displaced by robotics. Manufacturing is not only being done in other countries, but that production is done by machines. So the worker is no longer part of the machine, but he is a conductor and organizer of machines.

What about executives? Should they cut back?

You can't have one CEO three days and another one the rest, but senior managers are changed with some frequency—not as frequently as a [soccer] coach, but you know what I mean. Executives advance, and CEOs and chairmen retire relatively early and give space to new people.

There's three figures: the one who invests, the one who manages, and the entrepreneur. For example, Warren Buffett is a great investor. There are others who have been great executives, like Ed Whitacre, former CEO and chairman of AT&T and General Motors.

In that sense, the entrepreneur's job doesn't really have a beginning or an end?

No, because you're always thinking. Like an artist. Just because you finish a painting doesn't mean you're supposed to retire. **B**

Charlie Chaplin? He was part of the machine that has been displaced by robotics”

Ginni Rometty

CEO
IBM

The first woman to lead the century-old tech giant has tried to push Big Blue onto the cloud and make its artificial intelligence, Watson, appealing to a broad range of businesses

Interview by
Max Chafkin

Photo by
Christaan Felber

You joined IBM 35 years ago. What was the company like back then?

What struck me was the seriousness of the kind of things we did. We were building complex back-office banking systems. We were rolling out ATMs. That, to me, is true to this day about IBM. It lives at this intersection of inventing great technology but, more importantly, applying it.

I'll tell you a funny story: When I went for my interview, I didn't have a blue suit. In my mind, I needed one—so I went out and bought one. I had a great interview, and when I came home and took my jacket off, I realized the price and size were still on it. I thought, That was gracious. No one told me.

Did you always know you wanted to be an engineer?

What I knew was I liked math and science, and I never wanted to memorize everything. I wanted to understand where it came from. I'm the kid that tried to take Latin in school, because I felt if I could understand the root of everything,

then I could understand why it worked. That was what took me into engineering. And the reason I stayed is, engineering teaches you to solve problems. It teaches you to think.

IBM almost went away in the early 1990s. What happened?

We stayed too long in one era and had to reinvent ourselves, which, by the way, wasn't the first time. We're the only tech company that is 105 years old, the only one that has transformed multiple times. IBM existed a good 50 years before mainframes—we started with scales. To this day, mainframes are still here. They've been reinvented, and they're still 10 percent of our business. They run airline systems. They settle currency exchanges.

How does that reinvention compare to the current one?

Typically, when there's been a transition time in our industry, it's been driven by one big change. This time there were multiple changes—data, cloud, mobility—all happening at once, and that accelerated the change both for us and our customers.

Almost half of IBM's R&D budget goes to cognitive computing and analytics; more than

\$15b

has been spent since 2010.

WOMAN CEO OF IBM™

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CEO OF IBM,

On my first official day, at 7 a.m., I went to our primary research lab in Yorktown Heights [N.Y.] and broadcast to all of IBM from there. We are still the largest commercial research organization in the world. There are 12 labs around the world, more than 3,000 researchers. Last I checked, we take 10 percent of the world's Ph.D.s in math. I said there will be a new way of computing, and it's going to be driven by this huge amount of data. It's going to transform industries, and it will change the way the IBMer works.

IBM's revenue has declined for the past 17 quarters. Does that bother you?

It doesn't bother me. If you go back for a decade, revenue has been pretty much flat, but the margin has gone up 10 points. We have always had a business model that is about moving to the next level of higher value, for clients and our investors.

A big part of IBM's reinvention is Watson. When I see a TV commercial where Watson is chatting with Bob Dylan, what exactly is the product you're selling?

It's a service. It runs on the IBM public cloud, and you get it via an API [application programming interface, a set of tools for coders within an operating system].

Artificial intelligence is one of 50 things that Watson does. There is also machine learning, text-to-speech, speech-to-text, and different analytical engines—they're like little Lego bricks. You can put intelligence in any product or any process you have. That's why I went to the Consumer Electronics Show at the beginning of this year. We don't make end-consumer devices anymore, but we will be inside many things consumers touch: robots, fitness and wellness, medical.

We're developing a product with Medtronic that will predict hypoglycemic events in people with diabetes three hours or more in advance. Will

people know that it's Watson? That's not important to me.

You helped prepare Watson for a Jeopardy! match in 2011. Did you know he would win?

We were holding our breath. We knew he'd been well-trained, but it was open domain. He didn't know the questions in advance, you know.

Do you use any AI systems in your day-to-day life? Do you talk to Siri, for instance?

Yeah, sure, I'll do dictation. But with services like Siri, what you've got is natural language processing. And natural language processing is an important part of Watson, but it isn't the only part. You're going to start to see Watson in everyday life, but we don't know what people are going to do with it. There was an article in the *Wall Street Journal* about how Georgia Tech created a teaching assistant using Watson. There were nine teaching assistants, and Jill Watson was one of them. The irony was it was an AI class, and the kids didn't know she was a bot.

In that example, Watson is potentially taking a TA's job. How do we as a society cope with that?

As technology advances, there will always be routine things that can be replaced—and that will be true with this



technology. On the other hand, Watson Oncology is rolling out in India, where there are only 1,000 oncologists for a billion people. Most cancer patients in India have no chance of seeing an oncologist. These systems are going to help a doctor or a nurse practitioner make a treatment decision.

You've made health care, and especially cancer detection, a major focus for Watson. But cancer has frustrated technologists for years. We've had a war on cancer for more than 40 years, and life expectancies haven't gotten much better.

Life expectancy has gotten better with certain cancers. Great progress has actually been made, but the war on cancer keeps expanding. Years and years ago, breast cancer had four treatments. There can be 800 choices now. That's what's begging for this kind of applied technology, because it's beyond what any doctor could handle.

There was a time when getting a job at IBM was a golden ticket. But today, I'm guessing from time to time, some top engineer comes into your office and says, "I'm thinking of going to Facebook or Google," or one of these other sexy startups that you're suddenly competing with. What do you say to that person?

It goes both ways. People from Google and Facebook come here because they really want to have an impact on serious things. We are trusted with clients' most valuable data. We are trusted with their most valuable processes. So that is why people come here. It's why they stay. We get almost a million and a half applications a year. We still have the very best picks.

We're talking in your Watson headquarters in Manhattan. Do employees not want to go to Armonk anymore?

No, no, no. I've got a lot of stuff going on in the city today. But we have 150 real estate projects like this around the world, open workspaces conducive to small teams collaborating. I think a large part of my job is to keep reinforcing our transformation.

Are you willing to share who you'll vote for in November?

No. I've got employees with all different views. We've endured many changes of governments. In Brazil, we're 100 years old. And there have been leaders who have come and gone. We've worked with all of them.

Did your appointment as IBM's first female CEO feel momentous to you?

I felt a great sense of responsibility for IBM and a great sense of responsibility to be a role model. But IBM's commitment to diversity goes back a long time. We had the idea that there should be equal opportunity 11 years before the Civil Rights Act was passed. To take the most recent example, we ship breast milk for women employees who have just had children and who travel. It's a big deal to keep women in the workforce.

When you joined IBM in 2012, there was an opening to take a stand and say, "We're not going to sponsor the Masters," a longtime IBM beneficiary that didn't allow women to play. Why didn't you fight that battle?

I felt, and I still feel, that I wanted my tenure to be defined as being the CEO of IBM, not about being the woman CEO of IBM. So you make your choices. [Rometty joined Augusta National in 2014, becoming the club's third female member.]

Why did IBM speak out against North Carolina's bathroom bill, which prevents transgender people from using the public restroom of their choice?

We're one of the largest employers in North Carolina. We've had a long dedication to LGBT rights. And you know what? This is a really competitive industry, and you need the best workforce. So you've got to be open to everyone.

Was there any blowback?

None. If anything, our employees expected it. **B**

Tony Fernandes

CEO
AirAsia Group

The former music executive built a debt-ridden Malaysian airline into Asia's biggest low-fare carrier

Interview by
Anand Krishnamoorthy

Photo by
Sanjit Das

"I like co

When you were a kid in Kuala Lumpur, what did you want to be when you grew up?

I wanted to own an airline. I said that to my father. He said, "You make it past the doorman at the Hilton Hotel, I will be pleased." Those were the exact words. I still remember that.

What motivated you to enter the business?

I saw Ryanair and EasyJet—it was a no-brainer. If I could bring the low-fare product here to Asia, why not? I always say there's a fine line between brilliance and stupidity. But to me it was an unbeatable product to make travel cheaper. There was one statistic that stuck in my mind when I started doing research: Only 6 percent of Malaysians flew. So I thought I had a 94 percent market.



You'd already worked for Richard Branson at Virgin Communications and at Warner Music.

I felt that, because I was 34 at the time, if I failed I will go back and get another job. But I didn't want to sit at 55 and say I wish I had tried. It was a time in life where if I left Warner and took the next job, I would have been stuck in corporate life forever. I thought if I failed, I failed.

So in December 2001, you suddenly bought this company for 1 ringgit (25¢) and took over all those debts. Did you ever see yourself as kind of an Uber of airlines?

That's great. I hope someone asks Travis [Kalanick, Uber's CEO] if he is the AirAsia of taxis. I am going to tell him that.

We certainly disrupted air travel to a massive extent. It was cozy duopolies and monopolies. It was expensive. It was giving a service to a small part of the population. Then we came along and disrupted it, and then others came and followed us in the process. That has made traveling and air flights much more accessible.

But we've only scratched the surface. There's so much more growth that can happen in this part of the world.

How so?

You only have to compare the number of aircraft you have in Europe with the number of aircraft in Asia.

It's tiny. If you take out China, it's super tiny. You can't drive from one part of Asia to the other. You can in Europe. The potential to grow in this part of the market is huge.

You know, we flew to Shantou the other day. When I was asked to fly there by the head of Guangdong airport, I said, "Where is that?" And he told me the population is 8 million, and I said, "We will fly there." And we are full.

Eventually, how big can the airline business get here?

In Asia, there's no reason why an airline can't have 500 to 1,000 aircraft, really, if you include China and India.

There's only one Asian airline with 500 planes today, China Southern.

Correct. But if you look at Europe, there are five or six airlines with 500 aircraft. And we are a much bigger playground than them. So what I am trying to highlight is that we have only just begun.

Now that your low-fare success story is so public here in Asia, that's inspired a lot of competitors to come in.

If someone is better than us and we get our ass kicked, then we need to get our ass kicked. Competition is the best form of motivation, the best form of becoming better, and I like competition. It keeps me hungry, keeps me going.

Is anyone kicking your ass?

Yeah, Lion [Air] kicks our ass in Indonesia, and we've gotten better and learned. I think, Cebu [Air] does a good job in the Philippines. No one is able to do what we've managed, which is build a pan-Asian model, but that will come surely. My idea wasn't a new idea. I learned it from [Southwest Airlines founder] Herb Kelleher, [Ryanair CEO] Michael O'Leary, and Stelios [Haji-Ioannou, EasyJet's founder]. So no one is exclusive to any ideas.

Your long-term vision is to be Asia's biggest low-cost carrier. How far into that are you?

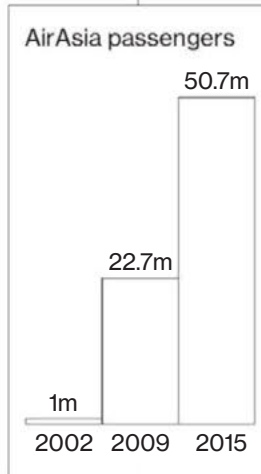
We are certainly now Asia's largest discount carrier. We stretch from India to Japan—we are the only airline that has the breadth of coverage. We are in the domestic market in India, we are in five other domestic markets, we are very deep into China. So I'd say our vision is maybe 30 percent to 40 percent of where we can eventually be.

There are more women pushing soda carts in airplanes than there are flying them. You've made some efforts, but what more can be done?

Most of our top managers are women. I think there's a 50-50 mix already. I think that's a big success for an Asian company. As an organization, male and female is not discussed—we don't even think twice—it's a meritocracy. And airlines such as ours have inspired others to go and do it. So you see more airlines talking about it.

What's holding them back?

Social pressures. There is discrimination for sure. When I first mentioned to my chief pilot about having females as pilots, I can't even repeat to you what he said. There's old-fashioned feelings in there, but it's breaking down now.



It keeps me hungry, keeps me going



Richard Trumka

President
AFL-CIO

The union chief drubs Trump for sowing fear, and he trusts Clinton to keep her word about free trade

Interview by
Josh Eidelson

Photo by
Christaan Felber

Donald Trump says of Hillary Clinton's Trans-Pacific Partnership stance, "Here's how it would go: She would make a small, token change, declare the pact fixed, and ram it through." Does that concern you?

No, not at all. I think the thing that she did best was she went out and she listened to people. She understood how bad trade has been for them, that we need a new regime. And she said, "That's what I'm going to do." We will help her make sure she stays with that stand.

"I've

talked to her.

I've looked in her eyes. I think I know people pretty well"

people pretty well—I've made a living doing that. I don't have any concern that she's going to double back on us after the election, saying, "I was just kidding." She's too good a politician to start off a new administration jettisoning the largest portion of your support that you're going to need to get things done.

Do you see any realistic prospect to reverse the decline in union membership?

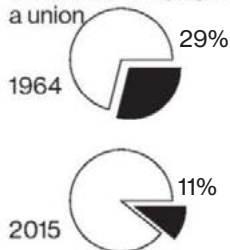
We're organizing in places that we haven't—doctors, adjunct professors, engineers. Those people are coming together, saying, "We need a voice." It used to be that a college degree guaranteed you a middle-class job and a good life. That's not true anymore.

Wisconsin governor Scott Walker's law gutting collective bargaining is still in place.

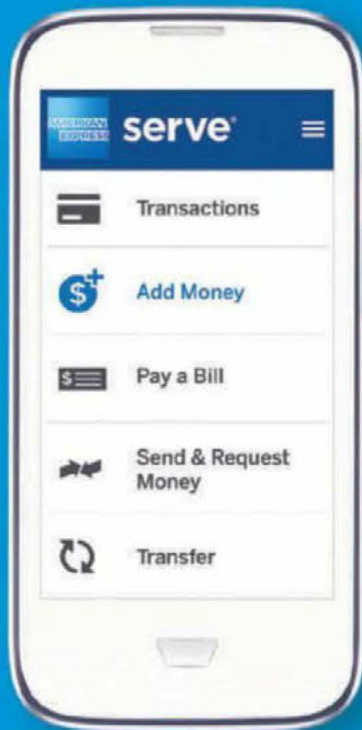
Tentatively. We'll see. We'll see. It's a 15-round fight. We still have 13 more to go. All of the nonsense that he spewed about the austerity policies—none of them have come true. He has nothing he can point to and say, "Wasn't my war on workers a success?" It's started to run its course, the austerity policies. And you're starting to see it internationally. Part of what happened in the U.K. was because of austerity policies. You're going to see a pushback, and you're on the precipice of that here. Donald Trump and Bernie Sanders, both of them tapped into the anger and frustration. Bernie did it with sane, rational policies. Donald Trump did it with fear

and division, sort of like those other guys did in the '30s—Mussolini and Hitler. **B**

Share of U.S. nonagricultural workers belonging to a union



We helped
American Express
build 1 digital platform.



American Express saw the opportunity in digital prepaid debit products – and the chance to make a better digital platform. So we created one for the launch of the Serve Card Account. It gives customers a simple and affordable alternative to banking, in the palm of their hands, that lets them move and manage money, pay bills and redeem special offers. And it brought new customers – 90% of Serve users are either new to American Express or are former members. Customers added more than \$7 billion across the Serve platform – a 300% increase in just two years. That's high performance, delivered.

Strategy | Consulting | Digital | Technology | Operations

Their customers
added \$7 billion.

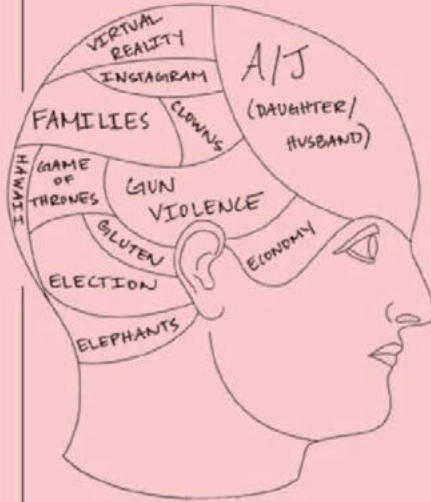
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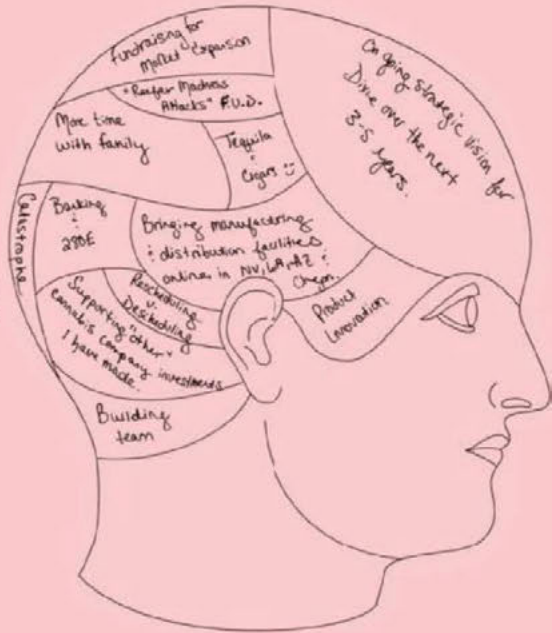
Alana Feld

No surprise, this circus producer is into clowns



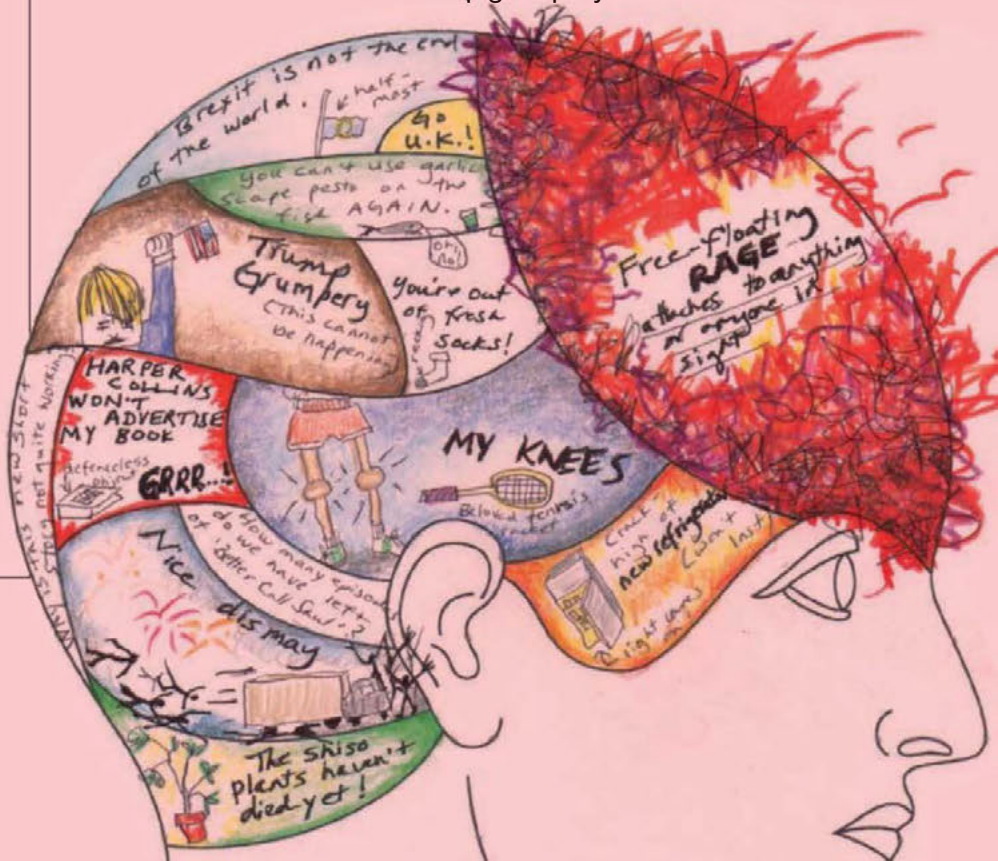
Tripp Keber

The marijuana entrepreneur is high on expansion planning



Lionel Shriver

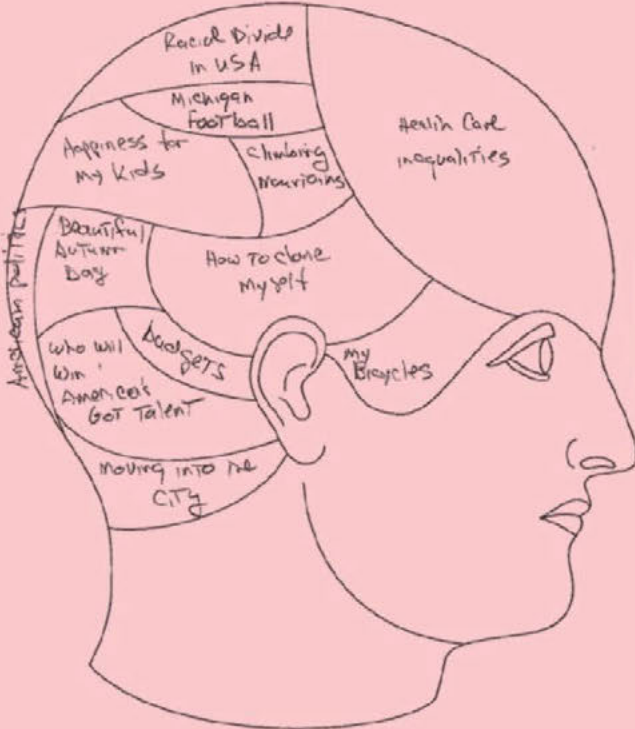
Among the author's worries: Trump grumpery



We asked some of our Interview Issue subjects what's on their mind. No, they don't all think alike

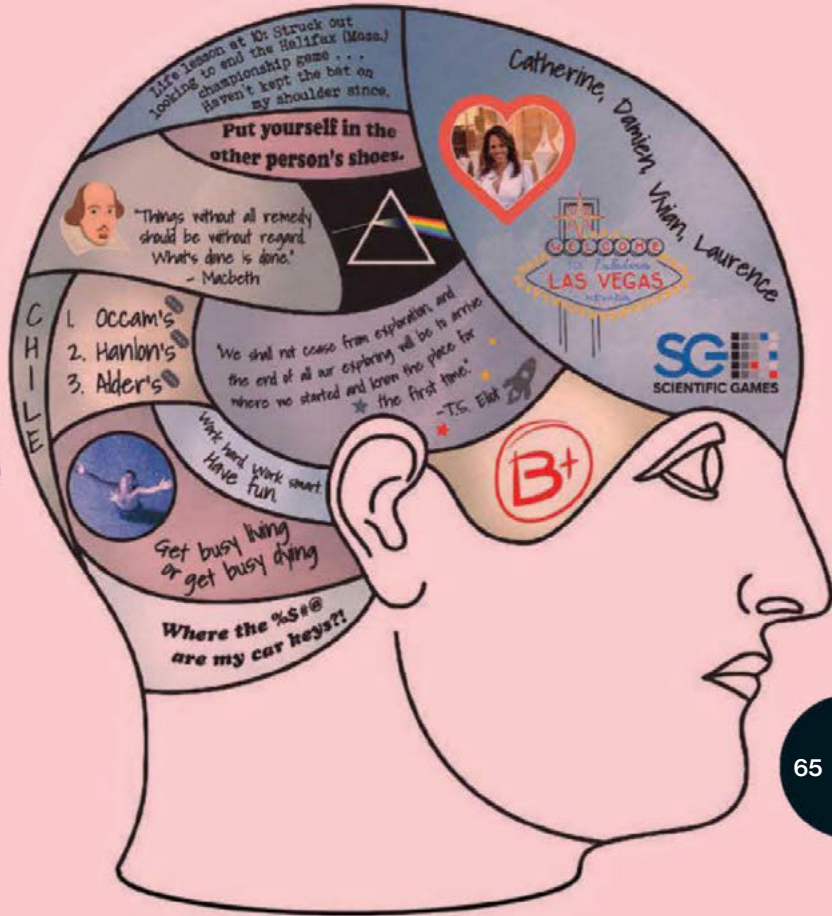
Jim Wilson

A pioneer of gene therapy sweats health care inequality—and Michigan football



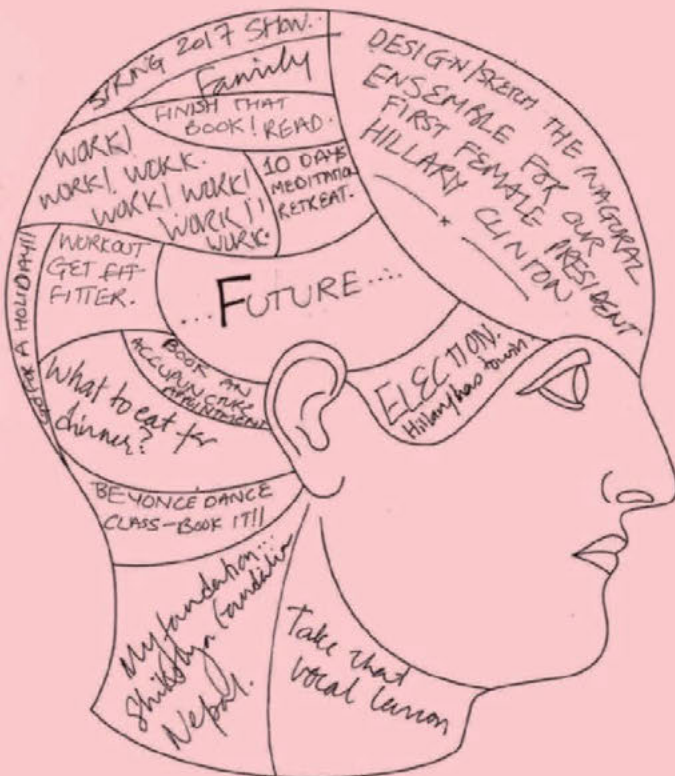
Roger Snow

Family comes first for the casino game developer



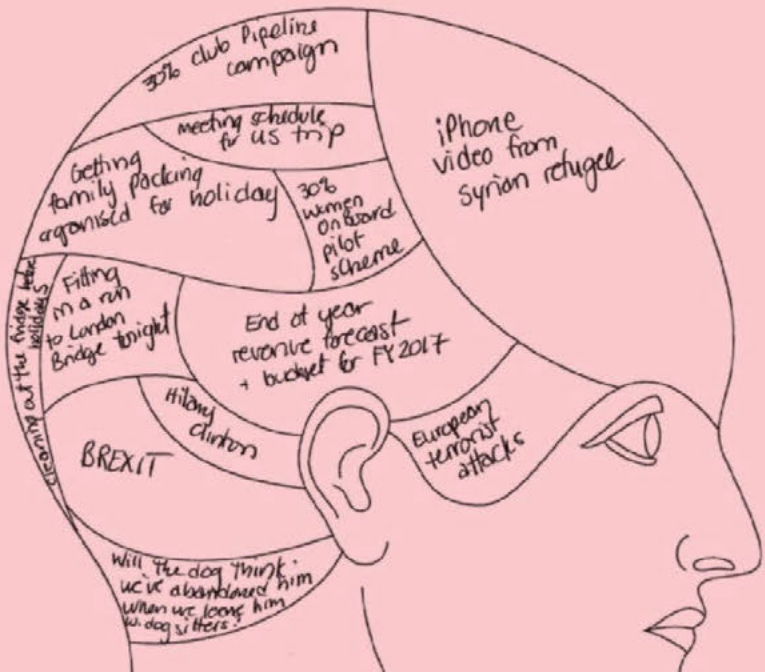
Prabal Gurung

The designer's already sketching Hillary's inaugural gown



Brenda Trenowden

Yes, the finance exec and diversity advocate ponders Brexit and budgets, but also if her pooch feels loved



Marissa Mayer

CEO
Yahoo!

The web exec on corporate motherhood, shareholders with competing priorities, and the struggle to make good choices great

Interview by
Max Chafkin

Photo by
Jeremy Liebman

You joined Google in 1999 as the 20th employee. Did it feel like a special place in those early days?

Larry [Page] and Sergey [Brin] are incredible thinkers. The arc that they had gone through in just a year, from being Ph.D. students to business leaders, was really impressive. The previous year, they'd been rollerblading around campus telling off other grad students who were bothering them.

I also interviewed at McKinsey, which is a great company. But I had some friends who went there, and they said, "Well, we give the presentations, and then we leave the room, and the executives make the decisions." In the musical *Hamilton*, there's a song, *The Room Where It Happens*. I just felt like at Google I could be in the room. Even if you fail, you learn so much by being where the decision is made.

What's the most important thing you learned from being part of those big decisions?

If you give smart people the same data, they end up coming to the same decisions. I really learned the importance of sharing information and transparency, and I tried to bring that to Yahoo.

The other piece that gets overlooked in the Google story is the value of hard work. When reporters write about Google, they write about it as if it was inevitable. The actual experience was more like, "Could you work 130 hours in a week?" The answer is yes, if you're strategic about when you sleep, when you shower, and how often you go to the bathroom. The nap rooms at

Google were there because it was safer to stay in the office than walk to your car at 3 a.m. For my first five years, I did at least one all-nighter a week, except when I was on vacation—and the vacations were few and far between.

When you joined Yahoo as CEO in 2012, there were two challenges. One was declining interest in the company's products. The other was a financial engineering challenge that occurred when its stake in Alibaba was worth more than the core business. Was that a surprise?

I knew I would spend a lot of time trying to help Yahoo take its products and transition from desktop computers to mobile phones. I didn't know how much time I would spend studying things like tax law and forming an opinion on Chinese e-commerce.

Why was it so hard for Yahoo to go mobile?

There were moments in the early 2000s [when Yahoo was so big] that people didn't understand where Yahoo ended and the internet began. It's hard to transition mediums and end up with the same mindshare. Facebook is the dominant player, but even by their own estimates, they probably occupy only 20 to 25 percent of time spent on mobile. Media is just a lot more fragmented today.

You recently announced that Yahoo had agreed to sell its core internet and media businesses to Verizon for \$4.8 billion. Why is that a good outcome for a company that once had such cultural significance?

We had shareholders with two different priorities. We have some people who owned Yahoo stock because they really cared about digital advertising and the internet and a possible turnaround there. And we had another set of stakeholders who owned it because they saw a lot of positive transactions that could happen with these very large, lucrative Asian assets. And we had duties to both as the executive team of the company. The Verizon acquisition is a way we can kill two birds with one stone.

What is it like to sell a company while you're trying to do a turnaround at the same company?

There was a time earlier this year when I was running the company,

““Could you w

130
hours

The answer



ork

s in a week?



is yes”

selling the company, bringing on new board members [after Yahoo had settled a proxy war with activist investor Starboard Value], while I had infant twins, and also a husband and a 3½-year-old son. Each of those is a full-time job.

There was a moment when someone said to me, “Wow, you might be the busiest person on the planet.” In the

Midwest, where I grew up, you shrug off a compliment like that and think a lot of people in the world are really busy, like President Obama. And then President Obama started posting YouTube videos for fun.

You gave birth to your first child shortly after joining Yahoo and had twin girls in December while the proxy fight row was brewing. How did you do it?

The company was not in a state where the CEO could go home for four to six months, so I worked my son into my daily life. For his first four months or so, I would just have him in the room when I was doing conference calls. He’s like this little business baby. You start talking about revenue or negotiating an offer or a deal, and he immediately kind of understands it. The twins have been the biggest shock and surprise of my life. It was like winning the lottery.

Does it bother you that your parenting choices were criticized?

In my view, there’s just entirely too much judgment over motherhood. There are some mothers who want to work; there are some mothers who need to work; there are some mothers who want to stay home; there are some mothers who need to stay home. One of the best pieces of advice I’ve ever gotten is there are always a lot of good choices, and then there’s the one you pick, commit to, and make great. In my case, I don’t really feel like I chose not to take a maternity leave; it was just a fact of life. I had healthy children. I had a company that needed me. I found ways to make that work.

Will you stay at Yahoo indefinitely?

I plan to stay. I love the company, and I want to see it go into its next chapter. ❸

Adam Silver

Commissioner
National Basketball Association

The new boss talks about avoiding a player lockout, changing the age minimum, and how he watches games

Interview by
Ira Boudway

Photo by
Christaan Felber

I'm going to abuse my privilege here to lodge a complaint, which is that basketball is a great flow sport, but NBA games stop too much. If it were me, I'd try to take most of the timeouts away from coaches. I know you have to have them for commercials and for rest, but if they were just programmed in, maybe longer and fewer—

It's so interesting: I thought you were going to say the opposite. I think coaches should have timeouts, because it's something they tactically need. The truth is, we try to find the right balance. Of course, we have to ensure that we get our commercials in. At the same time, it is a game of flow. And one of the things that the competition committee is meeting on this summer is, what can we do to enhance flow, particularly in the last two minutes of the game. Should we be reducing the number of timeouts in the last two minutes, the length of timeouts in the game? My sense is, there's a general agreement that we should do something. Figuring out exactly what we should do isn't easy.

Will you be back at the collective-bargaining table next year?

Well, we're back at the table already. While we and the union have agreed that we're not going to talk publicly about the substance of our discussions, neither side has made it a secret that we're talking and that the goal is, of course, to avoid any type of work stoppage whatsoever. I feel fairly confident that, based on the tone of these discussions thus far, based on the sense of trust and the amount of respect among the parties, that we should be able to avoid any kind of public labor issue and that the things we need to get done will get done behind closed doors.

The executive director of the players' union, Michele Roberts, gave an interview where she called salary caps un-American. What is your relationship with her like?

The communication is very direct between Michele and me. As a still relatively new head of the union, I think she is establishing herself, and it's not for me to say what she should be saying publicly or otherwise. What I care most about is what is said across the bargaining table. We have built a relationship. We're in the process of growing that relationship. I have tremendous respect for her. She has never made any issues personal. And to the extent she's said things publicly, I think she's made a distinction between what may be a personal point of view and a position that the union is taking.

Early on, you talked about one of your top priorities being moving the minimum age for players up from 19 to 20 years old. Is that still something you want?

It's still something I care a lot about. I'm also a realist. Given that Michele has said her preference would be for an 18-year-old minimum age, my sense is that it's not something that's going to

change in the short term. And by the way, I've always said I understand the other side of the issue, about a young man's opportunity to make a living. But my view has always been that we'd be a better league if players came into the draft at 20 instead of 19.

Overall revenue for the league will be about \$8 billion this coming season. The new TV deals with ABC/ESPN and TNT bring in, on average, about \$2.7 billion a year. Is that sustainable? And when those deals come up again in 2025, do you think they'll still be your biggest single revenue stream?

I am not confident predicting on what platform our viewers will watch our games. What that will look like in 2025 is somewhat unpredictable. But I think media will remain our single-largest stream of business. In part, that's the reason that we went fairly long on our current television relationship. At the same time, we have a relationship with Tencent in China, which represents in many ways the next generation of television, where they're streaming 600 games. There's an enormous amount of competition right now among these various services. We're partnering with Twitter in the U.S. now, with their burgeoning live-streaming service. My sense is that 10 years from now, whatever platform we'll be on, the fundamental game experience will be different. There will be an enormous amount of interactivity that doesn't exist now, which will lead to further engagement, meaning more minutes spent watching the telecast. So I welcome the change.

You think it can be as lucrative?

I think it will be more lucrative. We have a current model that's based on prime time as the primary window to watch television. The challenge always for us has been that, in many territories, our games aren't on in prime time. Games on the East Coast, for example, are on at drive time in China. And so you have tens of millions of commuters who are interested in watching the NBA. And now it's no further than the television in their pocket. That same change in viewing patterns is going to be critically important for Africa, a market we're very focused on, and for India. Ultimately, it may make sense for us to play some of our games outside of prime time or weekend afternoons in the United States.

What did you learn from the a la carte, single-game streaming that you offered for the first time this past season for out-of-market games?





We learned that it was incredibly popular. Largely, the reason we sold it as an all-you-can-eat package historically was it was a limitation of technology. Frankly, it still is, on a lot of cable systems. But for smartphones and tablets, where a lot of the consuming is taking place for our broadband League Pass [out-of-market TV subscription service], consumers were telling us that it didn't seem like a great proposition to pay one price for 1,200 games. It's great value if you watch a lot of games, but other fans love the idea that they can buy a single game just as they would a movie. It encourages more sampling.

It also allows us to send people on social media directly to games. So, for example, if you're on Twitter: You're following somebody's feed, and you read that Kevin Durant is going for 50 points and the game is 7 minutes into the second quarter—it's click, and for roughly \$7, you're now watching the game. I think as we get even more sophisticated, it may go beyond single games. It may be there's two minutes left in the game, and it's a tie game, and there's an alert. Consumers may want to watch the last two minutes. I'm sure some algorithm will spit out a price that's appropriate.

Are there changes in your tenure, that you already consider mistakes? Maybe the short-lived team format for the dunk contest at the All-Star Game in 2014?

That's a great example. There was enormous confusion not just with the fans in the arena, but I think the players were a bit confused. One of the things I've learned in business is, don't overly complicate things. And there are no shortcuts for introducing new processes. Often, you should find ways to introduce them outside the glare of the big lights.

How often do you get to actually watch games once the season's under way?

I can't think of a night where I'm not watching some portion of a game. I watch highlights every single night. There's almost always something interesting to me about every game, a particular player I'm interested in, a coach who's trying something new, a matchup where there's some particular fascination. I love watching the game. I have the benefit of our national broadcasters on ABC, ESPN, and TNT and hearing the different perspectives they bring to the game. Many of them, former players, former coaches, share ideas about things they would change. I'll be watching a game with my wife, and the announcer says, "If I were Adam Silver I would..." And I always sit up, and I say, "Yes?" You know, "I'm listening." And sometimes I e-mail them and say, "That's an interesting suggestion," or, "Do you really mean you would do that?" 📧

the fundamental game experience will be different

Lionel Shriver

Author

The writer's new novel describes a near future when the U.S. is locked out of global trade. One result: Stockbrokers turn to mugging

Interview by
Miranda Purves

Photo by
Boru O'Brien O'Connell

You've written fiction based on a school mass murderer (*We Need to Talk About Kevin*), the broken health-care system (*So Much for That*), obesity (*Big Brother*), and now the aftermath of a U.S. default (*The Mandibles: A Family, 2029-2047*). Why did you hinge a plot on fiscal disaster?

I think since 2008, ordinary people are much better educated about economics, by necessity. It created a tectonic underconfidence about everything to do with money, down to solvency of the banks that were taking your money, the money itself. Then we moved rapidly from the subprime crisis to the sovereign debt crisis. I'm very interested in debt on a moral level. We have become very sympathetic with debtors. I'm not saying I'm not. But I think we're undersympathetic with creditors, and we're underappreciative of the degree with which we are all creditors. On the simplest level, you give [the bank] your money in good faith, and you have reason to expect it back.

Were you affected?

I lost money. I've made most of it back since then. But don't take any investment advice from me! The sudden success of my seventh novel, *We Need to Talk About Kevin*, unquestionably changed my life. It was published in 2003. It didn't hit the *New York Times* best-seller list until something like 2011. That's when the film came out. But in the U.K., it happened much faster. I think it still, as a story, inspires a lot of other writers today, because it was a little engine that could. A publisher with no publicity budget.

The most exciting thing for me was getting a large readership—ultimately what any writer wants. But a larger readership comes with more responsibility, and if you're not careful, that becomes paralyzing. It was helpful that I didn't have my first

big success until I was in my mid-40s, so I was a grown-up already, like it or not, and was used to churning out books.

So were you just living on the...

Sad little advances. And I had moved on to starting to do a little journalism and I kept my expenses down. And that's been the other big transformation in my life since that book. Certainly I'm not wildly affluent, but in my terms, I am much better off, which took a little while to adapt to, because I think I conceived of myself as a poor person. And that can be a difficult leap to make, having to abandon all that warming self-pity. And it has political implications, because your self-interest changes. I mean, it's not as if I've changed my political party allegiance in the United States. I'm still a Democrat. But soak-the-rich policies potentially hit me, since the definition of rich in the tax code starts pretty low down. You don't have to do much to get up to the 50 percent line. And then it's like, "Where's my money, and what are you doing with it?"

That would have fed into your new book because you suddenly had...

It certainly informs this book. One of the things most fascinating to me about this experience of becoming more—people who are well off never are comfortable with the words that mean well off, even affluent. "Rich" is a word that poor people use. Rich people don't ever use it.

Because they hear the echo of the adjective "filthy" before it?

This is what fascinates me. I mean, obviously, when I was skint, like anybody who's on the edge of fiscal oblivion, I worried about money to a degree—on the level of being able to cover my rent or scraping together enough to do a research trip. Now I own my house.

You bought a place?

Oh, yes. Because what I wanted more than anything was a certain kind of security.

Did you buy property in London, too?

Yes. I live nine months in the U.K. and three in Windsor Terrace, Brooklyn. And that's been the only decent investment we've made. But the amount of fiscal anxiety I feel now that I have more money is the same or greater—I would say greater—than when I had no money. That worry that I have taken care of—I can certainly afford my grocery bill, and if I want to take a trip, I can definitely afford that—all that worry has just simply been converted. And so now I worry about worldwide fiscal collapse. **B**

Her **2003** novel *We Need to Talk About Kevin* sold more than a million copies across 25 languages, won the **2005** Orange Prize for Fiction, and was adapted into a critically acclaimed **2011** film starring Tilda Swinton.



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Prabal Gurung

Fashion designer

The couture designer talks about collaborating with mainstream retailers, “sizeism” in fashion, and how his charity work keeps him grounded

Interview by
Kim Bhasin

Photo by
Christaan Felber

How does your unique background influence your creative process?

When I left Nepal, and then India 16 years ago to come here, what I wanted to do was be a designer—not be an ethnic designer—but to be a global designer who was playing in the global field, internationally. But one thing that was really true to me as a person and that I couldn’t deny—and I didn’t want to deny—was my heritage. It was a very big part of my identity, my storytelling, what the brand stands for. It has given me personally an interesting narrative and also a different view about the world.

Have you felt any pushback from



going against industry norms?

I launched my collection in fall 2009, deep in a recession. I'd gone to a few people, retailers and everything, and they said it was the worst idea. Nobody was for it. I sat down and thought instinctively that it was the right thing for me, and I did it.

The reason why is that I went to an all-boys British Catholic school in Nepal, where I was very different from the rest of the boys. I was told I was different. And my difference at the time was my biggest hindrance in everything that I did. I was alienated. So I grew up understanding that while different may not be popular immediately, when it's the right path, it is right for you. That's how

I approach everything. And it's not with arrogance, it's just with experience.

You've had collaborations with Target and next year with Lane Bryant. How do you approach collaborations and keep your brand balanced?

I've always wanted to create a luxury brand with a soul. When you're at a certain price point, you're already alienating a lot of your consumer base. But in fashion I've always believed in a conversation of inclusion, whether it's diversity of the models on the runway, whether it's diversity of sizes, diversity of age. I've kind of represented that.

I wasn't able to address a lot of the consumers who were interested, because they couldn't afford to buy it. So when this Target opportunity came along, I wanted to reach out to those people who would never get an opportunity.

It also allowed me to work with a massive company like Target and see how they function. Understanding corporate discipline. Understanding how you function with timelines and deadlines.

In the end, we ended up getting 4 billion impressions based on that collaboration, which really brought the brand recognition to a new level.

How important is the runway these days?

Until there isn't an audience and appetite, movies and celebrities will live on.

That is the world we're shifting to, no matter what. Runways are important, too, because it's like a movie. It's like brand storytelling. It's like a seasonal brand message. So it tells the world what

I am thinking as a designer. It gives you as an audience a peek inside my brain about what I was feeling and what I am thinking. I think it's important in terms of building a story, building a brand.

Is there sizeism in fashion?

There's no doubt about it. I wish I could give you a politically correct answer, but there is. I will say it is definitely getting better than it's ever been. The world is shifting. The conversation on diversity is no longer just limited to black, white, or Asian models on the runway, it's also models of different ages and sizes. The conventional ideal of beauty is no longer a size zero.

Having said that, I still think we have a long way to go. But the conversation has

started. One of the reasons I wanted to do Lane Bryant was because the product in itself is there, and I wanted to serve a consumer that I haven't been able to. But I wanted to have a deeper and bigger conversation about fashion. Fashion can no longer be an exclusive club for a certain size only. Fashion is an idea, it's a dream, it's an emotion, it's an aspiration that should be allowed for various people who understand your aesthetic.

How do you handle social media?

I wasn't into social media at all in the beginning, and then Demi Moore had worn something, and she tweeted about it. That's how I got into social media. I pretty much early on understood, as an independent brand that's self-financed without much money put into PR, that social media were the tools I could build a brand on. I would say it's been a blessing. I can also turn off when I'm not into it. I can switch it off. I'm from Nepal, I meditate.

How can fashion help remedy the bigger problems of the world?

Fashion can definitely play a role. That's why I launched my foundation five years ago. How it started was, right after my third or fourth collection, the *Fashion Week Daily* came out with a magazine, and its cover was pictures of my collection. And there was a picture of me and it said, "A star is born."

I called my brother and my sister, and I talked to my mom—she lives in Nepal, and I call her every morning before I come to work—and I said, "Listen, all this stuff is happening, and it's going to get to my head. I'm going to start believing the hype. Why don't

we immediately start a foundation so we can divert the attention to that, so I can use this platform?"

We started with 12 girls. Now it's gone to educating inmates' kids, street kids, kids up in the mountains who've never had access to anything. Right after the earthquake [in April 2015, which killed almost 9,000 people and left 3.5 million homeless], we started raising a million dollars online to rebuild shelters, hospitals, clinics. In five years we've been able to impact 15,000 lives.

When people tell me it's just fashion, you're not saving lives, I say, "Actually, I am." So I know for a fact that fashion is not just about clothes. It is a bigger conversation to be had. **B**

Gurung started the Shikshya Foundation Nepal in 2011 to educate poor children and raised more than **\$1m** for relief after the April 2015 Gorkha earthquake.



Increase in U.S. crude production, 2006 to 2016: 74%. Decrease in U.S. crude imports over the same period: 23%

“They were being overrun by people

Harold Hamm
CEO
Continental Resources

who basically were there to KILL

America’s fracking king on environmentalists, why his industry can’t get any respect, and Donald Trump’s appeal

Interview by Matthew Phillips
Photo by Jonno Rattman

Domestic crude supplies have almost doubled. Do you feel Americans appreciate what your industry has done?

It’s hard to miss the benefits of what’s happened as a result of the oil and gas renaissance. A lot of people didn’t expect it—particularly those environmentalists that would stop all fossil fuel production.

The industry has been forced to reckon with efficiencies in the face of lower prices. How much more efficient are Continental and its competitors today?

When horizontal drilling began in the 1980s, one well would take the place of 18. So one surface location would take the place of 18 locations on the surface—a tremendously more efficient situation.

What has given us this energy renaissance in America is the horizontal drilling techniques that the small independent

operators like my company developed.
Do you think that your industry is going to come out of this price cycle stronger in any way?
As far as processes, yes. As far as financial, no. I mean, it’s hurt our industry greatly. But...it made OPEC irrelevant. They’re no longer going to be able to control America and the consumer prices here. You know, that’s probably the biggest patriotic gain that we’ll ever see in our lifetime. For 50 years, they’ve controlled consumer prices at the pump in this country—50 years.

Dealing with a diminished OPEC, you think, is a good thing for the U.S.?
Absolutely. I mean, what are you paying for gasoline out there today? Two dollars?

I paid two bucks last week.
There you go, man. They had it at \$4 or \$5. So it’s a huge thing. We can’t even measure that. Has it helped our economy? Absolutely. You know, the last eight years were pretty miserable, but they would have been real bad without what we’ve done—without this energy renaissance. It’s been tremendous.
As it relates to energy policy, what do you want to see from the next president?

Well, somebody’s going to have to change the rhetoric on the fossil fuel industry and not have a target on everybody’s back in this industry and trying to put us out of business.

Do you see Hillary Clinton as Obama 2.0? What does she mean for the oil and gas industry?

Well, just listen to what she said, that she’s going to stop pressure treatment of wells. That pretty much would put an end to everything [for shale development]. And for what? I mean, it’s been proven, you know, there hasn’t been any [environmental] damage from that.

For the Republican Party, what happened during the past four years that fed the rise of Mr. Trump?

It’s not just in the Republican Party; I think it’s basically across the country. Call it the Washington disconnect. While working there to lift the crude-oil export ban, I got a real feeling that there was a huge disconnect between the everyday American worker, the average American, and Washington. There wasn’t any attention being paid to it. And I think that’s played out with this entire process. The people that weren’t insiders necessarily have fared very well. And yes, Donald Trump is not a politician.

Is that good or bad?

I think it’s good. He basically has his thumb on exactly what concerns the American people. It’s like immigration: We ought to know who comes here, you know, like any other country. That’s what Brexit was about. They were being overrun by people who basically were there to kill the masses.

You think that’s a similar situation here?

Certainly. Orlando’s an awful good example. Will it get worse? Yes. It’ll get worse unless we get a handle on it real quick. **B**

the masses”



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Brenda Trenowden

Global chair
30% Club

The ANZ finance executive leads a campaign to increase the number of women on corporate boards

Interview by
Kristine Aquino

Photo by
Immo Klink

Have women come as far as you expected in corporations?

To go from 12.5 percent women among FTSE 100 directors in 2010 to 26 percent now in that short time frame and 21 all-male boards to no all-male boards is brilliant. Are we happy to just remain where we are? No. There's lots more work to be done. For us, the real work comes on the pipeline. The middle of companies is where we just don't see enough progress.

How do businesses do it?

First, a company has to, from the top, understand that this is a business imperative. It has to be led by the CEO, by the chair, and then by the managers all the way down. Second, they really need to get to grips with understanding which variates apply to them: Do they have an issue with recruitment? Is it a perception around whether they're a less female-friendly industry? Is it a promotion problem?

In financial services, what stands out as a common obstacle?

There is a big perception issue that financial services has been more of a male-dominated macho type of sector. When you think about the big banks and fund managers, you only think about a small handful of senior women. So we need to get more role models. Also, the culture may not be as inclusive or as welcoming, or it may not be a culture that women enjoy as much.

Have you encountered challenges to being a woman in finance?

Yes, of course. I was quite surprised that it was quite an openly sexist culture on the trading floor in the City of London in 1991. I was a stockbroker, and



a lot of the books that you read about that time are very true in terms of what went on, but you eventually just kind of got used to it. And so I just accepted that I was often the only woman, that sometimes the conversations were not incredibly comfortable, and some of the ways that we wanted to entertain our clients weren't necessarily things I approved of. But the thing

IS WHERE

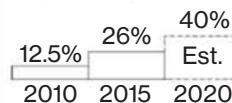
that I learned was to be resilient, and as long as you continue to deliver, that's the best defense you can have.

Did that involve toning down aspects of yourself as a woman?

Definitely. When I had my first child, I had a very short maternity leave and ended up taking him on a business trip when he was a month old. I was very

WE JUST DON'T SEE ENOUGH PROGRESS"

Women's share of board seats at top British companies



DATA: DAVIES REVIEW OF FEMALE BOARDS

board diversity?

The women are speaking out much more. But sometimes you can get into a Catch-22 situation where, because there are so few women, if you have a senior woman who supports another woman, there'll be this sense that

it's the women "clubbing together."

Then the men maybe are naturally supporting the guys, or women think it's not as easy to have that sponsorship role with a senior man, so that leaves the women out in the cold.

Have you encountered resentment from male executives to the idea that this should be done more?

Today, it's more of frustration. Some say, "We've done this, we've done that." They're frustrated that they're not making progress more quickly. Some of the men think this is an affirmative-action program, and they worry that they're going to get left behind, but the numbers don't bear that out.

This is about all the research that shows that greater heterogeneity in teams leads to better decision-making and better performance. **B**

Peter Grauer, chairman of Bloomberg LP, is the founding chairman of the U.S. chapter of the 30% Club.

conscious because a number of people went on maternity leave, and then people thought, Oh, they're not going to be very committed. I had to work extra hard to show them that I was no less committed and I was still going to lead my business. I had a cesarean, so I was in the hospital for five days, and there are pictures of my team coming in for a meeting around the bed. I'm not necessarily proud of it, and I recommend to women now to stay in touch and go have your maternity leave.

Are women speaking out enough about the lack of corporate

Ringo Starr

Musician

The Beatles drummer on how the band benefited from being late to digital music, the difficulty of starting a group today, and his support of Brexit

Interview by
Lucas Shaw

Photo by
Brian Guido

Why did the Beatles decide to finally make their music available on streaming services?

We're just moving with the times. When we started with vinyl, and then CDs came out, that was good for us

financially, because it wasn't in the contract. We had to go to CDs in the end. We were pretty late there. We were late to iTunes, too, but went there so you could buy the tracks. Streaming is huge now, so we're moving on. Who knows what's going to be next? What's Kanye West going to think of?

How do you listen to music? Do you stream or listen to vinyl and CDs?

At home, I do it all. I love iTunes. Though the Beatles are streaming now and have had a billion streams, I haven't actually done it myself. If I'm in the car, I usually listen to the radio, 88.5 Northridge [KCSN-FM, operated by California State University at Northridge]. I just love that channel, because it's such a mixed bag.

The other night, I was at dinner with

friends and their 18-year-old kid. He buys CDs and vinyl. The kids are going back to vinyl to be rebels. They've had CDs and streaming and all that stuff.

What do you make of the disputes between artists and the streaming services, with artists claiming they aren't getting paid enough?

I like to support the artists. I heard a guy had 12 million streams, and he got a check for \$5, which is not fair. I'm not talking about us. The Beatles are doing fine, and we have the power where we can make a deal upfront.

For an artist starting off, there's no clubs for them to play in. The venues have gone down. It's very hard now. It's easier to become a celebrity on a TV show as a band for four months than work solidly. People think it just happened—we just woke up

“A guy had 12 million streams, and he got a check for \$5”



one morning and were Beatles. That's not true. We worked very hard with the venues and put in the time.

Are the challenges for emerging artists the biggest change from when the Beatles began?

Yes. I go crazy, because if you want to open for a well-known band you have to pay; management makes you pay. Who is giving back? I did a Ringo tour once and had a local band at every gig open for us just to give them exposure. Nobody is helping anybody.

When is the last time you toured?

Last Saturday [July 2] I played the Greek Theatre here [in Los Angeles]. I'm always touring. I'm taking the summer off this year, and in October it's Japan and Korea.

Where do you have the biggest fan base outside the U.S. and U.K.?

The U.S. is my town. America is my town.

Is that why you voted for Brexit?

I voted for Brexit, because I thought the European Union was a great idea, but I didn't see it going anywhere lately. It's in shambles, and we're all stuck with people who want to make arrangements for their own country and don't think for the other countries. Britain should be out and get back on its own feet.

And Britain has always been a bit removed from the EU. It kept the pound.

Yeah, and now Scotland wants to leave

and Wales wants to leave. Then it will be Devon. God knows where it will end.

Since you're always touring, will you be going to see Paul McCartney at the Desert Trip festival?

I'm not going, because I'll be in Japan. They set it

up after I was booked.

The Rolling Stones will be playing. They're one of those bands that just keeps touring. If the Beatles were still functioning, would you be touring?

We would. We would have gotten over our difficulties and gotten on the road again.

You would have probably gotten a good paycheck.

Probably. We do it and get paid, but don't do it to get paid. It's all about the gig. **B**

Jeff Bewkes

CEO
Time Warner

The head of the entertainment giant sees more growth for cable and for HBO—despite Amazon and Netflix

Interview by
Gerry Smith

Photo by
Augusto Casasoli

What's the biggest threat to the pay-TV ecosystem right now?

There's a question of whether programming is being devalued. What is the economic sustainability of something that uses a lot of bandwidth and doesn't pay for it and that runs a lot of expensive programming and essentially doesn't have a profit? Think of Amazon or Netflix. The usual reason companies are funded or valued on the stock market for not having a current profit is because the investors believe there will be a future profit. That means they believe the market leadership position is going to turn into something that is unassailable enough—in other words, that does not have enough effective competition—that it can either cut costs or drive revenue and make a profit.

There's a word for that, but I leave it to you to say what it is.

Overhyped?

Monopoly. If you're running on a valuation that assumes essentially dominant market share, is that a good thing for consumers? Is it a good thing for public policy? And is it a good thing for the diversity and quality of content that's currently being produced?

How has the success of Netflix changed the strategy at HBO?

I think the question is: How has the strategy of HBO created the strategy of Netflix? HBO is the original subscription video-on-demand company. We were repurposing first-run movies, and then we added original programming. We had

a colleague in the industry, [Netflix Chief Executive Officer] Reed Hastings, who decided to do the same thing and put it over broadband. Since they're on broadband, they can do it according to net neutrality without paying for the usage. And because broadband allows for two-way interactivity, you can get data on what people are watching and start a conversation. If you watched this, you might like that. That's a great innovation. That's exactly the kind of thing where you could take not just Netflix but all of Silicon Valley and harness those abilities to do global, at scale, distribution. That's a tremendous boon to an industry producing more and more programming. If you don't have a way to search and have recommendations based on other things you've watched, you couldn't figure out what the

hell to look at, because there's too much! I think it's going to reinvigorate the television industry.

You have more than 1 million subscribers for HBO's online-only service, HBO Now. Is that progressing as you expected?

It's going exactly as we expected. There are about 12 million broadband-only households—people who don't have cable bundles. That number will grow. And we will probably end up in half of them. That's a pool of 5, 6, 7, 8 million over the next few years. But that's not where the big volume is. The big volume is in the 100 million pay-TV subscribers. Seventy million out of that 100 million don't have HBO. That's a big group of people. If you look, the HBO penetration in some of our affiliates like Charter, Comcast, Cablevision is literally twice what it is in the less-penetrated affiliates like Time Warner Cable and Dish. What that indicates is more about those distributors than about the people living in those places. You're looking at 10 or 15 million natural pay-TV HBO subscribers in that group. So whether they get HBO using HBO Now or whether they get it by signing up [through a pay-TV service] doesn't matter to us. We're looking at 45 million subscribers going up to 50, 60, 70 million.

HBO has canceled nine series in the past two years. Recently, *Vinyl* was canceled after one season. Is HBO having difficulty launching new dramas?

We just had a show last night which was the opposite of difficult, *The Night*

The big volume is in the 100 million pay-TV subscribers. Seventy million out of that 100 million don't have HBO.

The Beatles broke a record after hitting

250b

streams on Spotify within a month of their catalog's release last Christmas season. Less than one-fifth of the listeners would likely have been born when the band was touring.

Of. That one seems as though it's going to be a big success. It's got the biggest critical acclaim since *Game of Thrones*. We obviously did have trouble with *Vinyl* in the sense it had good edge and quality to it, but it didn't really find the kind of audience we wanted. I don't mean we care about how big the audience is, because we don't sell ads, so it doesn't really matter. But that was a big-budget show that we thought would appeal to a wide variety of ages and quadrants, and it didn't really get to the level we all hoped it would.

People think of TNT and TBS as channels that air a lot of reruns of shows like *Law and Order* and *Big Bang Theory*. Now both are investing in more original programming. What will it take to change that perception?

I think it's happened already.

TBS has four new shows we just renewed: [*Full Frontal With Samantha Bee*, *Angie Tribeca*, *The Detour*,

The Wrecked. TNT just renewed *Animal Kingdom*, which came out with about 7 million viewers [across all TNT platforms] and is growing week over week.

Is it harder for new shows to break through with more than 400 scripted series on the air?

It's actually easier, because there's more consumer expectation that this stuff is out there, and with social and search, they can find it. All of us are thinking about the 10 shows I should watch and haven't watched yet. There's more of that, but it doesn't mean it's harder to create a sense of value that "I want an HBO in my house, because I want those shows" or "I want TNT in my house, because there's three shows I want to watch."

What do you think the cable-TV bundle will look like in the next decade?

There will still be the cable bundle we know now, which is the full monty with hundreds of channels, live news, sports, niche, etc. You'll see for that big bundle and for the more focused bundles—whether it's what interests you have or what price point you want to pay—you're going to see the core channels represented across all of them, and you're going to see full video on-demand and

very good search recommendation and navigation engines, so consumers know what the programming is and where to find it.

The cost of sports rights keeps going up. Do you see that continuing?

The cost of sports rights will continue to increase. The question is whether they increase at the same rate. They were increasing 15 to 20 percent in the last eight or nine years. Football has been the mainstay. That's where a lot of the money is, and it mostly goes to the four

big broadcast networks. The one that's growing fastest globally and in the U.S. and in the young demographic is basketball, which is why we picked the championship pieces of the NBA and NCAA. Those were serious investments, but our affiliate revenue growth in relation to those sports costs is very positive, so it's an increasing margin.

It's reported that Apple executive Eddy Cue floated the idea of buying Time Warner. What was your reaction when you heard that?

That particular one is more about the efforts of the technology companies, Apple included, who we've been trying to help because we want this better user interface, and what they should do and

how would they get involved. That's more about that than M&A. I don't think M&A was serious.

People speculate that Time Warner could be sold because you've slimmed it down and it's one of the few media companies that's not under family control. Are you interested in selling?

It's not up to me. The obligation of every ethical management is to make sure we optimize the long-term value of the company. We're growing the company. We've grown the company at 25 percent a year in earnings for the last eight years. That's a lot higher growth than the S&P. We're essentially outperforming every other media company with the exception of CBS. When people talk about potential suitors showing up, that's because there's not a Sumner Redstone or Rupert Murdoch or [Comcast CEO] Brian Roberts who own the blocking shares. That's why they talk about it. It's not because there's a performance issue. If somebody offers something to our shareholders that's better than our earnings track, obviously we would try to consider what's best for our shareholders. We're a pretty big company. It's expensive. I don't anticipate being interrupted.

What would you be doing if you weren't CEO of Time Warner?

I'd be on the foredeck on somebody's sailboat trying to trim the jib. Or I'd be failing to get my rhythm guitar gig in a band. Or you know what I would do? I would basically be the roadie for Jimmy [Dolan, Cablevision's CEO who sings in a band called JD & the Straight Shot]. You can print that. And if Jimmy wants a roadie, I'm ready. **B**

From 2011 to 2015, U.S. HBO subscriptions rose 17 percent, to 33.3 million; about 1 million have been added via the \$15-per-month HBO Now streaming-only service that began in April 2015. Basic cable subs fell about 12 percent from 2009 to 2015, with 7.5 million lost.

Of that 100 million don't have HBO. That's a big group of people."



John Krafcik

CEO

Google Self-Driving Car Project

The tech giant's driverless-car czar on why he switched sides and how we will someday spend our commute

Interview by
Keith Naughton

Photo by
Christaan Felber

You devoted your life to human-driven transportation, engineering SUVs at Ford and taking Hyundai (as U.S. CEO and president) to record levels of sales in the U.S. Why did you go driverless?

For a lot of my generation, perhaps especially those coming from the family situation I had—my dad was a tool and die maker—mechanical things and complicated physical objects have always been a source of undue fascination. The driverless cars we're working on now are consistent with those human-piloted objects of my youth.

Did you find kindred spirits in car enthusiasm at Google?

There are a surprising number of car geeks here. That joins a lot of us on the team, which I think proves the point that it's the fascination with complicated physical, mechanical devices. Mind you, there are a lot of hard-core software-coding types as well. There's a unifying element: When I was at Ford and Hyundai, I thought it wasn't fair for consumers to have to make the choice of what's the safest way to equip the car. We at Google think we can keep more people safe than the way we currently get from A to B.

What can be learned from the Tesla fatality?

Well, first of all, it's a tragedy. I mean, Joshua Brown lost his life. A couple of key points, though. One is, he was one of probably a hundred or so people who died that day in automotive fatalities, in the U.S. alone. You know the statistics: 35,000 fatalities, up 7 percent from the year prior. Globally, it's over 1.2 million. It's as if a 737 was crashing every hour of every day all year. From a macro standpoint, it's a very, very big problem.

But we need to make sure we're using the right language when we talk about what happened with that accident, because that wasn't a self-driving car, what we refer to as an L4, or fully autonomous car. That was a car with traffic-aware cruise control and a lane-keeping function—an L2, where, for better or worse, it was the responsibility of the driver to be cautious. We, as humans, are fallible creatures. [The crash] confirms our sense that the route to full autonomy, though much harder, is the right route. And we've learned from experience what happens when you put really smart people with really clear instructions inside a car with capabilities like that Tesla one.

Back in 2012 we had a technology that was very similar. We let Google employees test it, after lengthy training sessions imploring them to pay attention at all times. We wanted to see how they were interacting with the technology. After three

months we saw enough to say this is definitely a problem. People would take their eyes off the road for some period, look down at their phones and start texting while in the driver's seat. Turning around to the back to get their laptop because they needed to plug their phone in. Right? When you're hurtling down the road at 60 miles an hour in a two-ton vehicle?

That takes us to the fundamental conundrum of the L2 semi-autonomous solutions: As they get better and better, but not quite good enough for humans to zone out entirely, then risk increases. So we need to take the human out of the loop. With L4, which is our focus at Google, the idea is, you don't need a steering wheel or controls because we're going to take care of everything, and you just have to say, "I want to go to that destination," and the car will take you there.

What role do you think government should play in promoting autonomous vehicles?

It's incumbent on them to provide the regulatory framework so that people can feel confident that the technology is evolving in the right way and is safe. That's not an easy task. Recently, California decided an extra level of licensing would be required to operate an L4 vehicle, which runs counter to one of the major social goods we think autonomous vehicles can provide—giving folks like my 96-year-old mom the ability to move from point A to point B. Not just one driver's license, but two would be required for an autonomous vehicle.

Now California I think has realized they went too far. One of the things we suggested, back in April, was that those working on this technology put forward recommendations based on data that would allow changes to current Federal Motor Vehicle Safety Standards requirements and the like to actually get this technology out on the road.

AlixPartners just did a survey that found 73 percent of people absolutely wanted autonomous vehicles. But when people had the option to have a wheel in the car, allowing optional full control, the acceptance rate went up to 90 percent. Would that help people get over being frightened by a robot car?

Yeah, I think if you could solve that problem of the handoff and making it crystal-clear who was in control. We all have fond memories of being behind the wheel. It's a beautiful Sunday morning, and maybe you take an extra day, and you're driving up the Pacific Coast Highway on the way to Carmel. And those are shining moments. If we're really honest with ourselves, though, and try to remember the times that we've been driving a car where we really, truly enjoyed that experience, I think they're few and far between. For the vast majority of time, you'd prefer to be taken from point A to point B in a fully autonomous car.

It's a certain sort of joy and exhilaration when someone's in a self-driving car for the first time. I have been in cars with folks who've been in the industry for some time, and seeing how quickly they adapt, relate, and then relax—it's astonishing. It takes about five minutes or less. That trust is developed.

If you can show them what's happening with a dashboard map and how they're being kept safe, that puts them at ease?

Yeah, here's this 360-degree view. We've become quite fond of this angle where we pull up as if there were a camera—at a 45-degree angle, maybe 50 feet up in the air—giving folks that...

As of June 30,
Google's autonomous
cars had self-
driven more than
1.7m
miles in four U.S.
states without a
fatal accident



Out of the human time we need to take

Like the drone view?

Yeah. It's led some people to ask the question, "Who's shooting that video of our car?"

Google X is trying to reimagine everything. Does it create a Big Brother atmosphere?

I hope it doesn't. As I looked at this project from my prior position it felt pretty cool. This is a company that doesn't have to sell cars today, is not burdened by legacy, and can take a clean-sheet approach. It's a wonderful service to the industry.

In this very connected world that we are creating, how do you protect people's privacy?

At this point, we're testing cars with test drivers in them, so we haven't had a lot of privacy-related situations come up.

But these cars will create a lot of data. Should the government get it to help design smarter cities? Should companies or courts have it to resolve accident disputes? Who owns the data?

All questions to be determined.

Is the balance of power shifting to Silicon Valley from Detroit?

That's too bold a statement. We demonstrate that with the fact that we just opened up an R&D center in Detroit.

Does Google want to build its own cars?

Google realized that it's really hard to build a car. We built the little prototype that gave us a taste of the complexity. And we had [automotive engineering company] Roush and Conti [Germany's Continental Automotive Systems] helping us. The 100 hybrid minivans from [our new partner] Fiat

Chrysler more than doubles our test fleet.

What will transportation look like 20 years from now?

I do think one of the fundamental shifts the transportation world will pivot around is a movement by all the players to recognize that the unit of economic optimization will have moved sometime during this period from vehicles sold to trips provided. Fully autonomous cars are going to be more expensive. Society will find ways to better utilize those assets. Cars are used just 4 percent of their time—96 percent of the time they're sitting in parking spaces, and each car has somewhere on the order of three or four parking spaces reserved in its name in our great land. That's a shame, especially for cities.

We've heard that Alphabet has set aside \$10 billion as a long-term bet on the self-driving car program.

Really? Somebody said that? I don't know who said that.

Sergey Brin has predicted the death of car ownership.

The same person who said \$10 billion might have said that.

You said we'll always have cars that are a blast to drive. So which is it?

We'll always have cars that are a blast to drive, absolutely.

Will we be allowed to drive them on public roads or will they be show ponies?

No, we absolutely will be. I don't think in our lifetimes we have to worry about driver's licenses being taken away from people or the freedom to drive our vehicles where we want. I don't think that's a future that any of us—or anyone—wants.

No one is taking your Porsche 911 away from you.

No, no! 🍷

Interviewers on Interviewing

Charlamagne Tha God

Co-host
Syndicated radio show
The Breakfast Club



Hip-hop's Howard Stern on being straight up with Kanye West and getting Hillary Clinton to abandon her talking points

Sometimes my style is to come right out of the gate with it. Like when [rapper] Tyga came in when he was dating Kylie Jenner, it was, "There's no need to talk about your music. You know why you're here. Are you f--ing Kylie or not?"

I'm just a fan who wants to understand things. When I sit down with Kanye West, I'm a fan. So I'm wondering why his behavior is so weird, why he's such a conceited, arrogant a--hole now. I have to say that to him, because I've been saying that about him when he wasn't here.

I don't get star-struck. A celebrity did the same things this morning that I did. He brushed his teeth. He kissed his kids. He ate his breakfast. As long as you realize you're talking to humans, you're able to get a good conversation.

You have to know how to humanize people. There's nothing political you're going to ask Hillary Clinton that she doesn't have a talking point for. I told my co-hosts: "We are going to talk to Hillary Clinton like we in the barbershop, and we kickin' it, and we smokin' weed, and we drinkin'." I said, "Let's talk to Hillary like she's a normal freakin' person." She started coughing, and I said, "You sound like you're hitting that medicinal [marijuana]," and she said, "I need to." That's just real conversation.

We asked six people who ask questions for a living to explain how they do it. By Jada Yuan

Anna Sale

Managing editor
WNYC's *Death, Sex & Money*



How's your sex life? The podcast host on the art of probing life's more sensitive matters

The show is called *Death, Sex & Money*, yes, but I'm not asking questions to be gratuitous. I'm asking them for a larger purpose, which is to bring big things out of the shadows. The intention is to create a safe space and say, "We can pretend that we don't have anxieties around death, sex, and money, but we do, so let's talk about it."

The question about death I often ask is, "Has there been a death that's left you with regret?" The question I often ask about sex is based on whatever age the person is: "How is the sex at this point in your life, compared to previously?" And then I ask, "Are you making more this year than last year?"

Phrasing is important. If you're bringing up something that you know will make the person you're talking to tense up the minute there's a mention of it, you want to say, "I know this happened." And then say, "This is why I want to know about this." Explain why you're asking the person to go there—embed it in the question.

If I ask a question, and someone pauses, there's an inclination to restate it. If I fill that space, they're not going to elaborate. But if I sit with them in the quiet, they may add more. Someone will fill that space.

Cheryl Strayed

Memoirist



The author of the best-seller *Wild: From Lost to Found on the Pacific Crest Trail* asks intimate and taboo questions as co-host of the *Dear Sugar* podcast

I met the husband of a student of mine at dinner, and he was telling me about how he spent time on fishing boats with his father when he was a boy. A flash of melancholy came over his face. I said, "Was your father an alcoholic?" He said, "Yes. What made you ask that?"

Part of asking good questions is paying attention. You have to tap into more than what is said—what is meant, what is felt. I use the phrase "unconditional positive regard"—no matter what people tell you, you're not going to judge them. I meet this guy, and then we're talking about our childhoods with fathers who are alcoholics. How is it that I go from being a stranger to somebody with whom he's having a conversation that he's only had with a few people in his life?

What that's about is being open. Having the ability to say, "This is a weird thing to say, but I'm going to ask anyway." He could have said, "No, he was great." But I've always been more willing to get that reprimand than to sit quietly.

I prepare. But *Esquire* has sent me to interview people where I couldn't. They wanted to see what would happen.

Gerard Butler was about to put out a new movie. I don't follow pop culture that much, so they knew that I wouldn't know who he was. They set up with him that *Esquire* is going to do a cover story, and the writer's going to come over. And then they told me, "Cal, we want you to go meet some guy named Gerry." And I said, "Well, what's his last name? Who is he?" They wouldn't tell me.

I went to Gerry's house, and Gerry comes out to greet me. I have to explain I have no idea who he is. His eyes are squinting, as if to say, "Oh, man, I'm not going to fall for this." It took about an hour for me to convince him that I had no idea who he was or what he did.

I told him, "Look, I learned to interview riding around on trains and buses when I traveled the world for 10 years without a home." I would take an empty seat next to somebody and get to know them. So that's how we approached the interview. And it went great. It was an example of being able to go into an interview as if you were just meeting somebody when you travel. That's pretty much my style.



Cal Fussman

Writer-at-large *Esquire*

The *What I've Learned* columnist talks about the time the magazine sent him to write a cover story about some guy named Gerry

A podcast that's really a long-distance conversation between friends

Friedman:

We talk about pop culture and politics and what's in the news and what's annoying us and what's delighting us. I remember Amina being like, "If all these dudes are doing podcasts, it can't be that hard."

Sow: We added this phone-a-friend component that was mostly about showcasing the awesome friends we have. We also stumbled into interviewing people who were not friends, like Huma Abedin, Melinda Gates, Valerie Jarrett, and Carrie Fisher. We do it with a glass of wine and sit in our closets.

Friedman: We interview powerful ladies. We always ask about the women in their lives who support them and the kind of network that surrounds them.

Sow: The beauty, the fashion—that's the stuff that has been covered ad nauseum in profiles and interviews.

Friedman: It's not, "What's your exercise routine?" I'm thinking of my least-favorite interview tropes.

Sow: Mine is what they're eating at the moment. Maybe we'll interview men, and all we'll do is ask them these soft questions. "How do you do your hair every morning?"

Friedman: "How did you get your pre-baby body back? Have you ever eaten five almonds for breakfast?"

Ann Friedman and Aminatou Sow

Co-hosts *Call Your Girlfriend*

Sow



Friedman

Tripp Keber

CEO
Dixie Brands

The pioneer in marijuana edibles believes the cannabis industry will grow exponentially, if a Colorado initiative doesn't get in the way

Interview by Jennifer Kaplan Photo by Christaan Felber

Why did you get into the cannabis industry?

I got into the marijuana business, ironically, to make money. Boy, was I wrong in the early days. I realized in a very quick time period that there was far more to this industry than making money. The power of cannabis is just superior to some of the other wellness platforms, so it's exciting to see us six years later and how the company has grown.

Why edibles?

It is called weed for a reason, because it grows like one. But to grow good quality cannabis, it's incredibly challenging. It's as much of a science as it is an art. I'm not one exactly to get my hands dirty in the garden, so I eliminated that as an opportunity.

We started with the concept that we

could take cannabis and add water and ultimately create an elixir. With that, Dixie Elixir was created in early 2010. And it's exciting—from that one product, we've grown 15, 16 delivery systems—a total of 170-plus products.

Who is your target consumer?

At the height of the medical marijuana registry in Colorado—that's our home state—we had just 120,000-plus registered patients. In January of 2014, the first month that adult-use cannabis was offered, over 10 percent of Colorado residents, 500,000-plus people, embraced legal adult-use marijuana for the first time. So the demographics just exploded. You'll have construction workers all the way up to women in business suits grabbing products like Dixie's on their lunch break.

Do you focus on different parts of that large swath of users?

We have products that will provide a cerebral or euphoric experience focusing primarily on THC, which is the psychoactive ingredient. We have products that are specifically designed to assist with women and premenstrual syndrome. We have products that are designed to be enjoyed at a golf course—an elixir. It's providing 10 milligrams, the equivalent of maybe one and a half

Total weed edibles sold in Colorado
Q1-Q3 '14 3.4m units
Q1-Q3 '15 5.7m units

glasses of wine. Our single most popular product in the country is a THC-CBD synergy zero euphoria. It is a topical that you apply to your skin. It provides

a level of wellness or a level of relief from pain.

What are the toughest challenges?

Twice in two years we lost our banking. When I moved to Colorado, I'd been with Wells Fargo for years, and on one given day we were notified that we had less than 30 days to shut down our accounts and come get our money.

This is an industry that presents so many challenges. Medical marijuana and/or adult-use marijuana are still illegal at the federal level, although that is becoming less and less of a risk.

The good news is companies like Dixie do have strong banking relationships, but there are smaller companies that end up having to pay me as a wholesaler in cash. And when you're selling millions of dollars of products on an annual basis, that is really a real big challenge.

What are the other challenges?

Right now we're facing a ballot initiative, Proposition 139 here in the state of Colorado, that would limit the amount of potency to 16 percent, which would be a death blow to the industry. It would basically gut the industry and take what was a billion-dollar industry last year and probably turn it into something 60, 70 percent of that.

Where will Dixie be in 10 years?

We're a privately held company, so we don't discuss revenues, but I can tell you that the company is dealing with hyper, hyper growth. I stated publicly that our company was valued in 2014 after an \$8 million investment as a \$40 million company. It is safe to believe that we will see significant increase in that valuation as early as the third quarter or fourth quarter of 2016. We will probably see the company valued as we go out for our next round for maybe as little as \$160 million, but potentially as great as \$180 million.

If you don't believe that there will be billion-dollar cannabis brands created, I don't think you're looking at the tea leaves properly. **B**



"You'll have construction workers all the way up to women in business suits grabbing products like Dixie's"

Roger Snow

Senior vice president
Scientific Games

The inventor of Ultimate Texas Hold 'em talks about building fun into card games

Interview by
Drake Bennett

Photo by
Christaan Felber

How do you think up games people want to play in casinos?

I do poker games. I have ventured out a couple of times into other things, but in the end I stick with poker. I think that poker is the best language for these card games. People saying there are too many poker games is the same as saying there are too many operas in Italian. I mean, there aren't.

So you keep it similar to what they've seen before structurally and aesthetically. Then I'm going to think of something fun. This idea popped into my head: I'm thinking of a draw poker game with five wild cards: four deuces and a joker. That's never been done before.

Describe what you mean by "fun."

I like decisions that foreclose other decisions. People say, "Oh, just give players a game that's really close to no house advantage, and they'll love it." They don't. I think what players like is what I call volatility, which is very loosely the ability to win money quickly. I've met other game inventors, and they have different philosophies. I like games that are very aggressive. If you're behind, you can catch up, and if you're ahead, you can press your advantage.

There's also this idea that games have to be simple. Well, how do you explain craps? Explain blackjack. Blackjack is not easy. Explain Ultimate Texas Hold 'em. That game—I have seen dealers go home crying. If that were the case, then Casino War, which is one card against a dealer, would be the most popular game of all time, and it's not.



designed a card shuffler specifically for how baccarat is dealt in Asia, which is a remarkable piece of engineering. But right

Games have to be intricate. **How do you tailor games for Macau?**

Baccarat dominates Asia even more than blackjack dominates the U.S. and roulette dominates the European market. We have a baccarat side bet that's about to launch, and we

now there's not a lot of specialty content over there, and we're still in an experimentation phase.

You see things over there that you don't see anywhere else. You get off the ferry from Hong Kong or from mainland China, and you walk out of the customs port, and you notice that people are running by you, and it's like, "Is the boat on fire?" They're running to the casinos, because they're only there for a day or for six hours. If you're a table games guy like me, that's like mecca. **B**

"PEOPLE SAYING

THERE ARE TOO MANY

SLOT MACHINES

IS THE SAME AS SAYING THERE ARE TOO MANY OPERAS IN ITALIAN"



Margrethe Vestager

European commissioner
for competition

The Continent's antitrust cop wants to keep tech giants from using their power to prevent new rivals from developing their own innovations

Interview by
Adam Satariano and Aoife White

Photo by
Immo Klink

Why are U.S. technology companies getting so much scrutiny from you?

It goes for every industry, not only the tech industry. Just as we would congratulate any business while they grow and flourish and invent new things, if we see that they start to misuse their size and power to prevent others from growing and flourishing and investing in new things, then you have an issue with us.

Can companies gain an unfair advantage over competitors based on the data they hold?

It depends. If you merge two businesses, and by merging the sets of data it becomes de facto impossible for somebody to enter that business space, then you have an

issue. We haven't had those concerns yet, but we're very much concerned that they will occur.

There's an implicit contract with internet services. A person hands over data in exchange for the service. Is the collection of people's data an area that deserves more government regulation?

It deserves a lot more attention, for people to realize that as always there is no such thing as a free lunch. There is no such thing as a free app. Obviously, you pay. And now you pay with your data.

The problem when it comes to paying with data is, it's very hard to see what the exchange rate is. The reason I don't use loyalty cards is that I find the exchange rate is very bad for me, because they get all my data—they know what I buy, they can figure out the age of my children, if I entertain guests, etc. But what I get is maybe a discount on washing powder that I don't even want to buy. Why would I

want that? Or I get customized shopping, which in my opinion limits my focus of attention, because maybe I would like to try something different than what an algorithm would suggest.

Google has been the subject of intense scrutiny by the European Commission. What would you like to see the company do differently?

We only open a case if we have strong evidence that a company is misusing its dominant position—that Google is promoting itself in neighboring markets [such as shopping] and not applying the same penalties [in its search rankings] to its products that it does to its competitors' in those

neighboring markets. From my point of view, I want

the competitors to have a fair chance of making it. If you can't present your innovations to customers, why innovate?

What if the competitors' products just aren't as good? People don't seem to have a problem with Google's quality.

That's not the question. You don't know if someone can come up with something better. Just because something is good doesn't

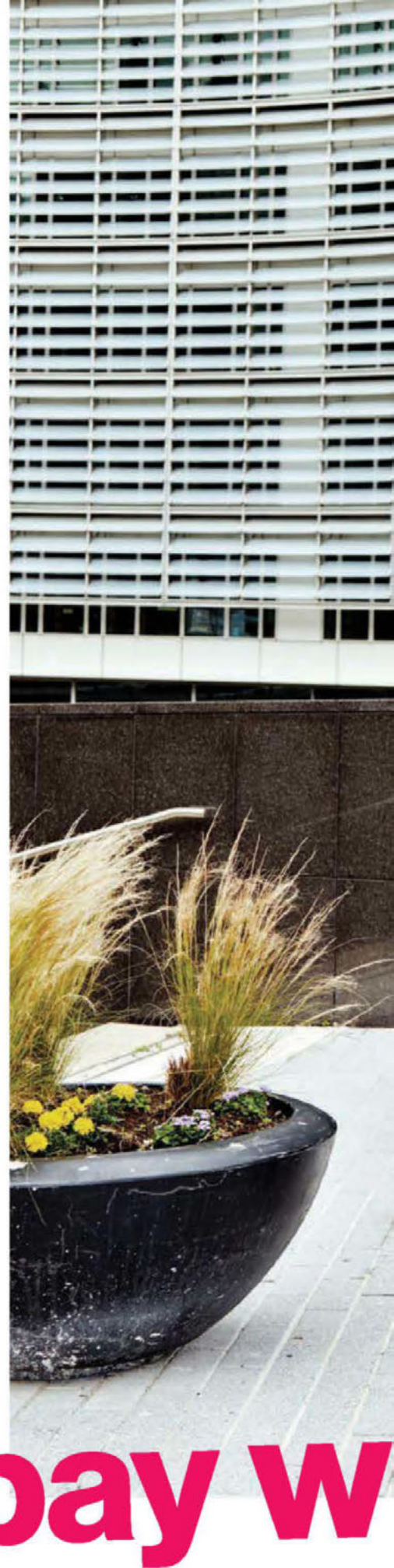
mean it's the end of innovation. If it was, well then, we'd still be in horse carriages.

But isn't there a choice? You're investigating Google because people need to sign up for its services when they use Android. Can't somebody download another search or e-mail app for their phone?

If everything is presented to you, then your impetus to look for something new is so much smaller. Android is a very good operating system—open source. But how Android is used seems

As commissioner, she's probed: Amazon.com, Apple, CNH Industrial, Comcast, Daimler, Gazprom, Google, MasterCard, Paccar, Qualcomm, Sky, Sony Pictures, Time Warner, 21st Century Fox, Viacom, Volkswagen, Volvo, and Walt Disney

“Obviously, you pay.”



And now you



to place customers in a lot of instances on a one-way Google Street. That's because you want an out-of-the-box experience, and even before you start thinking there is something else, you're in a 100 percent Google experience.

There's a fresh generation of technology firms that have quickly become dominant in new markets. Uber in particular has raised record amounts of money, and it's been accused of unfair business practices.

Not only have they raised a lot of money, but they have raised a lot of hostility. You can hardly find a European member state where there is not a lawsuit. What we have been trying to do from the European Commission side is to say it is very important to have a market that's open to new ways of doing business, but it's completely legitimate to have demands on those new businesses—taxation and consumer protections, maybe social issues of working, environment—that are in line with the European way of thinking.

Is Uber, or are others such as Airbnb, acting anti-competitively?

Not necessarily. The complaints the commission has received have been more from labor unions and people who worry about whether taxes are being paid. It's no surprise either that in some markets they cause hostility, because it's an obvious threat to people's jobs. That, of course, is not necessarily a competition law enforcement issue. It's an issue in the marketplace and, sometimes, an issue for the regulator, to make sure we have a level playing field.

You're fairly active on Twitter. Do you attract the hostility and the trolling many women experience?

Yes, but it seems to be much harder to be really angry in just 140 characters. I like Twitter much more than Facebook. For me it's a personal challenge, because I tend to talk a lot—so to be confined to 140 characters is a challenge.

As you've investigated the technology sector, have you changed how you use the internet?

I've become slightly more obsessed with data security and much more reluctant to give away my data. **B**

with your data

Mark Weinberger

CEO
EY

The accounting giant has learned a lot about how to keep millennial employees happy—even when they're leaving

Interview by
James E. Ellis

Photo by
Amy Lombard

Many CEOs say one of the most important jobs they have is managing the company's talent. What's your thought on that?

I'm passionate about this. We have almost a quarter of a million people, and we're in 150 countries. Seventy-five percent of our people are millennials, and the median age of an employee at EY—believe it or not—is 29 years old.

Wow, that's young.

People think of us as old, stodgy accountants. But we're a relatively young organization. In the last couple of years we hired 60,000 to 65,000 people a year. So we're probably one of the biggest hirers there is, and we have to appeal to this new generation.

How?

Purpose has become incredibly important to them. What we learned is that young

people want to do good as well as do well. They really do want to come to work thinking that they're going to do something that matters. So our purpose is "EY, building a better working world"—I wear a shirt that says that right on it. And this has to be authentic and has to be built into the business, not just your charity work or your corporate social responsibility work.

How do you do that?

Well, every audit we do helps bring trust and confidence to the capital markets. So if we're not doing our job, the capital markets aren't working. That's what we talk to our people about.

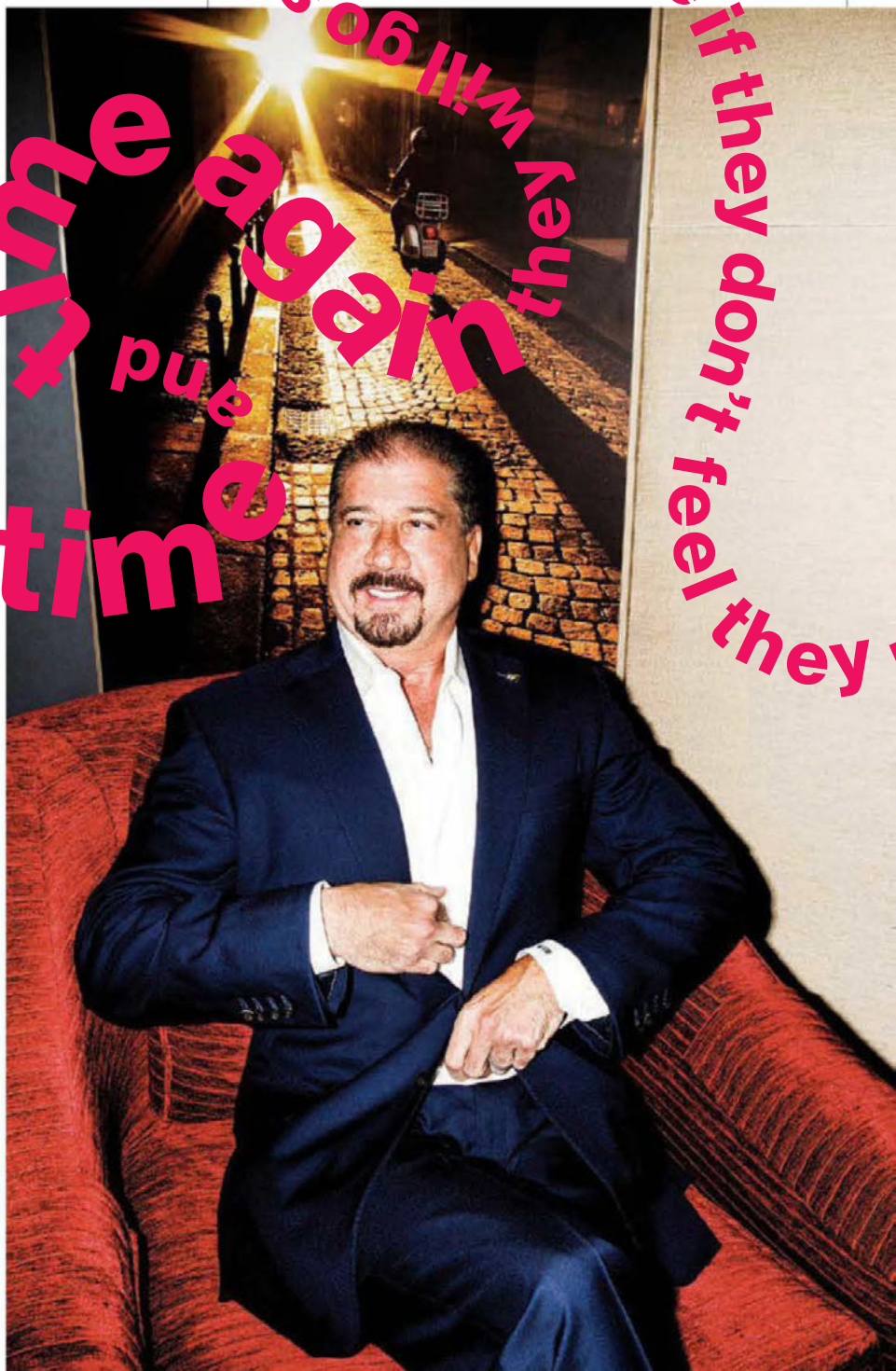
What else do millennial workers want?

They want to be engaged. They still care about compensation. But the single biggest factor for them in wanting to be somewhere is flexibility. It's not pensions, it's not health care, it's not things

we would have thought of. And they tell us time and time again they will go somewhere else if they don't feel they have a flexible work lifestyle.

Flexibility means not just the traditional flex work arrangements. It also means just the flexibility to go ahead and be able to go to your kid's soccer games or care for an elderly parent and not have to be clocking in over a certain period of time. And it means also being able to work from different locations with mobility and not having to be in an office 24/7.

So we've changed. We have more flexibility about teleworking and things like that. But, as importantly, I built our



strategy around this concept of high-performing teams. If we don't have a high-performing team, you can't flexibly serve an audit or an M&A deal or a major tax transaction, where you have to be on call 24/7.

So there are limits to how flexible work can be?

Well, there are limits. But if you have a team that respects flexibility and you're very transparent about when you're available and when you're not, all of a sudden you can meet the needs of the client. That's unlike in the past, where everyone had to be there, or where it was one or two people and not a team who was responsible. And so this teaming is a crucial element of providing the flexibility for the millennials—and, I think, of the future of success in all businesses.

Has the fact that you've worked other places helped you connect better with your young workers?

I've changed our value proposition. In the old days it was: "You come. You stay with us. You work with us. You get a pension." Today we know our people are not likely to stay with us for their careers. They're going to have five, six, seven jobs throughout their careers.

And so we want them to come and be trained here, get the EY seal of approval, so to speak, coming through our training and development programs and experiences. And wherever they go, they're part of the extended EY family. We have 850,000 alumni around the world.

That's a very different way of thinking, compared to the days when companies thought the best employee was the one who stayed 30, 35 years.

That employee is gone. Millennials, they're going to move around; they're going to experience different things. Why am I a believer about

EY, one of the world's largest professional-services firms, has **230,000 staff** (median age: 29) in more than **150 countries**. It hires **60,000 people a year**—one every 11 minutes. Revenue: **\$28.7 billion**. Competitors: KPMG, PwC, Deloitte, Accenture, and IBM

have a flexible work lifestyle

this and impassioned about it?

Because I'm living proof—I left EY three times [including to become assistant secretary of the Treasury in 2001].

We have what we call boomerangs: people who go, get experience in industry, and then decide they want to come back. In the old days it was like: If you leave, you're dead to us. I don't think you can operate that way today.

You've got to make people want to stay with you because of the experiences you give them, the training, the development, and how their personal brands improve. If you can keep them, great. If you can't, then hopefully they're a great representative of you, an ambassador of you out in their new jobs.

Which makes it easier for you to bring in new people in the future?

And work.

And new work assignments from your alumni as well?

Yes. So that's really an enlightenment from realizing the millennials are going to do this anyway and feeding into it, as opposed to trying to stop them from leaving. **B**



Misty Copeland

Principal dancer
American Ballet Theatre

The first black female principal dancer of a major American ballet company doesn't plan to be the last

Interview by
James E. Ellis

Being named the first black female principal dancer at ABT is an honor. Is it a heavy weight to bear, as well?

I don't feel that way. I love what I do. I understand the representation that I have and that it's a responsibility. Being a black woman, I've always understood that when we're given an opportunity, we're carrying everyone with us. That's just how it is.

When I joined ABT, I looked around me and I saw I was the only black woman in a company of 80 dancers. For 10 years it was that way, so I've always had an understanding.

Much has been made about how you have a different build than a lot of dancers of your caliber. Do you view your success as a sign that there's room for different types of people in classical dance?

Absolutely. The body of the ballerina is constantly evolving. You look back to the 1800s, and you see images, even Degas paintings, and the ballerinas are fuller. I think it evolves with the times, just like fashion does. And I think it also depends on the choreography that you're doing, which has become more athletic over the years.

Now when it comes to race, I think that's what kind of changes the vocabulary. And instead of making it so obvious, like, "We don't want to see a different shade of ballerina; we don't want to see a black ballerina," the easiest thing to say is, "You don't have the right body type." Now I look at dancers in ABT, in top companies, who don't have this kind of ideal image as to what we like to say is the perfect ballerina. There are dancers who have large busts and are more muscular, but nothing is said to them. I think a lot of that vocabulary has to do with my race and always has.

As an art form, dance requires so many different talents.

“My existence as a black principal dancer ... is giving young minority children an opportunity to dream”

The physical aspect and the athleticism it takes is out of this world. We train so hard to make it look effortless, but I don't think people understand that you have to really understand acting and be able to have the person in the top tier in the back—who can't see your face—understand what you're saying through your movement. That's definitely a skill.

You're widely known now—and have endorsement deals: Under Armour, Seiko. What does the Misty Copeland brand mean to you?

I turned down a lot of people because it means much more to me to have a connection to these things and have it be a part of my message and what I stand for. I want people to know how beautiful this art form is and how much it's done for me as an underprivileged child. That it's changed my life. It's made me articulate. It's made me confident.

Under Armour is all of those things. All of the athletes [CEO] Kevin Plank has literally plucked have been people he sees as having promise, have been people who don't fit this mold of like, “Oh, this person is going to be the best.” But he knows that they are. He definitely saw that underdog story in me and saw me as an athlete. That means the world to me, because in America people just don't look at dancers that way. And I think he's given me a platform to be viewed in a way that I think every ballerina has wanted—to be respected.

Do people still need role models?

Yes, yes. My existence as a black principal dancer is not going to change the ballet world, but what it's doing is giving young minority children an opportunity to dream, an opportunity to see a possibility for them, whereas before they didn't even want to go down this road. I think it's going to bring more minorities into dance schools so that when you get to the upper levels, there are more to choose from and bring into professional companies. Usually the excuse with a lot of top, elite white companies is, “They're not out there for us to choose from.” And I think this is what's going to change that structure.

So your success can help feed that pipeline?

Yes. That's what I'm pushing for with a diversity initiative I helped to create at American Ballet Theatre.

Is that Project Plié?

Yes. And so much of that is also educating minority teachers and the parents, so there's more people that can be a part of the system who will be not just white. If you have that sprinkling of diversity in every area, the ballet world will eventually change.

Do you feel any different about your art now that you're being acknowledged so publicly for your talent?

I feel so removed from words like “fame” or “celebrity.” I feel like there's something about this small world of classical ballet that creates a structure that builds a type of person that's humble—that is constantly striving for perfection.

There's no taking days off. We're as good as our last performance, and you're constantly working to be better every day. So there's not a lot of time to kind of sit back and lose that fire. Once you lose it, it's kind of over and you retire, because the audience sees it, if you're not keeping up with your training and your technique. So I think that either the day my body can't handle it anymore or the day I lose the passion and fire for it, I'll stop. **B**

Elizabeth Warren

U.S. senator
Massachusetts

The darling of the progressives talks about Donald Trump and financial reform

Interview by
Joshua Green

Photo by
Jonno Rattman

Is there some part of you that's thrilled Donald Trump is calling to reimpose the Glass-Steagall Act and force a split between commercial and investment banks?

I am delighted to see people of all political views engage on the Glass-Steagall issue. I think most Americans get this one: that there's plain old basic banking, checking, savings accounts, and then there's more speculative, high-risk banking. And those two should not be joined together. That's what Glass-Steagall is principally about, and that's why I think we're seeing so much support for it all around the country.

Are you surprised Trump is pushing it? He doesn't strike me as someone who's given deep thought to financial reform.

I'm not sure Donald Trump gives deep thought to much of anything. But on financial reform, it's really hard to miss the Glass-Steagall issue. I get up and talk to people who are not very politically connected, and I say “Glass-Steagall” and get a big cheer. I think that because it's not a distant, technical issue, it's something that people can feel and understand.

Finance serves two functions: basic banking, moving around your money through checking accounts. And that needs to be rock-solid pure. That's why banks get a monopoly to do that and why there's FDIC insurance. In effect, banks get to do that in return for modest but steady profits. This whole business around using some of those funds, backstopped by an FDIC guarantee, to get out there and engage in speculative financial transactions seems fundamentally wrong to most people. I think that's why it's an idea whose time has come again. John McCain and I have submitted a Glass-Steagall bill.

And now you've got Trump in your corner.

We've got Trump and the whole Republican platform! As well as the Democratic platform.

Given that the financial industry has given Hillary \$41 million this election vs. \$109,000 for Trump, do you think banks will exert renewed pressure within the Democratic Party?

I don't see it as a swing back to Democrats so much as I see it as supporting sanity. The financial-services people, as much as many of them would like to see more deregulation, are also deeply frightened by the prospect of a Trump presidency. Nuclear war is bad for business.

How would you grade Obama's presidency on reining in Wall Street, financial reform, and toughening enforcement of existing regulatory laws?

I always start with an A+ for how Obama fought for a



Is there a role for bankers in a Democratic administration?

Yes. There can be, so long as they have demonstrated independence and a willingness to act on behalf of the public. I want to see people who understand what's not working in America and feel a real sense of urgency to make change.

In 2015 only Bernie Sanders had a lower approval rating than Warren from the U.S. Chamber of Commerce, the country's largest business lobbying group. In 2014 she had beaten Sanders for last place.

Right now this economy is working extraordinarily well for those at the top, but not much for anyone else. The people who get appointed to the

top posts need to be committed to making that change. And if they have Wall Street experience and that helps them do it better, that's great. But if their view of the world starts and stops in Lower Manhattan, that's not going to work at all.

One issue that Democrats haven't resolved is TPP. Is the Trans-Pacific Partnership dead?

TPP? I thought it was looking pretty dead. I didn't feel a pulse.

I know you have grandchildren. I don't know if they watch Saturday morning cartoons. But a banker I spoke to at the Democratic convention said he worried you and Bernie Sanders would become the liberal Wonder Twins if Democrats take over the Senate. How will you and Bernie work together next year?

We will touch our rings together and use the lightning bolts to energize all of our colleagues.

You do watch cartoons!

You got it.

You've become an outspoken supporter of Hillary Clinton. Do you consider part of your job going forward is to keep pressuring her to resist falling under the sway of folks like Larry Summers, Robert Rubin, and other Wall Street Democrats who will have a voice in a future Clinton administration?

Yes. **B**

I didn't feel a pulse"

Consumer Financial Protection Bureau when a lot of his advisers wanted to throw it under the bus. That little agency has now returned more than \$11 billion directly to families who were cheated and handles nearly a million complaints and has begun to level the consumer credit markets so that families have a fighting chance to buy financial products without getting ripped off. But there have been disappointments.

What would those be?

Mary Jo White and the SEC. They have failed to prosecute wrongdoers. Failed to put tough regulation in place. Failed to take up changes that they have the authority to make and that would restore more confidence in the fairness of operations on Wall Street. That really hurts.

Show, Not Tell...

We asked a DJ, a chef, and a designer—all respected in their fields—for their takes on some of today's hotly debated topics

Steve Aoki

The superstar DJ and recording artist picked the perfect songs

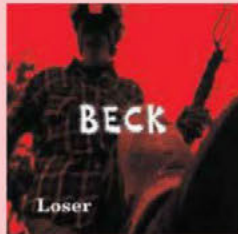
Justin Smillie

The chef at New York's Upland restaurant crafted signature dishes

Chip Kidd

The designer and author imagined the ideal posters

Trump



Loser Beck



Corn dogs
Mustard
Mayo
Tiny hands
Tufts of hair from a blond wig



Pokémon Go



Catch Me If You Can
Babymetal



Okonomiyaki
Cabbage
Octopus
Bacon
Kewpie mayo
Okonomi sauce
Pickled ginger
Bonito flakes



Brexit



If You Leave
Orchestral Manoeuvres in the Dark



Fried eggs
Blood sausage
Roast potatoes
Roast tomatoes
Beans
Costume blood
Crusty bread
Crumpled euros



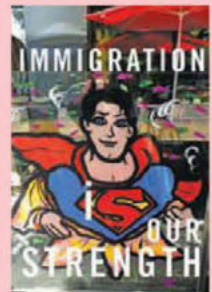
Immigration



Come As You Are
Nirvana



Fried anchovies
Corn tortillas
Roasted tomato aioli
Shredded cabbage
Lime wedges
To-go shell



WE LOVE YOUR WORK
SMALL BUSINESS MAVEN



RAKIA REYNOLDS
Owner, Skai Blue Media,
a fast-growing PR firm

Dell recommends Windows 10 Pro.

The XPS 13 with an Intel® Core™ i7 processor has the performance and all-day battery life to keep up with Rakia Reynolds. That's why PCMag named it Editors' Choice.

Learn more at Dell.com/BusinessLaptops or consult with a small business expert at **877-414-3355**.

XPS 13



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Productivity Outside.

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When will an idea bring the future forward faster?

When we connected the phone to
the Internet, it became a smartphone.

Today, that same restless vigor
guides us as we innovate the more
intuitive Internet of Things, create
new horizons in mobile experiences,
and lead the world to 5G.

We are Qualcomm and we are
bringing the future forward faster.



Why Wait™

#WhyWait to join the discussion
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