# The Economist

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How Brexit threatens Northern Ireland

Trump and trade: the danger of the deal

Iraq, on the right track at last

If bees could talk

# AI-spy

Artificial intelligence in the workplace

A SPECIAL REPORT

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# Politics this week

**Print edition | The world this week** Mar 31st 2018

**John Bolton** said he favoured keeping up the pressure on North Korea in the run-up to proposed talks on its nuclear programme. Mr Bolton was speaking three days after President Donald Trump appointed him as his national security adviser, replacing H.R. McMaster. Mr Bolton has in the past advocated pre-emptive military strikes to prevent the rogue regime in Pyongyang from acquiring the ability to hit America with nuclear missiles. He has also suggested bombing Iran's nuclear reactors. See article .

Mr Trump signed a $1.3trn **spending bill** passed by Congress that avoids a government shutdown and funds public services until October. The president had threatened to veto the bill because, among other things, it did not resolve the legal status of the Dreamers (immigrants brought to America illegally as children), or provide the full $25bn to build his border wall.



Tens of thousands of people, many of them high-school students, rallied in Washington, DC, in favour of gun control. The **March for our Lives** was led by survivors of the mass shooting in February at a school in Parkland, Florida. The measures that the demonstrators called for, such as banning semi-automatic weapons, are unlikely to be passed by Congress.

**We all stand together**

America decided to expel 60 **Russian** diplomats in protest at the attempted murder on British soil of a former spy, Sergei Skripal, and his daughter. They were attacked with a nerve agent. More than 25 other countries and NATO have supported the move against Russia by announcing their own expulsions. See article .

A fire in a shopping complex in the **Siberian** city of Kemerovo killed at least 64 people, more than 40 of them children. The government's slow response triggered huge demonstrations; some called for President Vladimir Putin to resign. See article .

**Italy's** parliamentarians elected new speakers for the Senate and the Chamber of Deputies. Some saw the choices as a sign that a coalition government involving the two big populist parties, the Northern League and the Five Star Movement, is in the offing. See article .

Violent protests erupted in Catalonia following the arrest of the **Spanish** region's leader in Germany. Carles Puigdemont is wanted in Spain on charges of sedition for declaring Catalan independence after an illegal referendum. German police took him into custody as he tried to return to Belgium, where he has been living in exile since October. See article .

**A new broom**

Martín Vizcarra was sworn in as **Peru's** president, following the resignation of Pedro Pablo Kuczynski. Mr Kuczynski was facing impeachment, after evidence emerged linking him to Odebrecht, a Brazilian construction company involved in corruption across Latin America. "We've had enough," said Mr Vizcarra in his inaugural speech. See article .

Court documents emerged showing that Nicolás Maduro, **Venezuela's** socialist president, gave Odebrecht priority in $4bn-worth of public-works contracts, which also involved the Brazilian Development Bank. In return, Odebrecht pledged $35m in donations to Mr Maduro's presidential campaign. Most of the projects, including a metro line, were never finished.

**Brazil's** president, Michel Temer said that he plans to run for re-election in October, despite popularity ratings in the single digits. He later announced that Henrique Meirelles, the finance secretary, will resign in order to launch a campaign of his own.

**The proxy war**

The Houthi rebel group in **Yemen** fired a barrage of missiles at **Saudi Arabia**, which is bombing the Iranian-backed fighters in a bloody campaign. The Saudis claim to have shot down several missiles, but debris fell on a home in Riyadh, killing one person.

In a deal arranged by Russia, some 7,000 people were allowed to leave Eastern Ghouta, as **Syrian** rebels surrendered one of their last strongholds to the government after a bombardment lasting months.

Jacob Zuma, the scandal-plagued former president of **South Africa**, was summoned to appear in court on April 6th to face corruption charges related to an old arms deal.

The ruling coalition in **Ethiopia** named Abiy Ahmed as its new chairman, signalling that he will replace Hailemariam Desalegn as prime minister. Abiy is the chairman of the Oromo People's Democratic Organisation, which is part of the ruling coalition but has been sympathetic to protests against the government.

José Filomeno dos Santos, the son of **Angola's** former president, was accused of fraud and embezzlement. Mr dos Santos had been chairman of Angola's sovereign-wealth fund until João Lourenço, the current president, removed him in January.

**Egyptians** voted in a presidential election, which Abdel-Fattah al-Sisi, the incumbent, is sure to win. The authorities prevented any serious challengers from running.

**Kim-Xi talks on nuclear pickle**

Kim Jong Un, **North Korea's** dictator, visited China in what was his first trip abroad since taking power in 2011. He reiterated to Xi Jinping, China's president, his offer to give up nuclear weapons in exchange for security guarantees. He is supposed to meet South Korea's president in April and Donald Trump in May. See article .

Lee Myung-bak, a former **South Korean** president, was charged with corruption in relation to bribes he allegedly took from companies, which he denies. Mr Lee's successor, Park Geun-hye, is in jail awaiting the verdict in her trial on charges of bribery.

**Malaysia's** government introduced a bill in parliament to outlaw **fake news**, with offenders facing possible prison sentences of up to ten years. A deputy minister said that any news not verified by the government about a huge corruption scandal involving the government would be deemed "fake". The opposition said this was a blatant attempt to silence criticism ahead of an election this year.

A prominent politician was sentenced to 14 years in prison in **India** for running a "fodder scam". Lalu Prasad Yadav, a former chief minister of the impoverished state of Bihar, was convicted of inventing imaginary herds of cows and goats in order to obtain public money for food and medicines for them.

# Business this week

**Print edition | The world this week** Mar 28th 2018

America and China made efforts to step back from a damaging **trade war**. Officials from both countries held talks after President Donald Trump announced plans to impose levies on $60bn-worth of Chinese imports for alleged unfair trade practices. China is said to have offered to buy more American semiconductors to help reduce its trade surplus with the United States; it may also hasten a measure to allow foreign companies to take majority stakes in Chinese securities firms. But China announced proposed tariffs on 128 American products, including fruit, pork and wine, in response to earlier levies on steel and aluminium. See article .



The EU, Argentina, Australia, Brazil and South Korea joined Canada and Mexico in gaining exemptions from America's punitive tariffs on **steel and aluminium** imports. **South Korea** won a permanent exemption by agreeing to revise its free-trade pact with America. The new deal imposes quotas on South Korea's steel exports and extends tariffs for its truckmakers. See article .

### A trade off

Markets see-sawed. **Stockmarkets** plunged when America proposed tariffs on China, causing one measure of market volatility, the VIX, to soar by 30%. They bounced back on hopes of a negotiated outcome. The Dow Jones Industrial Average jumped 669 points in a day, the third-largest increase to date by that measure.

**Facebook's** share price took another hammering, after America's Federal Trade Commission opened an investigation into its privacy practices following the scandal in which data on 50m users were obtained by a political-analytics firm. Mark Zuckerberg has been asked to attend hearings in Congress, where he has few friends. Fears of regulation caused an index of ten American tech firms, the FANG+, to suffer its biggest one-day loss. See article .

**Tesla Motors'** share price tanked by 8%. Moody's downgraded the company's credit rating because of the "significant shortfall" in production of its new Model 3 electric car. One of its Model X cars also crashed, killing the driver and raising fresh concerns about self-driving technologies following the first fatal accident involving a pedestrian and an Uber car.

**Uber** sold its business in South-East Asia to **Grab**, a rival based in Singapore with operations in almost 200 cities throughout the region. It is the latest instance of Uber exiting a market in which it is not the biggest ride-hailing firm, having reached similar agreements in China and Russia. See article .

A federal appeals court found that **Google's** use of **Oracle's** Java technology in its Android operating system did not constitute "fair use" under copyright law, overturning a jury's decision that had favoured Google. The court ordered that the case be reheard to settle damages.

The board of **Deutsche Bank** was reported to be seeking a replacement for John Cryan as chief executive, two years before his contract ends. The German bank's investors are unhappy about its run of annual losses and anaemic share price.

### Get your coat

Under pressure from investors to increase shareholder value after a bruising battle last year to fend off a takeover bid, **AkzoNobel** struck a deal to sell its specialty-chemicals division to a consortium led by Carlyle, a private-equity firm. The Dutch paint-and-coatings group valued the acquisition at €10.1bn ($12.6bn).

Global energy-related **carbon-dioxide** emissions grew by 1.4% last year, according to the International Energy Agency, to a record 32.5 gigatonnes. Some big economies, such as America and Japan, saw their emissions decrease; Britain's fell by 3.8%. Asian countries accounted for two-thirds of the global increase. Despite the growth in renewables, the share of fossil fuels in the world's energy mix remains at 81%, the same level it has been for three decades.

**SoftBank's** technology fund signed a memorandum of understanding with **Saudi Arabia** to expand solar power in the kingdom. If completed, the $200bn project would add 200 gigawatts of solar capacity; the world currently has around 400GW of capacity.

**Remington** filed for bankruptcy protection. The gunmaker, founded in 1816, piled on debt when investors pulled out following the Sandy Hook school massacre in 2012, in which the gunman used a Bushmaster rifle, a brand owned by Remington.

### It's a small(er) world

Qantas began operating the first direct flights from **Australia to Britain**. The Australian airline now flies passengers 14,498km non-stop from Perth to London in Boeing Dreamliner planes. The 28,996km round trip can be completed in just over 40 hours, including a generous few hours in between for sightseeing. See article .

# KAL's cartoon

**Print edition | The world this week** Mar 31st 2018

**The workplace of the future**
AI-spy

AI-spy

# The workplace of the future

*As artificial intelligence pushes beyond the tech industry, work could become fairer—or more oppressive*

**Print edition | Leaders** Mar 28th 2018

ARTIFICIAL intelligence (AI) is barging its way into business. As our special report this week explains, firms of all types are harnessing AI to forecast demand, hire workers and deal with customers. In 2017 companies spent around $22bn on AI-related mergers and acquisitions, about 26 times more than in 2015. The McKinsey Global Institute, a think-tank within a consultancy, reckons that just applying AI to marketing, sales and supply chains could create economic value, including profits and efficiencies, of $2.7trn over the next 20 years. Google's boss has gone so far as to declare that AI will do more for humanity than fire or electricity.

Such grandiose forecasts kindle anxiety as well as hope. Many fret that AI could destroy jobs faster than it creates them. Barriers to entry from owning and generating data could lead to a handful of dominant firms in every industry.



Less familiar, but just as important, is how AI will transform the workplace. Using AI, managers can gain extraordinary control over their employees. Amazon has patented a wristband that tracks the hand movements of warehouse workers and uses vibrations to nudge them into being more efficient. Workday, a software firm, crunches around 60 factors to predict which employees will leave. Humanyze, a startup, sells smart ID badges that can track employees around the office and reveal how well they interact with colleagues.

Surveillance at work is nothing new. Factory workers have long clocked in and out; bosses can already see what idle workers do on their computers. But AI makes ubiquitous surveillance worthwhile, because every bit of data is potentially valuable. Few laws govern how data are collected at work, and many employees unguardedly consent to surveillance when they sign their employment contract. Where does all this lead?

### Trust and telescreens

Start with the benefits. AI ought to improve productivity. Humanyze merges data from its badges with employees' calendars and e-mails to work out, say, whether office layouts favour teamwork. Slack, a workplace messaging app, helps managers assess how quickly employees accomplish tasks. Companies will see when workers are not just dozing off but also misbehaving. They are starting to use AI to screen for anomalies in expense claims, flagging receipts from odd hours of the night more efficiently than a carbon-based beancounter can.

Employees will gain, too. Thanks to strides in computer vision, AI can check that workers are wearing safety gear and that no one has been harmed on the factory floor. Some will appreciate more feedback on their work and welcome a sense of how to do better. Cogito, a startup, has designed AI-enhanced software that listens to customer-service calls and assigns an "empathy score" based on how compassionate agents are and how fast and how capably they settle complaints.

Machines can help ensure that pay rises and promotions go to those who deserve them. That starts with hiring. People often have biases but algorithms, if designed correctly, can be more impartial. Software can flag patterns that people might miss. Textio, a startup that uses AI to improve job descriptions, has found that women are likelier to respond to a job that mentions "developing" a team rather than "managing" one. Algorithms will pick up differences in pay between genders and races, as well as sexual harassment and racism that human managers consciously or unconsciously overlook.

Yet AI's benefits will come with many potential drawbacks. Algorithms may not be free of the biases of their programmers. They can also have unintended consequences. The length of a commute may predict whether an employee will quit a job, but this focus may inadvertently harm poorer applicants. Older staff might work more slowly than younger ones and could risk losing their positions if all AI looks for is productivity.

And surveillance may feel Orwellian—a sensitive matter now that people have begun to question how much Facebook and other tech giants know about their private lives. Companies are starting to monitor how much time employees spend on breaks. Veriato, a software firm, goes so far as to track and log every keystroke employees make on their computers in order to gauge how committed they are to their company. Firms can use AI to sift through not just employees' professional communications but their social-media profiles, too. The clue is in Slack's name, which stands for "searchable log of all conversation and knowledge".

### Tracking the trackers

Some people are better placed than others to stop employers going too far. If your skills are in demand, you are more likely to be able to resist than if you are easy to replace. Paid-by-the-hour workers in low-wage industries such as retailing will be especially vulnerable. That could fuel a resurgence of labour unions seeking to represent employees' interests and to set norms. Even then, the choice in some jobs will be between being replaced by a robot or being treated like one.

As regulators and employers weigh the pros and cons of AI in the workplace, three principles ought to guide its spread. First, data should be anonymised where possible. Microsoft, for example, has a product that shows individuals how they manage their time in the office, but gives managers information only in aggregated form. Second, the use of AI ought to be transparent. Employees should be told what technologies are being used in their workplaces and which data are being gathered. As a matter of routine, algorithms used by firms to hire, fire and promote should be tested for bias and unintended consequences. Last, countries should let individuals request their own data, whether they are ex-workers wishing to contest a dismissal or jobseekers hoping to demonstrate their ability to prospective employers.

The march of AI into the workplace calls for trade-offs between privacy and performance. A fairer, more productive workforce is a prize worth having, but not if it shackles and dehumanises employees. Striking a balance will require thought, a willingness for both employers and employees to adapt, and a strong dose of humanity.

*This article appeared in the Leaders section of the print edition under the headline "AI-spy"*

Making Satan great again

# Scrapping the Iran nuclear deal will harm America

*No tougher agreement will follow it; America will be in the wrong and at odds with its friends in Europe*

**Print edition | Leaders** Mar 28th 2018

LAST summer John Bolton was a hawk with clipped wings. The former ambassador to the UN and cheerleader for the Iraq invasion was grumbling that White House staff were thwarting his attempts to give President Donald Trump his plan for scrapping the Iran nuclear deal brokered by Barack Obama in 2015. Not any more. On April 9th Mr Bolton, whose walrus moustache and verbal bluster mask a skilled and ruthless bureaucratic infighter, becomes Mr Trump's national security adviser. As a result, that deal to roll back Iran's nuclear-weapons programme seems on its last legs. That is bad news for the Middle East, for America's allies and for America itself.

Mr Trump has long scorned the deal, the Joint Comprehensive Plan of Action (JCPOA), as the "worst ever". Yet every 120 days he must sign a waiver for sanctions to remain unenforced—and hence for America to continue to honour the agreement. Mr Trump half-disowned the Iran pact in January, but the sobersides in uniforms and suits running his foreign policy at the time persuaded him to give its European parties, Britain, France and Germany, one last chance to fix it.



The Europeans could point to reports from the International Atomic Energy Agency that Iran is sticking to the letter of the deal (which was also signed by Russia and China). They can envisage side-agreements to penalise Iran for its pursuit of ballistic missiles and to demand easier access to military sites for nuclear inspectors. They are willing to tackle the sunset clauses allowing, for example, curbs on uranium enrichment to lapse over time. But they have no appetite and see no legal case for reneging on a hard-won agreement. The best they can imagine is a declaration saying that the JCPOA's signatories will demand that a renewed Iranian nuclear programme is unambiguously peaceful. That falls far short of American demands (see article ).

Ever the cynic, Mr Trump accuses British and French leaders of liking the Iran deal because their countries make money trading with Iran. His new advisers share his bleak worldview. Rex Tillerson, sacked as secretary of state on March 13th, is being replaced by Mike Pompeo, also a fierce critic of the accord. As for Mr Bolton, he has asserted that only military force can slow Iran's sprint towards a lethal nuclear arsenal.

Although he has recently sounded less hawkish, his hiring surely dooms the Iran deal. But if Mr Trump does ditch it, he will find that his aides and allies were right: nothing better will replace it. The chances of Iran agreeing to tighter constraints are minimal. The hardest-line Iranian factions will pour scorn on colleagues willing to give diplomacy a try yet again.

### When worst comes to worse

The damage to America's reputation will extend far beyond the Middle East. Why would North Korea agree to swap its nuclear bombs for an accord that a future American president could simply rip up? The transatlantic alliance would face unprecedented strains. Europe would find itself siding with China, Russia and Iran against America. New American sanctions might try to force European companies to choose American over Iranian markets. European governments might feel compelled to support their defiance.

And, on top of all that, Iran might resile from the deal, further roiling an unstable region at risk of tit-for-tat nuclear proliferation. That would leave America nothing to fall back on but bombing Iran's nuclear sites (every few years, because air strikes cannot destroy know-how). With an arch-hawk like Mr Bolton at Mr Trump's side, expect much rhetoric about America seeking peace through strength. Yet ditching the Iran deal risks war, and is more likely to make America weaker.

*This article appeared in the Leaders section of the print edition under the headline "Making Satan great again"*

The danger of the deal

# Even if America wins concessions, worry

*Donald Trump's trade policy is economically muddled and politically toxic*

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JUST six words suffice to sum up President Donald Trump's approach to trade (and, you may mutter, too much else): make threats, strike deals, declare victory. In recent weeks Mr Trump's campaign-trail threats of 2016 have been turned into tariffs of 25% on imports of steel and 10% on aluminium, and proposed levies on up to $60bn-worth of Chinese goods.

Foreigners have duly queued to sue for peace. On March 26th South Korea agreed to limit its steel exports to America, and accepted an extension of American tariffs on its pickup trucks. China is said to be discussing cuts in tariffs on American cars, increased purchases of American semiconductors and the further opening of its financial industry. With many of America's allies belatedly exempted from the metals tariffs, and consensus among policymakers and business types that China should indeed change its behaviour, stockmarkets are less fearful of an outright trade war (see Buttonwood ). The man who tweeted that "trade wars are good, and easy to win" may be able to claim a string of victories with scarcely a shot fired.



Vindication? Far from it. For one thing, no deal has yet been done with China. Other countries have politics too, even dictatorships. Despite the South Korean deal, and keen as China is to avoid a trade war—keener than Mr Trump, it seems—the danger of a transpacific escalation remains real. Even if conflict is averted and China gives ground, however, the result will be a bad one for the world, and for America. That is partly because of Mr Trump's character. If he thinks he has won one fight, he is likelier to start another. It is also because his policy is founded on wretched economics and dangerous politics.

Take the economics first. The president is obsessed with America's trade deficits—not just the total, of $568bn, or 2.9% of GDP, last year, but its bilateral ones, especially the yawning $375bn deficit in goods trade with China, which he wants cut by $100bn. Mr Trump's bluster cannot change basic economic logic. America's total trade deficit reflects the shortfall in saving by its households, companies and government—the excess of their combined spending over their income. Tariffs and quotas can bring trade into balance only if they somehow encourage national saving or reduce investment. Protectionism predicts trade balances poorly. Just look at India, where, historically, high tariffs and high trade deficits have coexisted.

Bilateral deficits, it is true, can more easily be altered by trade policy. If America slaps taxes on Chinese goods (and nothing else changes), it will buy less of them and the $375bn gap will shrink. However, unless Americans change their total spending and saving, they will buy more from elsewhere.

The tax cuts that the president signed into law in December make his fixation on trade deficits even more senseless. Boosting the budget deficit to 5% of GDP in 2019 will, other things being equal, widen the trade gap. It is hard to imagine Mr Trump blaming himself for that—and all too easy to see him making a new round of threats against foreigners.

The president's more fundamental error is to see trade as a zero-sum game, in which exporting is for winners (or cheats, if they are foreign) and importing is for dupes. In fact, the gains from trade come from the specialisation permitted by the free exchange of goods, capital and know-how that allows, for example, Californian-designed iPhones to be assembled in China and sold worldwide by the bucketload.

**So long, Geneva's conventions**

Mr Trump's misunderstanding of economics explains why his politics are so irresponsible. Rather than join with other aggrieved countries to put legal pressure on China, Mr Trump has threatened putative allies. Rather than work within the rules-based system of trade, which America helped create and which, despite the system's imperfections, has served the country well, he bypasses it at will. He is particularly reckless to claim that the steel and aluminium tariffs are justified by national-security concerns (a get-out-of-jail-free card under World Trade Organisation rules that should be used sparingly). If America thumbs its nose at the WTO, why shouldn't others?

Managed trade is a mistake, not a victory. It substitutes the power of political lobbies for market forces, favouring loud, well-organised producers over silent, disparate consumers and robbing economies of the nimbleness needed to adapt to changing technological conditions. Other countries will feel freer to follow America's example, making a trade war a repeated risk rather than a one-off danger. Mr Trump's approach threatens to leave everyone much worse off. Some deal.

*This article appeared in the Leaders section of the print edition under the headline "The danger of the deal"*

Identity theft

# Britain underestimates Brexit's damage to Northern Ireland

*Those who won the referendum on the basis of culture and identity now seem deaf to such concerns*

**Print edition | Leaders** Mar 31st 2018

BRITAIN'S bloodiest battlefield of the past half-century was not in the Middle East, the Balkans or the South Atlantic. It was on home turf. A thousand British soldiers and police officers were killed in Northern Ireland during three decades of the "Troubles", twice the number who died in Iraq and Afghanistan combined. The civilian death-toll was twice as high again.

Twenty years ago that awful conflict was ended by the Good Friday Agreement. As Britain and Ireland each softened their claim to the province, Protestants and Catholics agreed to share power in Stormont. The centuries-old question of to whom Northern Ireland belonged was carefully buried for future generations to unearth when they were ready.



Now Britain's impending exit from the European Union, foreseen by nobody in 1998, has posed the question again, long before Northern Ireland has an answer. Britain's ruling Conservatives treat this as, at best, a detail and, at worst, an irritation on the road to Brexit. That is an error—possibly a fatal one.

After two decades of peace, Northern Ireland is at once transformed and unchanged (see Briefing ). Violence has dried up to the point where the crime rate is lower than the British average. Hotspots where armoured cars used to rumble now receive convoys of tourists. Yet beneath the bandage of the Good Friday Agreement, the healing has been slow. Protestants and Catholics still lead segregated lives. Just 5.8% of children are in formally integrated primary schools. Stormont is gridlocked and has been suspended for over a year.

In London some say that this shows the Good Friday deal has failed. That is to misunderstand its purpose. Peace agreements stop conflicts; reconciliation and integration are generational tasks. Chivvied along by the British and Irish governments, Northern Ireland's parties had until recently kept faith. Society is changing too slowly, but it is inching forward.

Brexit now threatens this. Britain and Ireland are too distracted to give enough attention to Belfast, which looks like the child in an acrimonious divorce. Britain squandered its standing as a neutral referee when the Conservatives formed a governing alliance with Northern Ireland's main unionist party and the Labour opposition voted in a vocal republican as its leader. The Irish government has aggravated tensions by reviving talk of unification, something it previously tiptoed around. Both prime ministers must now go out of their way to show they are committed to getting Stormont up and running.

Above all, Brexit has revived nagging questions of identity. The Good Friday Agreement and both countries' membership of the EU allowed people to forget about whether they felt Irish or British. Their option of dual citizenship, the invisible border and growing north-south co-operation, on everything from electricity markets to health care, blunted the distinction. Brexit sharpens it again.

This is clearest at the border. Britain says it will leave the EU's single market and customs union, and that new technology will let it do this without any new infrastructure or inspections at the Irish frontier. The EU (and plenty of others) doubt that this is possible. The EU argues that such technology does not yet exist and says that if Britain cannot come up with a more convincing plan, Northern Ireland must maintain customs and regulatory alignment with the EU. In effect, that would create a border between it and Britain.

### A farewell to arms

For *The Economist*, this is not much of a conundrum. We have long argued that Britain would be better off staying in the customs union and single market; that this also keeps Ireland's border invisible only adds to the case. Polls suggest that most voters agree. But the government believes that anything less than a hard Brexit would betray the referendum.

Some Brexiteers dismiss the border question as a ploy by Ireland and "Remoaners" to wheedle a soft Brexit. They are being superficial and reckless. Northern Ireland's Catholics are deeply unsettled by Brexit, which undermines assumptions on which the Good Friday Agreement was made. Protestants are jumpier still. In recent decades they have lost their grip on government, business and the public sector; they will soon be outnumbered. Erecting barriers between either community and the place each considers its home would cause anguish.

Again, Brexiteers play this down, arguing that a border like Canada's with America would be easy enough to cross, and that trade between Northern Ireland and the south is small. Some have even said Ireland should leave the EU and join a single market with Britain, so strong are the commercial links.

To understand why this misses the point, they should examine their own triumph in 2016. They won the Brexit referendum because arguments about culture and identity trumped those about economics. Some of the MPs telling the Irish to calm down about the prospect of a few cameras and customs officers are outraged at the news that British passports are set to be made by a French company. Brexit suggests that, when people feel that remote elites are trampling on their culture and threatening their identity, they react unpredictably. Northern Ireland is a dangerous place to put that theory to the test.

*This article appeared in the Leaders section of the print edition under the headline ”Identity theft”*

Better days in Baghdad

# Fifteen years after America's invasion, Iraq is doing well

*An election in May offers a chance to build on recent progress*

**Print edition | Leaders** Mar 28th 2018

IT IS less than four years since the homicidal zealots of Islamic State (IS) stood on the doorstep of Baghdad, their black flag already fluttering over several other Iraqi cities. The jihadists triumphed, albeit temporarily, because disgruntled Sunnis, former Baathists and others who felt alienated by the rule of Nuri al-Maliki, the Shia prime minister, stood aside. The central government lost control over much of the country. The independence-minded Kurds in the north watched while Iraq fell apart—until IS turned on them, too.

Today things look very different. Iraq has defeated IS and avoided the wave of Shia-on-Sunni violence that many predicted would follow. The number of civilians killed each month in fighting is a fraction of what it was in 2014. The government in Baghdad saw off a premature Kurdish push for independence last year. Oil production is up and the state has money. The power of foreigners, including Iran and America, has diminished as Iraqi politicians have learnt how to play one off against the others. In six weeks Iraq will hold an election, affirming its status as the only Arab democracy east of Tunisia.



Iraq, in other words, is doing well (see article ). Some will argue that this justifies America's invasion to overthrow Saddam Hussein (which we supported). It does not. Too much blood was shed along the way in Iraq and elsewhere. America botched the occupation, touching off a brutal Sunni insurgency. Then Iraq's politicians stoked sectarian divisions, leading to yet more violence. They must learn from these mistakes, or they will waste this hopeful moment.

Iraq now looks much as it did in 2010, another election year, shortly after the defeat of al-Qaeda in Iraq, the precursor to IS. That victory was thanks largely to America's support for "awakened" Sunni fighters, many of whom were repelled by the jihadists' brutality. The Kurds, at the time, co-operated with the government in Baghdad. But after Barack Obama pulled most American soldiers out of Iraq in 2011, Mr Maliki locked the Sunnis out of the security services, cut off funds to the Kurds and jailed Iraqis who complained.

**Jobs for men with guns**

Today's prime minister, Haider al-Abadi, is better. A Shia who is nonetheless popular with Sunnis, he has a chance to unite his country. Mr Abadi should merge the militias that helped vanquish IS into Iraq's regular security forces. He should split the militiamen up and pay them directly, not through their leaders, in order to make them loyal to the state. The elderly could be pensioned off, the young dispatched to college and those who had jobs sent back to work.

Sectarianism must be stamped out of politics, too. Since the invasion, Iraq's leaders have done deals that guarantee most parties a share of power and its spoils. This has led to corruption and stagnation, not unity. Jobs are handed out by sect and ethnicity, not merit, and ministries are plundered. The state is so dirty that many Iraqis have come to doubt the merits of democracy. No opposition exists to hold the executive to account.

Lately, parties have delighted Iraq's increasingly secular voters by forming broad coalitions that campaign on issues. They briefly did the same in 2010. The test of this will come after the vote. The winners, having no doubt promised to tackle corruption, should do so. Ditto for vows to keep the peace and govern for all. With luck, a more normal Iraqi politics will emerge, based on policies and competence, not sect.

*This article appeared in the Leaders section of the print edition under the headline "Better days in Baghdad"*

# Letters

**On China, Colombia, Stephen Hawking, sensible people**
Letters to the editor

Letters

## Letters to the editor

*On China, Colombia, Stephen Hawking, sensible people*

**Print edition | Letters** Mar 31st 2018

*Letters are welcome and should be addressed to the Editor at letters@economist.com*

**Understanding China**

The problem with the analysis offered in " What the West got wrong " about China (March 3rd) is that Western countries never bothered thinking much about China until it became so economically huge that they had to. The sad truth is that, beginning in the 1980s, when China started to open up, Americans and Europeans made a number of lazy assumptions about how economic engagement was going to lead to inevitable change in social and political areas, without thinking much about the country they were applying this to.



Even the most cursory attention to China's imperial and modern histories would show that it was unlikely to conform neatly to such a simplistic approach. After all, China has form as a disrupter. It took Marxism-Leninism from the Soviets and completely changed it to a template that suited itself. The West in the 1980s might have asked the Soviet Union how its engagement with China went. That would have spared a lot of wasted effort.

Complaining about China's bad form in disrupting these big engagement plans is ungracious and hypocritical. The West's strategic scenario was too simplistic for such a complex place. Moreover, as shown by the election of Donald Trump, Brexit, and a host of other things that have gone awry, the more staggering issue is how the West also got itself wrong.

As Sun Tzu pointed out 2,500 years ago, going into a battle where you don't even know yourself is a near certain recipe for defeat.

KERRY BROWN
Professor of Chinese studies
King's College, London

You used the example of Mercedes-Benz issuing an apology to Chinese customers after quoting the Dalai Lama in one of its commercials to illustrate how Western firms are miserably treated by the Chinese government. Yet the government had no role in the incident. Mercedes-Benz issued the apology because quoting the Dalai Lama hurts Chinese people's feelings. The universal rule for a company wanting to expand in a foreign country is rather simple: respect the culture and history.

Most appallingly, you claimed that China was a danger to the world as one day it may even "retake Taiwan". Taiwan is an inseparable part of China, as recognised by more than 160 countries, including America. I fail to understand how China resolving its internal affairs could bring instability to the world.

NARISA TIANJING DAI
Associate professor
University of International Business and Economics
*Beijing*

The paid propaganda piece published by the *Beijing Review* in the March 10th edition of *The Economist* cannot go unremarked. Under authoritarian rule, China's rise has been marked by the deaths of millions because of forced collectivisation, famine and the brutal suppression of dissidents. China has achieved economic progress over the past 30 years because it liberalised markets. Despite this progress, China continues ruthlessly to suppress anyone at odds with the regime. China is a great nation and a great civilisation. She will be greater still when she allows her people to think for themselves.

JONATHAN STAUFER
*Vail, Colorado*

**Colombia's difficult task**

The Colombian authorities face an extraordinarily complex task in trying to run forced and voluntary coca-eradication and crop-substitution programmes in parallel (" See it. Spray it. Sorted ", February 24th). It is really a Catch 22 situation. Many peasant coca-growers are reluctant to give up their crops until they are assured of a secure environment in which they can invest in alternative produce. Such a safe environment is difficult for the state to provide as long as revenues from coca production continue to finance illegal armed groups.

It was inevitable that these groups—the FARC dissidents, the ELN guerrillas, and narco-related criminal gangs—would move into some of the areas abandoned by the FARC when it demobilised. In areas where these groups were already strong, such as North Santander on the Venezuelan border, they have made it almost impossible for the voluntary programme to proceed. Not surprisingly, the homicide rate in coca-growing areas has risen.

There will always be violence as long as cocaine remains an illegal and therefore an absurdly profitable commodity. But violence could be considerably reduced if the next Colombian administration persisted with the voluntary programme. Many peasants are naturally distrustful of the state; the programme of forced eradication inevitably reinforces this. Proposed legislative changes to ensure that small growers do not face jail, however unlikely that is in practice, need to go ahead.

SIR KEITH MORRIS

British ambassador to Colombia,

1990-94

*London*

**Be curious**

Your obituary of Stephen Hawking suggests that "no philosophy which puts humanity anywhere near the centre of things can cope with facts like these" ( March 17th ). The facts here being the age and size of the universe as revealed by physics. But although the Copernican, and then the Darwinian, revolutions may have dethroned man by revealing he was neither at the centre of space nor the beginning of time, it is arguable that he was at least partially rethroned by the great discoveries of 20th-century physics. These changed our understanding of the nature of space and time, as well as the relation between the observer and reality.

Putting aside the vulgar prejudice that significance can be measured by mere size and location in space and time, what could it mean to say that humanity is not at the centre of the universe when, according to most physicists, it has no centre? Or not at the beginning of time when, some physicists say, time doesn't really exist?

Mr Hawking himself once said that humanity is "just a chemical scum". But apart from being literally untrue, the evidence of his life suggests that he did not really believe it.

JOHN SEXTON

*Chicago*

**Getting back in the game**

I was thankful for the miserable truth detailed by Bagehot , that in angry times the "sensible people retreat into private life" (March 10th). Believing myself to be one of those sensible people I am at a loss for what to do. I would like to rally against the forces of all that is unreasonable, as many of my creed would. But scattered and elusive as we are (and mindful of the threat of any platform being torn away by masked morons), I can't for the life of me think of how to proceed. How do you rally the reasonable?

LIAM JAMES

*London*

Having read the first 40 pages of your March 10th issue, I suggest that western Europe should be the subject of your next Obituary page.

ROD TIPPLE

*Cambridge*

**Northern Ireland**
Past and future collide

Past and future collide

# Twenty years after a peace deal the mood is sour in Northern Ireland

*Questions set carefully aside for future generations have been forced back onto the agenda*

**Print edition | Briefing** Mar 31st 2018

WHEN the Irish Republican Army at last put aside its weapons, ending a century-long insurgency against the British state, witnesses were needed to confirm that the guns were gone for good. Two clergymen were chosen, Harold Good, a Protestant, and Alec Reid, a Catholic. As they travelled in secret between rural arms-dumps with the IRA's quartermasters and an international team of weapons decommissioners, they noticed a young IRA man with an old-fashioned rifle among the group. When the last of the arsenal had been destroyed, the young man marched up to the general in charge, clicked his heels and solemnly handed over his gun. Now in his 80s, Reverend Good recalls the moment: "Father Reid said to me, 'There goes the last weapon out of Irish politics.' We just fell silent."

Northern Ireland's long war ended with the Belfast Agreement, signed on Good Friday in 1998. The deal between the governments of Britain and Ireland, in conjunction with the main Northern Irish parties and the paramilitaries some of them spoke for, spun a delicate web of compromises between the province's Protestants, most of whom want to remain in the United Kingdom, and its Catholics, who more often identify with the Republic of Ireland. The "Troubles" of the previous 30 years—the most recent spasm in a conflict dating back to Britain's planting of Protestant settlers in the 17th century—caused the deaths of more than 3,500 people, mostly civilians. Tony Blair, then Britain's prime minister, later described signing the deal as "one of the few times in the job I can honestly say I felt contented, fulfilled and proud."



Yet 20 years on, the mood is sour. In Belfast the Stormont assembly has lain empty for over a year. The British and Irish governments have warned that commemorations of the agreement will feel "hollow". The two countries are publicly bickering over Northern Ireland's fate after Britain leaves the European Union next year. Vexed questions that the Good Friday Agreement had carefully put aside—on borders, identity and to whom Northern Ireland really belongs—are dangerously back in play.

**Changed utterly**

Under the agreement Ireland gave up its claim on the north and Britain agreed to a mechanism by which Northern Ireland could secede via a future referendum. The Northern Irish gained the right to citizenship of the United Kingdom, Ireland, or both. International bodies were set up to give the two countries shared oversight of how the place was run. And a devolved government was established at Stormont, one in which nationalists and unionists would share power. Paramilitaries who had dealt in Semtex and Armalites turned their attention to early-day motions and the d'Hondt voting system.

Security has been transformed. In 1972, the bloodiest year of the Troubles, 498 people were killed in sectarian violence. As recently as the early 1990s the annual death toll was around 100. Now it is in the low single digits. Northern Ireland's murder rate is equal to the British average, its overall crime rate slightly lower. Sectarian hate-crimes have fallen by more than half since 2005, when they started being recorded. Belfast feels like a normal European city. Crumlin Road prison, once a holding place for paramilitaries, is now a tourist attraction that hosts weddings (promising, and doubtless providing, "a surrounding that will keep your guests talking").

Yet not all the past is so deeply buried. The police detect the "continuing existence and cohesion" of an IRA hierarchy, though they accept that the organisation is now committed to a political path. So-called dissident republican gangs continue to fight a lonely war against the British state, foiled most of the time by the police and MI5, Britain's security service, which still devotes about 15% of its energies to Northern Ireland.

Paramilitary gangs on both sides of the sectarian divide are active in organised crime. Their "punishment" beatings and shootings of drug-dealers, pimps and loan-sharks purport to be for the protection of "their" communities, but often they simply want the business for themselves. Some former paramilitaries have been prosecuted, others have been co-opted. The hardest ones to deal with, says George Hamilton, the chief constable, are those in the murky middle ground, who "want to be community workers by day and paramilitary thugs by night".

Such organisations live on because Northern Irish society is still divided. Physical walls, known as peace lines, still separate some working-class Catholic and Protestant areas. Indeed, more have been built since 1998, because they are popular. "I wouldn't like it down," says a resident of Bombay Street, a Catholic district in Belfast separated from Protestant Shankill by a ten-metre-high wall. "They're lovely people. It's just the lunatics." The wall has been made higher several times since it was erected in 1969. Stones still sail over, so houses nearby have metal cages over their back gardens.

### Devout and profane and hard

Surveys show that three-quarters of people would like to live in integrated neighbourhoods, and two-thirds would send their children to mixed schools. Yet making this happen has proved difficult. A handful of mixed social-housing developments have been started, but the "lunatics" make them dicey places to live. Last year four Catholic families in a mixed-housing project in Cantrell Close, Belfast, were advised by police to leave, after threats from paramilitaries. The share of children in formally integrated schools has edged up only slightly since 2000—from 3% to 5.8% in primary and from 5.6% to 8.6% in secondary—partly because of opposition from the Catholic church, which runs many schools of its own. The province remains astonishingly segregated (see map).

In other areas there has been progress. Integration has deepened in the workplace, helped by laws compelling big firms to publish the religious breakdown of their staff. Catholics hold nearly half the jobs in both the public and private sectors, in line with their share of the population. A once-yawning unemployment gap has nearly closed. Catholics hold high-profile public offices, including those of attorney-general and Lord Chief Justice. Their share of police officers has risen from one in ten at the turn of the century to one in three, after a temporary affirmative-action programme.

National and religious identities are blurring, particularly among the young. A Protestant minister says he now christens more children with Irish names like Una, Malachi and Sadhbh. Many young Catholics have little interest in Ireland, which some refer to as "Mexico". "I'd rather go to Spain or something, to tell you the truth," says Martin, a 29-year-old who lives near the Falls Road in Belfast. Surveys find that about a third of the population considers itself British, a slightly smaller share says Irish, and around the same reports itself to be neither, but rather Northern Irish.

This nuanced, cautiously evolving identity is lost in a local politics that is crudely sectarian, and becoming grimly more so. At the time of the agreement the main forces in Northern Irish politics were the Ulster Unionists and the Social Democratic and Labour Party (SDLP), which represented the moderate forms of unionism and nationalism, respectively. Those two parties have since been swept aside by the harder-line Democratic Unionist Party (DUP) and Sinn Fein, the former political wing of the IRA and the only party that stands at elections both in Northern Ireland and the Republic. Whereas in 1997 the region's 18 Westminster seats were split between five parties, in last year's general election the DUP and Sinn Fein took all but one. They have also come to dominate the devolved assembly and executive.

In January last year a long-simmering row between the two parties blew up and Sinn Fein walked out; without its participation, the institutions cannot function. Fourteen months without a government have proved trying. The budget has been delayed, laws to reorganise health care and tackle domestic abuse have been put on ice, public-sector pay rises have not been honoured, and institutions such as the policing board, which holds the police accountable, have been unable to fulfil their functions. Negotiators predict that it will be months before the two parties work together again.

That such an impasse can persist is in part due to the design of the Good Friday Agreement, which intentionally provided a plethora of constitutional vetoes to protect each side against the other. The ability of either main party to collapse the executive by walking out makes for unstable, high-stakes government. The agreement has fostered a structural divide in other ways, too. A supermajority required for legislation that could threaten one community has been cynically used by both sides to block measures they merely dislike. Parties must declare themselves followers of one of the "two traditions" (they may register as neither, but then lose some voting rights).

Paul Nolan, a Belfast-based researcher, compares the polarisation to a seesaw: whenever one party has moved farther from the centre, the other has done the same to balance it. Seeing the other side as ever more extreme, voters feel they have little choice but to vote for their own lot of extremists. As one assembly member puts it: "If they're going to elect an arse, we're going to elect an arse."

When the Stormont government has run aground before, Britain and Ireland have stepped in to get it back afloat. But Britain's role as a referee has been impeded by a deal last year between the Conservatives and the DUP, which agreed to support Theresa May's minority government in Westminster on important votes in return for £1bn ($1.4bn) of extra money for Northern Ireland. The alliance "undermines a tradition of neutrality going back to at least 1990," says Jonathan Powell, who as Mr Blair's chief of staff helped to negotiate the Good Friday Agreement.

### Gathering Stormont

To get Stormont back up and running, Ireland has called for a meeting of the agreement's British-Irish Intergovernmental Conference—which could be chaired either by Ireland's foreign minister and Britain's Northern Ireland secretary, or by Mrs May and Leo Varadkar, the Irish *taoiseach*. Britain has not taken up the offer (an official says Ireland has not issued a formal request). The DUP is opposed to it. "The British government needs to remove the blocks. But it's tied to the DUP," says Gerry Kelly, a Sinn Fein assemblyman.

What is more, Mrs May and Mr Varadkar have another matter on their minds: Brexit. In 1998 Britain and Ireland were, in the words of the Good Friday Agreement, "partners in the European Union". On March 29th 2019 that will cease to be the case. In 2016 the High Court in Belfast ruled that Brexit would not formally invalidate the agreement, as some had argued. But it will complicate the relationship hugely.

Britain and Ireland have identified 142 areas of cross-border co-operation. Combined cancer services, a single wholesale power market and police intelligence-sharing give an idea of the range. Officials reckon most of this can more or less continue, though it will involve mountains of work—but regret that future initiatives will be harder to get started. Northern Ireland has received a lot of EU money, via initiatives such as Peace IV, worth €270m ($335m) in 2014-20. Unlike funding from Britain (tainted in the eyes of some Catholics) or America (long involved in the peace process, but seen as leaning towards the nationalists by some Protestants), EU grants are viewed as neutral. The EU has indicated that some funding can continue after Brexit.

The biggest problem concerns the border, around which Mrs May has drawn three negotiating "red lines" that seem to run into each other. She insists that Britain will leave the EU's customs union and single market. Yet she also promises there will be no new customs checks or physical infrastructure at the Irish border, or any between Northern Ireland and Britain.

The government argues that trusted-trader schemes, waivers for small firms and unspecified technology could let customs checks be carried out invisibly. So far the EU is not convinced. Some member states are unwilling to turn a blind eye even to trade by small businesses. And no one, including the Northern Ireland committee of Britain's Parliament, has yet identified technology that could enforce customs controls without any infrastructure.

**Borderline disorder**

The opposition Labour Party backs membership of a customs union, as do a handful of Tory rebels. Mrs May said in February that she was open to a customs "arrangement", which could amount to something very similar. Yet Jacob Rees-Mogg, who speaks for an influential caucus of Eurosceptic Tories, has said that the right to set tariffs, possible only outside a customs union, is "non-negotiable". And it is not clear that membership of a customs union alone would be enough to maintain the invisible border, anyway. If Britain leaves the single market and diverges from EU regulatory standards, goods crossing the border would need to be checked.

The idea of such inspections is neuralgic for those who live near the frontier. Conor Patterson, head of the Newry and Mourne Enterprise Agency in South Armagh, remembers when Newry last had a customs post. It was blown up in 1972, killing nine people. His father required a triangular badge from the police to cross the border, something which could take an hour at busy times. British soldiers would sprint through the streets of Newry, for fear of snipers. Nearby Bessbrook was home to the busiest heliport in Europe, operated by the British army. The local roads were so dangerous that it had to fly men and supplies around the 18 nearby watchtowers.

No one foresees a return to those conditions. But David Davis, Britain's Brexit secretary, betrays a deep and complacent misunderstanding of the problem when he breezily suggests that the frontier could resemble that between America and Canada. "It's not a question of the speed of the lorries crossing the border. It's the question of identity," says Mr Powell. To win support for the 1998 agreement, nationalist leaders in both north and south needed to show tangible benefits. None was clearer than dismantling the border. A Canada-style crossing, one with "people in uniforms with arms and dogs", is "not a solution [Ireland] can possibly entertain", Mr Varadkar said on March 5th.

The security services are aware of the risks. "We would have a responsibility to have a presence there," says Mr Hamilton. In policing terms, "any physical infrastructure or control measures that required people to be physically at the border would be a very bad thing...It would be perceived as being a symbol of the British state." Dissident republican paramilitaries, who have almost no public support for their cold-blooded attacks on police, might win wider backing for strikes on border installations. Resentment at a return to a hard border could provide the "sea" of public sympathy that Mao Zedong said terrorists need to swim in, fears Brian Feeney, a former SDLP councillor.

Nor would the EU's suggested "backstop" of a customs border between Northern Ireland and Britain be easy to swallow. "People would absolutely resist any attempt to cordon off" the province from the mainland, says Winston Irvine, a Shankill community leader who is familiar with the thinking of west Belfast's paramilitaries. Unionist protests have flared over far smaller affronts to British identity. A decision in 2012 to reduce the days on which the union flag would fly at Belfast City Hall triggered a year of protests in which 150 police officers were injured and a political party's office firebombed. "People are getting a bit twitchy about where all this is going to land," says Mr Irvine.

The mood of reanimated Irish nationalism and unionist mistrust of the British government is "all rather redolent of 1920", notes Diarmaid Ferriter, a historian at University College Dublin. Then, Northern Ireland was separated from the south, ahead of the creation of the Irish Free State. Now, he says, "Brexit has thrown the issue of the unity of Ireland back into the frame."

**Taking back control**

No one was surprised when Sinn Fein demanded a unification referendum a few days after the Brexit vote. Less expected have been the shifts in thinking among moderate nationalists. "If we're at constitutional ground zero then absolutely, we're going to start looking at the north-south question," says Claire Hanna, an SDLP member of the assembly. In December Simon Coveney, Ireland's foreign minister, said he hoped to see a united Ireland "within my political lifetime". He is 45.

Could it happen? Northern Ireland's Catholics will soon outnumber its Protestants. In March 2017 Sinn Fein came within 2,000 votes of outpolling the DUP in elections to the assembly. Not all the party's supporters, let alone all Catholics, would vote for unification. A poll in 2015 found that 30% of Northern Irish would be in favour—and when respondents were told that it would mean higher taxes (a near certainty, as Ireland could not afford the £10bn of subsidies that Britain shovels to Northern Ireland each year), the figure dropped to 11%. Support in Ireland dropped from 66% to 31% when the financial implications were pointed out.

It remains to be seen how much Brexit will move those figures. But at a time when populist nationalism is on the rise around the world, matters of culture and identity can sometimes count for more than economic self-interest. Whatever else they misjudge about Ireland, Brexiteers, of all people, should understand that.

*This article appeared in the Briefing section of the print edition under the headline "Past and future collide"*

**Team Trump**
March madness

The Trump administration

# Personnel changes leave fewer checks on Donald Trump's impulses

*March madness*

**Print edition | United States** Mar 31st 2018

THE revolving door of Donald Trump's administration is spinning fast. In the past couple of weeks the president has fired his national security adviser, H.R. McMaster (pictured, top left), and his secretary of state, Rex Tillerson, and lost his chief economic adviser, Gary Cohn (bottom left), who resigned after failing to stop Mr Trump putting tariffs on aluminium and steel. John Dowd, the top lawyer representing the president in Robert Mueller's investigation into Russian election interference, has also quit. Mr Trump is trying to hire his fifth communications director, following the resignation of Hope Hicks.

While such turnover is rarely good for morale or the crafting of coherent policy, a bigger problem lurks. The replacement cast will now be made up of advisers who could indulge Mr Trump's worst instincts on national security, trade and legal defence rather than temper them. The next phase of his presidency could therefore be one of the unfettered id: Trump unbound.



Start with national security. In place of Mr McMaster, a three-star general formerly best known for his sharp criticism of the Vietnam war, Mr Trump has elevated John Bolton (pictured, top right), a bellicose nationalist who has talked approvingly of military strikes in Iran and North Korea (see Lexington ). Just one month ago Mr Bolton penned an opinion piece for the *Wall Street Journal* entitled "The Legal Case for Striking North Korea First". American participation in the agreement to curb Iran's nuclear ambitions could soon end, adding to tensions in a Middle East that is already aflame (see article ). Nominated to replace Mr Tillerson as secretary of state is Mike Pompeo, the hawkish director of the Central Intelligence Agency who also dislikes the Iran deal and wants to see regime change in North Korea. At least he is likely to prove a more competent administrator of the State Department than Mr Tillerson.

Then there is trade. Protectionism is one of the few political positions that Mr Trump has held steadfastly. Trumpologists had divided the administration into two camps: the so-called globalists, with Mr Cohn as their erstwhile chief, and the nationalists, who include Wilbur Ross, the commerce secretary, and Peter Navarro, the director of the National Trade Council. The two sides had warred over Mr Trump's mercantilist tendencies, but it now appears that the nationalists are ascendant. Steel and aluminium tariffs were quickly followed by a proposal to levy tariffs on $60bn-worth of Chinese goods. A full-blown trade war might be only a few more shots away (see article ). Larry Kudlow (pictured, bottom right), a television pundit who last worked in government under Ronald Reagan, will replace Mr Cohn as chief economic adviser. Though a free trader in his commentary, Mr Kudlow now says he sees a value in "targeted tariffs", at least as a negotiating tool.

As for Mr Mueller's investigation, as it has deepened and apparently widened (after ensnaring former Trump aides like Michael Flynn, the first national security adviser, and Paul Manafort, a former campaign chairman), Mr Trump's temper has flared. With Mr Dowd's resignation, reportedly over Mr Trump's refusal to heed his advice and avoid an in-person interview with Mr Mueller, the legal team in charge of defending the president is in disarray. Joe diGenova, a staunch supporter of the president in his Fox News appearances, had been set to join the team before backing out a few days later. Few top-tier lawyers are said to be jumping at the chance to represent the president.

Already the president has taken to assailing Mr Mueller by name on Twitter—a tactic that Fox News hosts such as Sean Hannity have been pushing for months. Friends of Mr Trump fretted aloud in the summer of 2017 that he seemed minded to sack the special counsel, a move they believed would be disastrous. Press reports, called fake by the president, asserted that the White House counsel, Donald McGahn, threatened to resign if Mr Mueller were fired. Now Mr McGahn is said to be keen to leave.

The official with the authority to sack Mr Mueller, Rod Rosenstein, the deputy attorney-general, has testified to Congress that there is no reason to do so. To rid himself of the special counsel, Mr Trump would have to sack Mr Rosenstein and all succeeding officials who refused to enforce the order. This "massacre" manoeuvre was performed by Richard Nixon during the Watergate scandal, with disastrous consequences. A handful of elected Republicans, most of them members of Congress who are not seeking re-election, have warned Mr Trump that firing Mr Mueller would jeopardise his presidency. But as Senator Bob Corker of Tennessee recently noted, Trump support among Republican voters is "more than strong, it's tribal in nature." Voters on the trail no longer ask about issues, added Mr Corker, who is standing down this year. "They want to know if you're with Trump or not."

**Exeunt omnes**

Further ejections could be coming. Jeff Sessions, the attorney-general, incurred the unending wrath of the president by recusing himself from the investigation into Russia's election interference. For the past few months, Mr Sessions has been subject to semi-regular humiliations—the typical prelude to eventual sacking in the Trump administration (as Messrs Tillerson and McMaster could attest). Scott Pruitt, the administrator of the Environmental Protection Agency, has been floated as a replacement for Mr Sessions. David Shulkin, the veterans-affairs secretary, is fighting to keep his post, amid speculation that he might be replaced by Pete Hegseth, a Fox News pundit. John Kelly, the chief of staff credited with imposing some discipline in the White House, has also been the subject of constant rumours of removal.

As the mid-term elections loom, congressional Republicans are in defensive mood, and the White House seems unwilling to push big, risky pieces of legislation. Expect Republicans to talk up their biggest achievement, a package of tax cuts that has slowly gained in popularity. Mr Trump may return to his greatest hits at rallies: new protectionist trade measures, say, or attacks on Democrats and left-leaning cities that shield illegal immigrants. Any new Supreme Court vacancy would galvanise conservatives.

The president seems to think that he governs best from his gut, and that bad advice has forced him into unpopular concessions to the Washington establishment. As nerve-racking as it may be, both within the White House and beyond, the Trump-unbound phase of the presidency could prove politically effective. With the economy strong and Mr Trump visibly emboldened, his popularity has been creeping up. This week a CNN poll showed his approval rating to be 42%—still low compared with most previous presidents at the equivalent stage, but his highest in nearly a year.

*This article appeared in the United States section of the print edition under the headline "March madness"*

Abandon ship!

# Republicans seek alternatives to Obamacare's pricey insurance markets

*Would weaker regulations hurt or help those facing high premiums?*

**Print edition | United States** Mar 28th 2018

REPUBLICANS may have abolished the "individual mandate", an unpopular part of Obamacare that fines Americans for not buying health insurance. But most of the law's rickety architecture remains intact. Having given up, for now, on sweeping legislative reform, the Trump administration and Republican-leaning states are seeking ways to help consumers circumvent the law.

During the latest annual enrolment period, which ran from November 1st to December 15th, just before the individual mandate was repealed, 11.8m Americans signed up for coverage on Obamacare's "exchanges". Several million more will have bought similar plans direct from insurers. These markets are designed so that anyone, however ill, can buy generous coverage at the same price as a healthy person. The individual mandate was designed to bring in enough low-risk customers to make the market profitable for insurers. Without it, enrolments for 2019 are likely to fall (though no one is sure by how much).



Having drilled another hole in the ship, Republicans now want to provide lifeboats for those who jump off. In February the Health Department proposed expanding short-term health plans, to which many of Obamacare's rules, including the prohibition on charging sick people more, do not apply. Such plans currently offer coverage for a maximum of three months. The administration wants to expand the definition of "short-term" to 364 days. This would allow the deregulated plans to compete more directly with the exchanges.

The proposal is an ingenious run around Obamacare's regulations, which have inconvenienced several conservative-leaning states. Most recently, Idaho planned to let insurers sell skimpy coverage, so long as firms also offered at least one Obamacare-compliant policy. On March 8th Seema Verma, a federal Health Department official, warned the state that its proposal, however admirable, violates the law. But under the administration's proposed rule, Idaho would be able to offer deregulated plans, if reframed as "short term" offerings lasting for 364 days.

How many buyers would prefer thinner coverage? Even for the healthy, such plans are not necessarily better, given the risk of falling ill. But in places premiums are so high that cheaper plans of any sort are probably an attractive proposition for those buyers, numbering about 7m in 2017, who earn too much to qualify for subsidies. For example, the total annual bill for a typical family of four in Boise, Idaho, is almost $18,000 for a benchmark plan. Such a family must pay this premium in full if its income exceeds $100,000 before tax.

Unsurprisingly, given such costs, existing alternatives to Obamacare have already proved popular. Tennessee has one of the shakiest individual markets partly because its Farm Bureau, a not-for-profit agricultural organisation, is allowed to sell deregulated health insurance in competition with the exchanges. In 2017, 73,000 people held a Farm Bureau plan that did not fully comply with Obamacare's rules. This is about one-third of the number who are enrolled through the exchange.

Religious cost-sharing ministries are another popular escape route. These allow voluntary cost-sharing among the devout. As well as paying a monthly charge, enrollees must typically abide by certain strictures, such as abstaining from tobacco and illegal drug use, and regularly attending church. Generally, there are no guarantees of payment, and no networks of medical providers with which the ministry has negotiated discounts. Services deemed ignominious—such as abortions—go uncovered, and ministries need not pay for treatment for pre-existing conditions.

A decade ago, before Obamacare, fewer than 200,000 Americans were signed up for these plans, according to the Alliance of Health Care Sharing Ministries, a trade group. The law exempted cost-sharing ministries from its new regulations and the individual mandate. Today the plans are so cheap relative to Obamacare that their membership has grown to over 1m.

The Urban Institute, a think-tank, predicts that 4.2m Americans would enroll in short-term plans if they were expanded. In combination with the withdrawal of the individual mandate, the resulting exodus of healthy buyers from Obamacare's markets would raise premiums there by an estimated average of 18% in the 43 states that do not restrict short-term plans.

This would damage the exchanges, but not destroy them. In 2017 a little over half of buyers benefited from subsidies, which would rise in tandem with premiums. It is only the market for unsubsidised buyers that might dry up completely—at great personal cost for those in poor health who could be locked out of deregulated plans.

In other words, Obamacare would continue to act as a safety net for the unhealthy, but only those whose incomes were sufficiently low. Ironically, given that Republicans typically lament welfare traps, deregulating health-insurance markets might make it pay to be poor.

*This article appeared in the United States section of the print edition under the headline "Abandon ship!"*

Shaping America's electoral districts

# How the Supreme Court and the next census could affect the electoral map

*Drawing the line*

**Print edition | United States** Mar 28th 2018

AS LONG as elections have been held, candidates have sought to bend the rules to their advantage. American political parties have taken gerrymandering to new heights, using computer models that enable districts to be crafted block by block for maximum partisan gain. The Supreme Court is now taking notice, having accepted two cases that question whether it is constitutional for legislators to choose their voters, rather than the other way round. But Republicans, whose victories in 2010 put them in a position to doctor far more districts than Democrats have, are taking no chances. A change to the questionnaire for the decennial census in 2020 is expected to increase the share of districts whose voters prefer Republicans.

The Supreme Court has ruled on gerrymandering before. In 2004 a majority of the justices agreed that it should be reined in, but they could not decide how. Now they are poised to re-evaluate that question.



On March 28th they were to hear *Benisek v Lamone*, a case pitting Republican voters in Maryland against Democrats in the state's House of Delegates. In 2011, the voters complain, legislators sabotaged the Republican Party in the sixth congressional district. A year after this "devastatingly effective" gerrymander, a House seat which a Republican, Roscoe Bartlett, had won for a tenth time in 2010 by 28 points went to John Delaney, a Democrat with presidential ambitions for 2020. Mr Delaney's 21-point win in 2012 may show that Republicans were "singled…out for disfavoured treatment"—"retaliation" barred by the First Amendment. The freedom of association, the plaintiffs contend, "guarantee[s] that no state may punish its citizens for their political beliefs". Maryland Democrats counter that First Amendment retaliation is an "untested theory".

*Benisek* is the court's second look this term at gerrymandering. When the justices heard *Gill v Whitford* last October, some seemed intrigued by a statistics-based approach pegged to the 14th Amendment's equal-protection guarantee. But the conservative wing of the court was sceptical of the standard offered by those challenging a Republican gerrymander in Wisconsin. Chief Justice John Roberts derided it as "sociological gobbledygook". For the statistics-shy, the First Amendment approach in *Benisek* may present an attractive alternative. But its simplicity swings the Goldilocks problem in the other direction. As Wisconsin argues in its amicus brief, the Supreme Court's endorsement of the "retaliation" test may make it "trivially easy for plaintiffs to scrounge up an expert or two" and spawn lawsuits.

Any new restriction on gerrymandering would aid the Democrats. But the Trump administration has already begun efforts to counteract this risk. On March 26th the Commerce Department said it would add a question to the census in 2020 asking respondents whether they are American citizens. The census is designed to count all residents, regardless of their immigration status. The department says it needs the information to enforce the Voting Rights Act's protections for racial and linguistic minorities.

Democrats say the intention is the opposite. They argue that the spectre of officials knocking on doors asking whether respondents are citizens will discourage people in communities where undocumented immigrants live from taking part in the census. That would cause an undercount of the population of these (mainly Democratic) areas, reducing their number of congressional districts and presidential electoral votes.

As with gerrymandering, the final outcome will depend on the courts: California and New York, among others, have announced that they will sue the federal government to block the census question. But a decision will have to come quickly. The law requires the questionnaire to be finalised by March 31st.

*This article appeared in the United States section of the print edition under the headline "Drawing the line"*

Voting for state legislatures

# Republican governors try to avoid holding special elections

*You cannot lose if you do not play*

**Print edition | United States** Mar 28th 2018

"WE SHOULD call him Walker the Rigger," fumes Martha Laning. The chair of the Democratic Party of Wisconsin is up in arms about plans by Scott Walker, Wisconsin's Republican governor, to change a law so that Republicans can avoid losing another special election. "He has already rigged the system so much that he thought he would not have to worry any more," says Ms Laning, referring to districts gerrymandered to favour Republicans, which voters are challenging at the Supreme Court (see article), and voter-identification laws that make it harder for minorities and poor people to vote.

Until a few months ago Mr Walker expected to cruise to re-election in November for a rare third term. Yet the year started with a shock for him. In January a historically Republican district in a rural western region in Wisconsin voted for Patty Schachtner, a Democrat, in a special election for a state Senate seat, even though her Republican opponent, Adam Jarchow, was far more experienced and better funded.



To avoid another nasty surprise in a special election, Mr Walker decided not to hold any. Yet on March 22nd Josann Reynolds, a county-circuit judge appointed by the governor, ruled that by March 29th he must call special elections for a vacant seat in the state Assembly and one in the state Senate. Not holding them, she argued, would disenfranchise tens of thousands of voters who have not been represented since December, when two Republicans resigned to work for the governor. Mr Walker reacted by asking Republican legislative leaders to recall lawmakers for an extraordinary session on April 4th, so they could pass a bill that would no longer allow special elections after the state's spring election in even-numbered years. (This year's spring election is on April 3rd).

The Republican Party has majorities of 18 to 14 in the state Senate and 63 to 35 in the Assembly, so neither race risks changing the balance of power. Yet Mr Walker does not want to give Democrats more of the momentum that helped them flip seats in three dozen elections for state legislatures since Donald Trump was elected president. A poll earlier this month by the law school of Marquette University in Milwaukee found the state evenly divided: 47% of those surveyed approved of the job the governor is doing, while 47% disapproved.

Two other Republican governors, Rick Snyder of Michigan and Rick Scott of Florida, are stalling on special elections. Mr Snyder has decided to wait until November to replace John Conyers, a Democratic congressman who resigned in December because of allegations of sexual harassment, as well as Bert Johnson, a Democratic state senator who resigned after pleading guilty to charges of corruption. Mr Scott, who like Mr Snyder is term-limited, is refusing to hold special elections for two seats in Florida's legislature.

A couple of Wisconsin's Republican state senators have expressed concerns about Mr Walker's proposed opt-out from special elections. The bill will not pass if they vote against it. The governor may still be obliged, after all, to abide by Judge Reynolds's ruling.

*This article appeared in the United States section of the print edition under the headline "You cannot lose if you do not play"*

Suicide

# How and where growing numbers of Americans are taking their own lives

*The statistics of self-destruction*

**Print edition | United States** Mar 28th 2018

THIRTY-THREE people leapt from the Golden Gate Bridge last year, plunging 75 metres to their deaths. Yet the tally could have been much worse. Another 245 contemplating suicide were talked down by the police patrols who diligently comb America's most famous suicide site. Plans to construct a suicide-prevention barrier (a large net) have now been agreed on: it will be completed in 2021 and cost $204m.

Though jumping is a relatively rare way to end one's life, it is on the rise. There were 1,123 such deaths in 2016 compared with 788 in 2010. The same trend holds for suicides by gunshot, overdose and hanging, according to an analysis by *The Economist* of mortality files from the Centres for Disease Control. In almost every demographic category—men and women, young Asians and elderly whites, city dwellers and rural folk—the problem is getting worse.



In nearly all other OECD countries, suicide has declined since 2000 (Greece and South Korea are exceptions). In America, however, from 2003 the number began to grow by 1,000 a year and did not stop. This climb has been almost perfectly constant. In 2016, the latest year for which detailed data are available, there were 45,000 suicides in America: 23,000 of them by gun, 11,700 by hanging and 5,300 by overdose. Because of suicide's stigma, these numbers are thought to be an underestimate.

Though there has been an alarming increase among women—the number rose by 39% between 2006 and 2016—men are still much more likely to kill themselves. For every two women who committed suicide in 2016, so did seven men. White men kill themselves at nearly three times the rate of black, Hispanic and Asian men. Only Native American men have higher rates. Similar racial differences exist in the rates among women, making suicide one of very few public-health crises that disproportionately affects whites.

The suicide rate in rural counties is 78% higher than that in big cities. Alaska and Montana, two of the states with the lowest population density, are the worst-afflicted—suicide is five times as likely there as in the District of Columbia, which has America's lowest rate. And suicides are increasing more rapidly in states that already have high rates, deepening the disparities.

There is a strong correlation between the suicide rate and the Republican share of the vote in the presidential election. Solidly Democratic east-coast states like New York and Massachusetts have some of the lowest rates—a phenomenon that long predates Donald Trump's election.

America is an extraordinarily violent country. Its firearm-murder rate is far above the rest of the rich world. Yet there are roughly two gun suicides for every gun homicide. Easy access to guns undoubtedly worsens matters. Guns are perhaps the most efficient means of getting the job done: 83% of attempted suicides by gun are successful, compared with 61% of hangings and a mere 1.5% of intentional drug overdoses. Those who try to commit suicide and fail can receive therapy and recover. According to a Harvard study, only one in ten people who survive a suicide attempt go on to kill themselves. In Britain, where guns are much less easily available, hangings make up nearly 60% of suicides.

White men, especially older ones, overwhelmingly favour guns as a means of suicide. Young women have turned from drug overdoses to guns and hanging. Hanging has surged from 21% of all suicides in 2003 to 26% in 2016. Researchers who interview survivors find that those who choose this method often imagine a painless death.

Determining the cause of these dispiriting trends has proved hard. The suicide rate seems to have risen independently of the lurches in America's economy. Anne Case and Angus Deaton, two Princeton economists, have argued that a toxic cocktail of opioid addiction and stagnating economic prospects is worsening the problem of premature death, including by suicide, among middle-aged whites.

All suicides are, by definition, preventable. Yet detecting them in time is hard. Depression and other mental illnesses are clear correlates of suicide, but only a small proportion of the millions of Americans diagnosed with depression will attempt it. Matthew Nock, a Harvard professor, has tried to train an algorithm to comb through patients' medical records and produce advance warnings of suicide risk, but these methods are still plagued by false positives. Machine-learning may one day help. Until then, the vigilance of friends and family will be the best defence.

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Spanish in America

# Can Spanish avoid America's language graveyard?

*The battle for bilingualism*

**Print edition | United States** Mar 31st 2018

IN A sunny classroom scattered with Spanish translations of "Green Eggs and Ham" and Spanish-English dictionaries, Anabel Barrón reads aloud to her second-grade class from a book about penguins. "Y los pingüinos vuelan?" she asked. "No, they don't fly!" answered an eager boy with a neat crew cut. "En español, por favor, Justin," Ms Barrón gently chided him.

The classroom is one of several that offers bilingual instruction at the Sandra Cisneros Campus, a charter school in the Echo Park neighbourhood of Los Angeles that serves mostly Latino children. Kindergarteners in its dual-immersion programme spend 80% of their days in Spanish and 20% in English. Each subsequent year they spend an extra 10% of their time in English until fifth grade, when 70% of their instruction is in English and 30% in Spanish.



The original theory underpinning such programmes was that they helped Spanish-dominant children perform better by easing them into English. Today, says Melissa Mendoza, the school's principal, Latino parents are seeking out dual-immersion programmes for a different reason: to make sure their English-dominant children can speak Spanish at all.

Such was the motive for Juan Montanez, whose five-year-old son, Rocco, attends kindergarten at Sandra Cisneros. Mr Montanez was born in Los Angeles to Mexican parents. Even though they understood little English, they encouraged him to speak in it to "get ahead". He married someone from a similar background and they speak to one another and to Rocco mainly in English. "Now he probably knows more Spanish than me, but without this programme he would only learn it from his grandpa," Mr Montanez muses.

Linguists have often referred to America as a "language graveyard". Despite being a country of immigrants, it has tended to snuff out foreign languages within two or three generations. Spanish, it has long been thought, might be different. Hispanics account for 18% of America's population and are projected to make up 28% by 2060, according to the United States Census Bureau. Given the large size and rapid growth of the Hispanic population, some people used to fear that Spanish would not only endure but overtake English, especially in states like California and New Mexico, where Latinos are the largest ethnic group.

That concern has turned out to be unfounded. Between 2006 and 2015 the population that speaks Spanish at home in America, which is often interpreted as a proxy for Spanish dominance, grew from 31m to 37m. But during the same period the share of all Spanish-speaking Hispanics who speak Spanish at home shrank by five percentage points, from 78% to 73%. Data analysed by Pew Research Centre, a think-tank, show that, in 2000, 48% of Latino adults aged 50 to 68 and 73% of Latino children aged 5 to 17 spoke "only English" or "English very well". By 2014 those figures had increased to 52% and 88%.

The explanation has a lot to do with changing demography. Net migration to America from Mexico, the largest source of immigrants, has been negative since the end of the financial crisis. More Hispanics in America today were born in the United States than arrived from other countries as immigrants, making them less likely to speak Spanish at home—or at all. In 2000, 59.9% of Latinos were born in America. By 2015 that share jumped to 65.6%. Lower birth rates and a stronger economy in Mexico mean such trends are likely to continue, rendering the future of Spanish in the United States uncertain.

In his well-known study on "linguistic life expectancies" in southern California in 2006, Rubén Rumbaut, a professor at the University of California, Irvine, found that Spanish was following the same trajectory as other languages in America had—just more slowly. He established that only 5% of fourth-generation Mexican-Americans in southern California could speak Spanish very well: "After at least 50 years of continuous Mexican migration into southern California, Spanish appears to draw its last breath in the third generation."

In reaction to the idea that Spanish may succumb to the same pattern that saw German, Polish and Italian largely disappear from America, today there is a growing movement to encourage bilingualism. Beyond California, programmes have also sprung up in states like Utah, which wants to build a healthy core of bilingual missionaries, and Delaware. "It used to be that immigrant parents thought discouraging their kids from speaking foreign languages was the way to assimilate. Now there's a growing recognition that bilingualism is a great advantage, not only culturally, cognitively and to college applications, but practically," Mr Rumbaut explains.

Controlling for age, gender, ethnicity, parents' socioeconomic status and living with parents, he found that fluent bilinguals in southern California made nearly $3,000 more per year than Californians who spoke only English. That income bump was part of what motivated Mr Montanez to enroll Rocco in a Spanish-immersion programme: "I tried to explain to him that more languages means more money, which means more toys."

But overall, American language education remains poor. As of 2014 only 12 states had more than one in four elementary and secondary schools where pupils studied a language other than English. Nationwide, 21.5% of American pupils were learning another language, compared with more than half of pupils in Europe. Research shows that 75.5% of English-speaking Americans who are fluent in another language learned that language at home; only 16.3% did so at school. As Spanish use at home shrinks among Latino families, the language seems destined to dwindle too.

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Lexington

# Why Donald Trump is unlikely to start a catastrophic conflict

*War games*

**Print edition | United States** Mar 31st 2018

AFTER Donald Trump gave the order to fire 59 cruise missiles at an air base in Syria last year, no one seemed more surprised than the president himself. Ordering military action wasn't like deciding to buy a building, he mused on CBS News. "These decisions are unbelievable—you know, in terms of importance because it's human—it's...it's...it's killing. I hate it." Is it credible that someone so shocked and tremulous after launching a strike that mangled a few planes and killed fewer than a dozen people could start a war in North Korea or Iran that might claim hundreds of thousands of lives?

Mr Trump seems to want people to think so. Despite denouncing America's invasion of Iraq as "the single worst decision ever made" earlier this month, he has hired as his national security adviser one of the few people who still defends it. John Bolton has also advocated pre-emptive strikes against North Korea and Iran. "When you see a rattlesnake poised to strike, you don't wait until it has struck before you crush it," Mr Bolton said last year, paraphrasing Franklin Roosevelt. "I would argue that today North Korean nuclear weapons and ballistic missiles, and Iran's, while we're on the subject, are the rattlesnakes of the 21st century." Mr Trump has also nominated one of his most hawkish advisers, Mike Pompeo, to be secretary of state. The outgoing CIA boss is another advocate of regime change in Iran and North Korea. Indeed, Mr Trump's policies towards those countries, while stopping short of that aim, are increasingly consistent with it.



He has sworn to denuclearise North Korea. Further nuclear provocations by Kim Jong Un would be met "with fire and fury", he said last year. He also tasked his outgoing national security adviser, H.R. McMaster, to give him a wider array of military options against Mr Kim's regime, including plans for a so-called bloody-nose attack, intended to weaken it without provoking nuclear war. The president is meanwhile unpicking the multinational deal to roll back Iran's nuclear-arms programme, which raises the chances of the Iranians resuming the programme and reduces, perhaps to zero, any prospect of the resulting crisis being handled diplomatically. The Washington foreign-policy crowd, in which Trump fans are rare, is aghast. Richard Haass, president of the Council on Foreign Relations, says America is heading for war with North Korea, Iran or both. "This is the most perilous moment in modern American history," he tweeted.

It is a worrying time, all right. Yet the fears about Mr Trump's readiness to unleash mass violence are probably inflated.

The surge in apprehension about Mr Trump is fuelled by long-standing concerns about his character and judgment, new ones about his national-security set-up and a startling departure from his anti-war campaign rhetoric. On the trail he castigated every recent American intervention: in Libya, Syria and Afghanistan ("We made a terrible mistake getting involved there in the first place"), as well as in Iraq. The world would be better off, Mr Trump argued, if every recent president had ignored foreign affairs and "gone to the beach". To those scouring his rants for an ideological thread, this seemed in line with the isolationist whiff of America First. As Mr Trump had in fact supported most of those interventions at the time (though he denied it), that credited him with too much consistency. The president, as his new enthusiasm for sabre-rattling suggests, has no ideology and few well-informed beliefs. He has instincts and a day-to-day appreciation of interests, chiefly his own.

In this case that is probably reassuring. True, even in his more dovish phase, Mr Trump seemed obsessed with nuclear weapons: the prospect of Mr Kim being able to nuke Manhattan horrifies him. And he has plainly become more hawkish in office, as most presidents do. Barack Obama took charge vowing to end his predecessor's wars, then bombed seven countries. Yet it is still hard to imagine Mr Trump starting a war unless he thought he would gain from it personally, and he would not gain from a bloodbath. The first Gulf war, which was short, victorious and saw light American casualties, is the only American war since 1947 that remained popular long after it was launched. War with North Korea or Iran would be a different matter.

**The art of the nuclear deal**

The fact that Mr Trump appears to have come close to setting red lines on North Korea does not alter that analysis. Like any businessman, he is accustomed to asking for a lot and settling for less. His genius lies in having the gumption to claim he got everything he asked for nonetheless—which may prove useful here. Mr Kim, who knows as much about leverage as Mr Trump, is highly unlikely to give up his several dozen nuclear devices, since that would be to sign his death warrant. But it is possible to imagine him agreeing to concessions, such as a freeze of his long-range missile programme, in return for economic benefits, and Mr Trump proceeding to call that victory. There are many ways that could go wrong. Were North Korea to emerge from that negotiation as a recognised nuclear power, an Asian arms race might ensue. But war would have been averted. If so it would probably mean the unyielding Mr Bolton turning out to be less decisive than many fear. This seems likely. The president likes Mr Bolton's damn-your-eyes style, but has a way of surrounding himself with diverse opinions, and tires of ideologues. Even if he gives Mr Bolton a good run, moreover, there will remain a strong safety-device in the form of James Mattis, the admired defence secretary. He is for the Iran deal and against trying to bloody Mr Kim's nose.

This is hardly ideal. Mr Trump, Mr Bolton and Little Rocket Man are about to assume a combined lead role in maintaining global security, which in itself raises the risk of a catastrophic miscalculation. Yet the notion that this president would be any likelier to risk Armageddon than his predecessors is unconvincing. It is a measure of dark times that such an idea seems a relief.

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**Mexico**
How AMLO might win

Anaya under fire

# How AMLO could win Mexico's election

*Accusations against a moderate candidate could tip the race to a left-wing populist*

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WHEN campaigning for Mexico's general election officially begins on March 30th, Andrés Manuel López Obrador, a left-wing populist, will be the clear front-runner for the presidency. His two main challengers are political moderates, but their rivalry is no less bitter for that. One is backed by the government. The other is feeling heat from the federal prosecutor. To many Mexicans, that smacks of political bias. It also increases the chances that Mr López Obrador will win the presidency—a prospect that terrifies markets and puts economic reforms in jeopardy.

On February 21st the office of the acting attorney-general, Alberto Elías Beltrán, confirmed that it was investigating a property deal involving Ricardo Anaya, the brainy presidential candidate of the centre-right National Action Party (PAN). This has shaken up a campaign in which the main issues are crime and corruption.



Few voters think that José Antonio Meade, the nominee of the ruling Institutional Revolutionary Party (PRI), is the best candidate to tackle these ills. No one has accused Mr Meade, a technocratic former finance and foreign minister, of wrongdoing. But voters regard the PRI and Mexico's current president, Enrique Peña Nieto, as abettors of lawlessness. Crime has soared. Mr Peña's government has been dogged by allegations of graft. In February the government auditor said that 1.3bn pesos ($71m) of public money had gone missing from two ministries run by Rosario Robles, now secretary of agrarian development. Mr Peña's personal reputation was damaged in 2014 after reports that his wife had acquired a house with help from a businessman who had contracts with the government.

Mr López Obrador, often known as AMLO, and Mr Anaya have contrasting claims to be the candidates of clean government. The leftist former mayor of Mexico City has a decades-long career of railing against corrupt elites and promises to clean up Mexico through the sheer force of his righteousness. Although presidents serve for a single six-year term, Mr López Obrador says Mexicans will get the chance to vote him out of office every two years, by referendum. Mr Anaya has a more modest suggestion for establishing the rule of law. He says he would make institutions such as the attorney-general more independent. He is the only one of the three leading candidates to emphasise this.

**Landing in trouble**

The property scandal surrounding Mr Anaya has the twin effect of dramatising the need for the institutional reform he champions, while making it less likely that he will be in a position to lead it.

It revolves around the purchase of land in 2014 by a firm owned by Mr Anaya and his family in his home state of Querétaro. The firm paid $815,000 for the plot, built a warehouse on it and sold it two years later for $2.5m. The investigation and the coverage of it by the press have raised questions about the probity of the people Mr Anaya's firm dealt with, about the size of the profit it made and about the tax it paid. Mr Anaya insists he is blameless on all counts.

Mr Elías Beltrán is looking into whether the purchaser, a company thought to be linked to Manuel Barreiro, a businessman, engaged in money-laundering. A lawyer who says he represents two people hired by Mr Barreiro has stated that Mr Barreiro controlled the money for the purchase and told his clients to move it anonymously through offshore havens before paying it to Mr Anaya's firm. Mr Barreiro, who has not commented publicly on the case, is also the president of the industrial park that originally sold the land to Mr Anaya's company. The two people shown in public records to be the firm's founders are said to be Mr Barreiro's driver and the wife of one of his employees.

This connection is awkward for Mr Anaya. He says he believed that the purchaser belonged to a local architect who has publicly claimed to own 99% of its shares and may well have bought it from the founders. (That transaction would not be shown in public documents.) Even if the allegations about Mr Barreiro are true, Mr Anaya insists he has done nothing wrong. He has posted online a video in which he contends that it is not his legal responsibility to verify the source of the buyer's money. The sale contract includes an anti-money-laundering clause, in which the buyer attested that it was paying with money that it obtained legally.

Mr Anaya says that the money his firm used to finance the original purchase is clean, and that its profit reflects market prices. He invited *The Economist* to inspect documents attesting to that. They show that just over half the cash to buy the property came from a loan secured by his house, which is in his wife's name. A tenth came from an interest-bearing loan from the industrial park. The Anayas used their savings to finance the rest of the land purchase and the building of the warehouse.

Mr Anaya's firm paid $63 a square metre for 13,000 square metres of land in 2014. That does not look suspiciously low. A report in 2016 by ProMexico, a government body that promotes investment, put the price of industrial land in Querétaro at $50-95 a square metre. Mr Anaya's firm spent $1.3m to build a 7,000-square-metre warehouse. Assuming an average exchange rate of 16 pesos to the dollar, that is a cost per square metre of 3,000 pesos. A builder in the area says the going rate to build such a structure is 3,200 pesos.

Having spent $2.2m (including $100,000 in tax) to buy and build, Mr Anaya's firm sold the property for $2.5m, making a profit of 14% in two years. A property with a building half the size at the same industrial park is listed for 35m pesos, or about $1.9m. That does not suggest that Mr Anaya's company received an inflated sum for the sale. In 2016 it paid 3.5m pesos ($189,000) in tax. The tax authorities have confirmed that it paid the right amount.

Whether or not Mr Anaya's defence holds up, the conduct of the case raises questions about the independence of law-enforcement agencies and their relationship to the PRI. Mr Elías Beltrán's office posted on its Twitter account security footage of Mr Anaya and his entourage visiting its premises. That was unprecedented and illegal, says Armando Santacruz of Mexico United Against Crime, an NGO. The prosecutor's office also issued a press release falsely stating that Mr Anaya had refused to offer a "ministerial declaration", a statement from an accused in response to a preliminary investigation. The electoral commission ordered the prosecutor to take down the video and press release. A home video showing Mr Anaya at Mr Barreiro's wedding in 2005 appeared online after police raided the businessman's home. Mr Anaya says the bride was the sister of a high-school friend, and denies knowing Mr Barreiro well.

That has not stopped the PRI from hurling accusations at Mr Anaya, seconded by the pro-government press. Going beyond Mr Elías Beltrán's investigation, they claim that Mr Anaya was laundering money and is beholden to Mr Barreiro. Enrique Ochóa, the PRI's president, called the PAN candidate "two-faced, a liar and a crook".

Less partisan Mexicans worry that Mr Elías Beltrán, who received his law degree in 2011, is acting like a political operative. They contrast his pursuit of Mr Anaya with his apparent leniency towards members of the PRI who are suspected of corruption. On March 14th Mr Elías Beltrán decided not to press charges of money-laundering and tax fraud against César Duarte, a PRI ex-governor of Chihuahua. Prosecutors in the state (now governed by Mr Anaya's party) are still pursuing Mr Duarte for allegedly diverting billions of pesos of public money. He is a fugitive.

In December 2016 executives from Odebrecht, a Brazilian construction firm at the centre of lots of scandals in Latin America, claimed to have paid bribes worth $10m to Emilio Lozoya, a close friend of Mr Peña and an adviser to his presidential campaign in 2012 who became the boss of Pemex, the state-run oil firm. Mr Elías Beltrán sacked the investigator last year, ostensibly for illegally disclosing information about the probe. This month a federal judge suspended the inquiry indefinitely.

All this suggests that the attorney-general's office has yet to achieve the independence and stature it is supposed to have as part of a new "anti-corruption system" created by Mr Peña. This month 56 intellectuals and activists published a letter accusing the government of politicising institutions to help Mr Meade's candidacy. Some anti-corruption activists say the PRI is actually trying to help Mr López Obrador. That is because it fears that a President Anaya would crack down harder on corruption.

Mr Anaya's supporters fear they are witnessing a replay of the election in the state of Mexico last June. Two months before election day Mr Elías Beltrán's predecessor accused members of the family of the PAN's candidate of money-laundering. In the end, the prosecutor did not file charges. But the allegations helped the PRI win over voters opposed to the candidate of Mr López Obrador's party, Morena. The PRI won by three percentage points.

This time, the beneficiary is likely to be Mr López Obrador. His advantage has widened since Mr Elías Beltrán launched his probe of the land deal in February. He leads both Mr Anaya and Mr Meade by more than 15 percentage points, according to Bloomberg's Poll Tracker. There are other reasons for his ascendancy. Mexicans do not remember earlier PAN governments more fondly than they do those of the PRI. Only Mr López Obrador represents a break with the past. An election with just one round gives him an advantage over rivals scrapping for the anti-AMLO vote.

Without the property scandal, that vote would have been more likely to consolidate around Mr Anaya. The attorney-general's intervention means that he and Mr Meade are more evenly matched, and less of a threat to Mr López Obrador. Mr Anaya and Mr Meade should hold a two-man debate, the populist cheekily suggested. He is obviously enjoying the spectacle.

*This article appeared in the The Americas section of the print edition under the headline "How AMLO might win"*

Bello

# Peru’s President Pedro Pablo the Brief

*Lessons from another fallen leader*

**Print edition | The Americas** Mar 28th 2018

EVER since it began in July 2016 the presidency of Pedro Pablo Kuczynski in Peru looked like an accident waiting to happen. He squeaked into a run-off election only after his supporters in Peru’s media and business establishment helped to press the electoral authority to disqualify a more popular rival, Julio Guzmán. After he unexpectedly defeated Keiko Fujimori, a conservative populist, in the run-off by just 0.2% of the vote, she exercised her pique by using the congressional majority gained by her Popular Force (FP) party to harass Mr Kuczynski’s government. After narrowly surviving one impeachment attempt in December last year, PPK (as Peruvians know him) resigned on March 21st when defeat in another became inevitable. Having served just 20 months, he became the 19th elected president in Latin America in the past 30 years to fail to complete his term.

Many of these were victims of the instability inherent in Latin America’s unique combination of directly elected presidents and legislatures chosen by proportional representation. This arrangement means that presidents often lack congressional majorities. In PPK’s case, there were two aggravating factors. The presence of a host of small parties meant that the electoral system rewarded FP with 73 of the 130 seats in the unicameral congress, although it won just 36% of the vote. And Peru’s constitution, unusually for Latin America, contains parliamentary elements: congress can oust ministers and cabinets almost at will, and proceeded to do so.



Any president would have been tested by such a spiteful and powerful opponent as Ms Fujimori. But PPK played a big part in his own downfall. Although he had served in past governments, for most of his life he worked as an economist and businessman. He showed a disastrous disdain for politics. He appointed cabinets in his own image, stuffed with technocrats and business people. Friendship with the president outweighed knowledge of ministerial briefs or of a large and socially diverse country. A clearer political and communications strategy might have kept public opinion on his side and thwarted Ms Fujimori. As it was, his government soon seemed rudderless and impotent.

Faced with impeachment, his response was a caricature of political bargaining. He struck a secret deal with Kenji Fujimori, Keiko’s estranged brother, who was an FP congressman, to pardon their father, Alberto, a former president jailed for human-rights abuses. The pardon was controversial. PPK gained the votes of Kenji’s nine followers in congress, but he lost more: the backing of part of the left, of some of his own legislators and of many voters. Kenji was an ally of dubious worth. The release of clandestine videos of him and his allies offering FP legislators bribes in the form of public contracts made PPK’s defeat in a second impeachment certain.

It was PPK’s failure to distinguish between private business interests and public responsibility that had rendered him vulnerable to impeachment in the first place. Companies that he owned or to which he was linked earned $4.8m in fees from Odebrecht for consultancy work, some awarded when PPK was a minister in 2001-06 and signed a big public contract granted to the Brazilian construction company. This may have been legal, but it was unethical. That politics matters, that technocracy alone is not enough and that public servants must be seen to avoid conflicts of interest are lessons that appear to have been learned by two more successful businessmen-turned-presidents, Argentina’s Mauricio Macri and Sebastián Piñera of Chile, but not by PPK.

As for Peru, it may gain a respite under Martín Vizcarra, PPK’s vice-president, who has taken over the top job. A former provincial governor who belongs to no party, he has a record as a negotiator. FP may give him an easier ride, at least until after local elections in October. Ms Fujimori is facing an investigation over a claim by Odebrecht (which she denies) that it gave her campaign money in 2011.

For much of this century, Peru has been an economic success. But Peruvians are rightly disillusioned with their politicians. Four of the five living elected presidents have been accused of corruption. Growth has fallen to around 3% a year. Reviving it requires institutional reforms, especially of local government, education, the judiciary and the political system. The *fujimoristas* have blocked them. The fact that they are divided and in disarray offers an opportunity. Understandably, Mr Vizcarra’s instinct may be to play safe. But his best hope of surviving until 2021 is to be ambitious, and to set out a bold programme for a better country that Peruvians can rally around.

The magic of Montevideo

# Uruguay's record-setting economic growth streak

*How a small country outperforms its neighbours*

**Print edition | The Americas** Mar 28th 2018

AFTER long recessions, Brazil and Argentina still cheer when good economic news comes out. In tiny Uruguay, sandwiched between them, it is old hat. On March 22nd the central bank reported that GDP grew by 2.7% in 2017, bringing the country's growth streak to 15 years, the longest expansion in its history. Uruguay's growth since 2011, when global prices of commodities started to fall, puts its neighbours to shame (see chart). Its success shows the value of openness, strong institutions and investment in know-how.

Uruguay's most recent economic disaster was in 2002, after Argentina defaulted on its debt. Argentines pulled their money out of banks in Uruguay, triggering a bank run there. Thanks to a bail-out from the IMF, it avoided default. That won it a lot of trust with investors, says Jesko Hentschel, the World Bank's director for Argentina, Paraguay and Uruguay.



Thereafter, Uruguay's leaders realised that the economy needed to diversify. The Broad Front (FA), a leftist coalition that has governed since 2005, began an effort to "decouple" Uruguay from its neighbours. Under two FA presidents—Tabaré Vázquez, an oncologist who governed from 2005 to 2010 and again since 2015, and José Mujica, a former guerrilla who held office between Mr Vázquez's two terms—the government created special tax regimes and set up economic zones to attract investment. Uruguay entered new industries, such as software and audiovisual services, which exported to new markets. Between 2001 and 2016 the share of exports going to Brazil and Argentina fell from 37% to 21%.

Recently the government has invested in raising productivity. Public spending on science and technology increased by 73% in real terms between 2007 and 2015. Even cattle farmers adopted new technology. While Argentina slapped export tariffs on beef to hold down domestic prices, Uruguay became the first Latin American country to make all its beef exports electronically traceable, a way of reassuring buyers that problems like foot-and-mouth disease will be caught early. Between 2005 and 2012 Argentina's beef exports fell by three-quarters; Uruguay now sells more than its larger neighbour.

At the same time, FA governments stuck with the orthodox economic policies they inherited and with practices that make the country attractive to investors, such as keeping taxes low and the judiciary independent of political influence.

The formula has worked. Uruguay kept growing after Brazil and Argentina entered recession in 2014. The middle class, as defined by the World Bank, grew from 39% of the population in 2003 to 71 % in 2015. Uruguay's income per person is the highest in Latin America.

Not everything is rosy. Growth dropped in 2015 and has not bounced back to its old level. The economy still looks over-dependent on exports, which account for a fifth of GDP. Both inflation, at 7%, and the budget deficit excluding interest payments, at 3.5%, are too high. Uruguay has rigid labour markets. The education system needs reform. The population is ageing.

Taking good tidings for granted, Uruguayans are focusing on their discontents. A rural workers' movement is demanding lower taxes and electricity bills. Its protests have lasted for weeks, dragging the government's approval ratings down to an all-time low of 27%. In an election next year the FA could lose power for the first time in 15 years. That would end at least one of Latin America's longest winning streaks.

*This article appeared in the The Americas section of the print edition under the headline "The magic of Montevideo"*

**China and North Korea**
More conviviality than clarity

More conviviality than clarity

# Kim Jong Un visits China

*But the unannounced visit still leaves the prospects for nuclear talks obscure*

**Print edition | Asia** Mar 28th 2018

ON MARCH 28th a sandstorm descended on Beijing like a chemical-weapons attack, sending pollution-monitoring equipment off the charts and reducing visibility to a few metres. The same day the Chinese government announced that Kim Jong Un, North Korea's leader, had met his Chinese opposite number, Xi Jinping, in Beijing, sending diplomatic speculation off the charts and leaving the prospects for talks about North Korea's nuclear weapons as hard to discern as ever.

Mr Kim's visit was shrouded in secrecy from the moment an armoured train, similar to the one his father and grandfather used for foreign trips, pulled into Beijing station, unannounced. The mystery continued throughout his two-day stay, Mr Kim's first meeting with any head of state and his first known foreign trip since he took power in 2011. The visit was not even confirmed to have taken place until he had returned to Pyongyang. But if it added new puzzles to the geopolitics of North-East Asia, it also made a few things clearer.



The trip affirms China's central role in keeping the peace in the region after a flurry of diplomatic activity had shifted the focus to South Korea and the United States. Relations between China and what it used to refer to as its "little brother" have been severely strained by Mr Kim's nuclear-weapons programme. Last year Mr Xi gave a warning that "no country can afford to retreat into self-isolation"—widely seen as a dig at Mr Kim. When the Chinese president sent a special envoy to North Korea, Mr Kim refused to meet him. But straining does not mean breaking. This time the tone of Mr Xi's speech of welcome was emollient. Xinhua, China's news agency, quoted him saying "we speak highly of this visit" and referring to "the major efforts that North Korea has made" towards improving the situation on the Korean peninsula. In communist diplomacy, it seems, old habits die hard.

**Back on track**

For Mr Xi, the visit may come as something of a relief. The Chinese were alarmed in early March when Mr Kim offered to meet Donald Trump for direct talks, and the American president accepted. They feared being shut out of negotiations and being left to face Mr Trump's threats of a trade war without anything to offer on North Korea. Optimists in Beijing now hope that, in the wake of Mr Kim's visit, Mr Xi may be able to limit some of the risks of the forthcoming summit with Mr Trump. The hope is that, if talks go awry (which seems all too possible), China is more likely to step in to help. Just after the summit, China announced that one of its top foreign-policy officials, Yang Jiechi, would visit South Korea for talks—taken as further evidence of Chinese engagement.

Seen from the North Korean perspective, Mr Kim's visit looks like an attempt to reassure himself that his country's most important ally and main financial backer remains behind him as he begins a risky period of diplomacy. In late April Mr Kim is due to hold a summit meeting with South Korea's president, Moon Jae-in, to be followed by the one with Mr Trump, probably in May. In Beijing he confirmed that both meetings would take place. The trip came days before North and South Korean officials were scheduled to make final preparations for the summit with Mr Moon. Mr Kim cannot afford to be wrangling with China just now.

His comments in Beijing on the denuclearisation of the Korean peninsula also raised hopes that he may be moderating his stance somewhat. Xinhua quoted him saying that, if South Korea and America responded to his efforts "in good faith" and built a "peaceful and stable atmosphere", then the issue of denuclearisation could be resolved. He told Mr Xi he is still committed to achieving that goal.

But his language does not differ much from the North's previous public comments. To North Korea, building a "peaceful and stable atmosphere" means the withdrawal of American troops from the peninsula and the end of America's military alliance with South Korea and Japan, which are all non-starters. Nevertheless, the Trump administration cited Mr Kim's visit to Beijing as further evidence that America's campaign of maximum pressure was "creating the appropriate atmosphere for dialogue with North Korea". The sandstorm that blanketed Beijing seems a suitable image for that atmosphere.

*This article appeared in the Asia section of the print edition under the headline "More conviviality than clarity"*

Justice on the loose

# Pakistan's top court is eager to take on any brief

*Just as long as it doesn't have to say "Boo!" to the army*

**Print edition | Asia** Mar 28th 2018

THE chief justice of Pakistan, Saqib Nisar, peers through a pair of gold-rimmed spectacles at the ingredients list on a packet of powdered milk, shakes his head in sadness and then shoos 20 lawyers for the industry away from the bench. He has a busy schedule. Consumed in recent months by a mission to deliver "clean air, clean water and pure milk" to Pakistan, the 64-year-old is spending a Saturday hearing 16 cases that he has taken up *suo motu*, or on his own initiative. Crowds throng the courthouse in Lahore, the capital of the state of Punjab, drawn by the spectacle of a judge dispensing verdicts like a king. The powder, he rules, must be relabelled post-haste. After milk, he turns to the owners of a factory allegedly dumping effluent into a river. An elderly villager in a white turban breaks forward, begging the justice to punish them. "I cannot let my children be poisoned," thunders Mr Nisar (pictured).

Mr Nisar is not Pakistan's first celebrity judge. In 2008 Iftikhar Chaudhry helped to oust General Pervez Musharraf, a military dictator, overturning the Supreme Court's previously pliant reputation, which it had gained by rubber-stamping a series of coups. The successful exercise of his authority went to Mr Chaudhry's head, however. He began to interfere in all manner of areas typically seen as beyond the court's remit, such as fixing the price of sugar. All four of his successors (until Mr Nisar) were more circumspect, stung in particular by the potential $12.5bn bill left by Mr Chaudhry's energetic voiding of government contracts with foreign firms.



Most lawyers blanch at the judiciary's return to the headlines. Mr Nisar has launched around 30 *suo motu* cases since the beginning of the year. In one, he was so moved by the plight of a medical student unable to pay his $3,000 school fees, he said the Supreme Court would pay instead. He has also delved into such pressing matters as the quality of chicken feed (he launched a commission on standards), even as the judiciary groans under a backlog of 3m pending cases.

The Supreme Court is obliged to act because of the indolence of the executive, say the judge's supporters. His assault on dodgy private medical colleges could limit the growing number of doctors unsure of where to find the appendix. Bank employees have the chief justice to thank for raising their paltry pension, from $13 to $70 a month. In response to the charge that he exceeds his brief, Mr Nisar points to the dire state of many public services. "Call me any time I am crossing a line," he told a journalist, "but why should not the ordinary people of Rawalpindi have clean water?"

**Filling or creating a vacuum?**

Unfortunately, it is not clear that the chief justice can get the water purified single-handed. Worse, in the run-up to a general election due to be held this summer, Mr Nisar's actions distort national politics. His impromptu visits to hospitals prompt coverage harmful to the Pakistan Muslim League-Nawaz (PML-N), the ruling party. Most of his complaints focus on Punjab, the party's stronghold. He has threatened to "shut down" the Orange Line, the first phase of Lahore's new metro system, if the government does not improve health and education. Other decisions clash with the PML-N's policies. Whereas the government promises a tax amnesty for citizens who bring money home from abroad, the chief justice has formed a commission to investigate how to seize the assets. "He's filling the role of the opposition," sighs Junaid Jahangir, a barrister. Indeed, the actual opposition, in the form of Pakistan Tehreek-e-Insaf (PTI), a party led by Imran Khan, a former cricketer, often plays second fiddle to the courts, applauding the chief justice's rulings.

Yet even opposition politicians ought to be wary of the Supreme Court's hubris. The court is cramping the space for democracy, argues Babar Sattar, a lawyer and columnist. In disqualifying Nawaz Sharif, the former leader of the PML-N, as prime minister for failing to live up to the injunction in Article 62 of the constitution that politicians be "honest" and "righteous", it set a potentially sweeping precedent. On March 2nd Mr Nisar doubled down. He annulled a law that allowed MPs removed from office in this way to run parties (a measure the PML-N had passed on Mr Sharif's behalf), on the feeblest of grounds. "Faithful adherence to Article 62," Mr Nisar writes, "provides a recipe for cleansing the fountainheads of the State from persons who suffer from character flaws."

Such talk is music to the army's ears. It was under its aegis that Article 62 was slipped into the constitution in 1973, to control civilian politicians. Leaders of the PML-N often imply that the judiciary is a tool of the army. At any rate, the two institutions offer one another undisguised support. Unlike Mr Chaudhry, Mr Nisar has avoided topics the army would rather not discuss, such as unexplained disappearances of those who annoy the top brass. This month Qamar Javed Bajwa, the chief of army staff, warned that the armed forces would stand behind the judiciary in any dispute with parliament.

Although the PML-N is now casting itself as the persecuted champion of democracy, the party did little to burnish it before Mr Sharif's ousting. In four years as prime minister, Mr Sharif appeared in the National Assembly just six times. Politicians have ceded more and more ground to the courts, points out Asad Rahim Khan, a lawyer. Parties now regularly file legal petitions aimed at disqualifying their rivals, instead of leaving voters to adjudicate their disputes. The army also has no shortage of supporters in politics, despite its blatant refusal to submit to civilian control.

This two-pronged attack on democracy is only likely to get worse. A corruption trial may soon put Mr Sharif behind bars, hamstringing the chief foe of both institutions. After this summer's election the more pliable Pakistan Peoples Party and the PTI might be able to form a coalition to remove the PML-N from office. Whoever wins, one thing appears certain: they will have a boot on their neck and a gavel poised to strike them over the head.

*This article appeared in the Asia section of the print edition under the headline "Justice on the loose"*

A prickly pair

# Nepalese nationalists force a Bollywood muscleman to retreat

*It's the latest in a series of spats between the two neighbours*

**Print edition | Asia** Mar 28th 2018

BRIGHT lights, a booming soundtrack and 100 back-up dancers set the stage for the "Da-Bangg Tour". The main attraction, a heavily built 52-year-old man dressed in spangly clothes, gyrates and lip-syncs just as in his Hindi blockbusters. Who wouldn't wish to see India's Salman Khan, tough guy of the Dabangg ("Fearless") film franchise, bring his song-and-dance routine to Nepal?

A tiny faction of Maoists, it turns out. Da-Bangg's local promoter postponed the show because of a warning against "Indian cultural interventions" issued by the Communist Party of Nepal (Maoist), or CPN(M). Those parentheses matter. In 2014 this group splintered from the CPN-M, which has a hyphen; both descend from the CPN (Maoist Centre), now a partner in Nepal's coalition government.



Thousands of Nepalis had paid between 2,000 and 10,000 rupees ($19-96) for tickets to see Mr Khan prance on March 10th. A new date has been promised for mid-April, but frustrated fans are still waiting. Others could not resist mocking the less-than-*dabangg* leading man in retreat. Kedar Ghimire, a celebrated comedian, was not joking when he tweeted that money would be better spent on local talent.

Resentment at India's shadow has darkened since a blockade of the landlocked country's border in 2015. Independent India, like the British Raj before it, has a long history of meddling in Nepalese affairs, often to constrain the far left. No wonder Nepal's Communists seize on insults to their country's sovereignty. (This week they scolded the EU for finding fault with its electoral system; "Nepal," the prime minister reminded them sternly, "is sovereign.") Last year it joined the Belt and Road Initiative, a big infrastructure scheme championed by its only other neighbour, China. In February the prime minister welcomed his counterpart from Pakistan, India's implacable rival, before making his first trip to India since taking office.

Yet there is no comparing China's influence with India's. Across the dusty parade ground awaiting Da-Bangg in Kathmandu, the China Town Centre mall bears a plaque commending the Sinohydro group that built it. Inside, however, the cinema screens only Indian and Nepalese films. The love affair with Bollywood has been fraught: in 2000 unfounded rumours about another star's disregard for Nepal sparked deadly riots.

There have been at least eight such furores, mainly based on nonsense. In 2009 a movie was banned because one character in it described the Buddha as Indian. Years later, stickers on taxis remind visitors that "Buddha Was Born in Nepal", albeit near the border with India, and long before either country existed.

Nepal's time zone—15 minutes ahead of Indian Standard Time, which it borders on both east and west—is an exercise in narcissism. Then again, in their tireless vigil against "cultural interventions", Nepalese have good company in India. A year ago India's foreign minister asked Amazon to stop selling doormats printed with India's flag and flip-flops bearing the image of Gandhi. And Indian Standard Time itself is an unusual five-and-a-half hours ahead of Greenwich Mean Time.

*This article appeared in the Asia section of the print edition under the headline "A prickly pair"*

A palm-fringed cesspool

# The president of the Philippines wants to close paradise

*Or at least treat its sewage*

**Print edition | Asia** Mar 28th 2018

STAND where the warm sea laps the gleaming white sand of the 4km-long beach on the resort island of Boracay and whip out your selfie stick. You can capture an image of yourself against the impossibly beautiful backdrop of an orange sun dropping from a pink sky into a deep blue sea. Or you could, if the parasailors and banana-boat riders would only get out of the way. And then there is the local feature that your camera cannot capture: the peculiar whiff wafting up from the water at your feet.

"Boracay is a cesspool," President Rodrigo Duterte declared, with customary frankness, in a speech last month. "You go into the water, it's smelly. Smells of what? Shit." Look down, and your toes curl up in the green algae washed ashore from the shallows where it grows, fed by sewage that seeps untreated into the sea from the resorts and ancillary businesses that cram the island. Look up, and you see the start of the evening parade of tourists up and down the beach-front. They are Chinese or Koreans, mostly, a horde in search of the perfect place to drink, eat and be merry after a day of fun in the water. They appear unperturbed.



Resort-owners, in contrast, are alarmed. "I will close Boracay," the president has threatened. He claims to have told his environment secretary, Roy Cimatu, "I'll give you six months. Clean the goddamn thing."

Boracay's beach has earned the island world renown. Over 2m tourists visited in 2017, spending 56bn pesos ($1.1bn). Yet businesses here seem reluctant to invest in disposing of their sewage in the way required by law. Mr Cimatu's inspectors found that only 383 of the 578 places they had checked by late February were connected to the sewage system and that, anyway, the system needed repairs.

The legend among backpackers is that two Swiss discovered Boracay in the age of the Hippie Trail. The ensuing trickle of escapees from suburbia were delighted to have to wade straight onto the beach from an outrigger boat, dine on the barbecued catch of local fishermen and sleep in thatched huts. These days planeloads of visitors step ashore on a concrete jetty, from which motor-tricycles whisk them to concrete hotels complete with air conditioning, cable and Wi-Fi.

By threatening to close this flawed paradise, the president is perhaps just trying to scare resort-owners into spending some money to preserve their main asset, the beach. But as his bloody campaign against drug-dealers proves, not all Mr Duterte's threats are hollow.

*This article appeared in the Asia section of the print edition under the headline "A palm-fringed cesspool"*

Paper elephant

# India spends a fortune on defence and gets poor value for money

*The country's millions of men and women in uniform wield mainly Soviet weapons*

**Print edition | Asia** Mar 28th 2018

IN FEBRUARY India quietly passed a milestone. The release of its annual budget showed that defence spending, at $62bn, has swept past that of its former colonial master, Britain. Only America, China, Saudi Arabia and Russia lavish more on their soldiers. For nearly a decade India has also been the world's top importer of arms. In terms of active manpower and the number of ships and planes, its armed forces are already among the world's top five.

Measured by ambition, India may rank higher still. Its military doctrine envisages fighting simultaneous land wars against Pakistan and China while retaining dominance in the Indian Ocean. Having revealed its nuclear hand in 1998 with a series of tests, India has developed its own ground-hugging cruise missiles and is trying to perfect submarine-launched intercontinental ones, too. Since the Hindu nationalist party of the prime minister, Narendra Modi, took power in 2014 it has also adopted a more muscular posture. Last summer it sparred with China atop the Himalayas in the tensest stand-off in decades. It has also responded to cross-border raids by militant groups from Pakistan not with counterinsurgency tactics and diplomatic ire, but with fierce artillery strikes against Pakistani forces.



Yet a growing chorus of Indian officers, civilian officials and defence analysts appears less than impressed by all this seeming toughness. In mid-March their long-muted criticism burst into the open. Summoned before a parliamentary committee on defence, India's service chiefs revealed not only dire shortfalls in equipment and investment, but mounting frustration with a pettifogging civilian defence bureaucracy and the government's penny-pinching ways. Subsequent public debate has gone further, questioning not only poor resource allocation but also the armed forces' own failure to reform, restructure or revise doctrine.

Judging from the three services' own testimony, the airing of such grievances is long overdue. MPs were told that some 68% of the army's equipment, much of which was first supplied by the Soviet Union, such as BMP-2 personnel carriers and Shilka anti-aircraft guns, may be described as "vintage". Only 8% could be considered state-of-the-art. "To be prepared for…a two-front war, the huge deficiencies and obsolescence of weapons, stores and ammunition existing in the Indian army do not augur well," said the army's report.

In its own commentary the committee noted, by way of example, that despite its having repeatedly raised the matter for a decade, the army had still failed to provide soldiers with adequate body armour. The other services are no better: antiquated MiG-21 fighter jets still patrol the skies and the navy's shipbuilding programme is a decade behind schedule.

Despite Mr Modi's chest-thumping, the defence budget has actually shrunk over the past decade as a proportion of GDP and is far below China's in dollar terms (see chart). More tellingly still, the share of it devoted to capital expenditure has slipped dramatically: for the navy this dropped from 13% in 2014 to below 8% last year; for the air force from nearly 18% a decade ago to below 12% in 2017. A sharp pay rise means that personnel costs will eat up 63% of the army's budget this year.

If pensions are included, some three-quarters of the overall defence budget will be consumed by salaries and benefits, leaving scant funding for procurement, let alone such luxuries as research and development. Small wonder that foreign investment in the defence industry, touted as a centrepiece of the government's Make In India campaign to boost domestic manufacturing, amounted to less than $200,000 from 2014 to 2017, out of some $60bn of FDI in 2017 alone.

There are also doubts about how India's men and women in uniform are being used. Despite increasing pressure on Pakistan, for instance, the number of cross-border violations counted by India has gone up dramatically, from 152 in 2015 to 860 last year, with a consequent rise in casualties on both sides and no movement towards resolving disputes. The number of intrusions from China also rose from 273 in 2016 to 426 last year. India's refusal last summer to permit Chinese road-building in a patch of disputed Bhutanese territory showed strong nerves, yet what became known as the Doklam incident has not prevented China from massively reinforcing its position in the area.

Brahma Chellaney, a hawkish Indian security expert, noted in an acerbic commentary that Doklam "illustrates that while India may be content with a tactical win, China has the perseverance and guile to win at the strategic level." The struggle to counter Chinese political and economic encroachment even in zones where Indian influence has seldom been challenged, such as Nepal and the Maldives, also suggests difficulties in projecting influence.

Some of the weakness may be due not to the size of India's forces, but to their shape. Despite numerous expert reports, internal military recommendations and committee findings calling for integrating both India's central and regional commands, its army, navy and air force have maintained rigidly independent structures. Whereas China recently streamlined its operational forces into five broad regional commands, India maintains 17 separate single-service local commands.

Meanwhile the defence ministry, which calls the shots on such vital questions as procurement and promotions, is staffed with career bureaucrats and political appointees who lack not only technical knowledge but also, grumble ex-servicemen, much sympathy for people in uniform. Mao Zedong, who foolishly derided America as a “paper tiger”, might have applied similar words to the southern adversary his country faces today.

*This article appeared in the Asia section of the print edition under the headline ”Paper elephant”*

**Pursuing fugitives abroad**
Forbidding kingdom

Forbidding kingdom

## China’s law-enforcers are going global

*But their methods are far from orthodox*

**Print edition | China** Mar 31st 2018

LAST year’s big blockbuster in China, “Wolf Warrior 2”, assured citizens not to fear running into trouble abroad: “Remember, the strength of China always has your back!” That is doubtless a comfort to patriots. But for those who seek to escape the government’s clutches, its growing willingness to project its authority beyond its borders is a source of alarm. In pursuit of fugitives, the Chinese authorities are increasingly willing to challenge the sovereignty of foreign governments and to seek the help of international agencies, even on spurious grounds.

Fugitives from China used to be mainly dissidents. The government was happy to have them out of the country, assuming they could do less harm there. But since Xi Jinping came to office in 2012 and launched a sweeping campaign against corruption, another type of fugitive has increased in number: those wanted for graft. Though they do not preach democracy, they pose a greater threat to the regime. Most are officials or well-connected business folk, insiders familiar with the workings of government. And in the internet age it is far easier for exiles to maintain ties with people back home.



So China has changed its stance, and started to hunt fugitives down. It has managed to repatriate nearly 4,000 suspects from some 90 countries. It has also recovered about 9.6bn yuan ($1.5bn). Still, nearly 1,000 remain on the run, according to the Central Commission for Discipline Inspection, China’s anti-graft watchdog.

The problem is that only 36 countries have ratified extradition treaties with China. France, Italy, Spain and South Korea are among them, but few other rich democracies. It is easy for Chinese suspects seeking refuge abroad to argue that they will not get a fair trial if returned home, since the government does not believe that courts should be independent. Last year the country’s top judge denounced the very idea as a “false Western ideal”. What is more, China has thousands of political prisoners. Torture is endemic.

### The hard way

These failings have forced the Chinese authorities to resort to less-straightforward methods to bring suspects home. Typically, they send agents, often travelling unofficially, to press exiles to return. The tactics involved are similar to ones used at home to induce people to do the Communist Party’s bidding. Many are subjected to persistent surveillance, intimidation and even violence. Occasionally, Chinese agents attempt to kidnap suspects abroad and bring them home by force.

If runaways have family in China, those left behind are often subject to threats and harassment. In an interview in 2014 a member of Shanghai’s Public Security Bureau said that “a fugitive is like a flying kite: even though he is abroad, the string is in China.” Some exiles are told that their adult relatives will lose their jobs and that their children will be kicked out of school if they do not return. Police pressed Guo Xin, one of China’s 100 most-wanted officials, to return from America by preventing her elderly mother and her sister from leaving China, and barring a brother living in Canada from entering the country, among other restrictions. In the end she gave in and went home.

In countries with closer ties to China, agents have occasionally dispensed with such pressures in favour of more resolute action. Wang Dan, a leader of the Tiananmen Square protests of 1989, says that he and other exiled dissidents have long avoided Cambodia, Thailand and other countries seen as friendly to China for fear of being detained by Chinese agents. The case of Gui Minhai, a Swede who had renounced his Chinese citizenship, suggests they are right to do so. He was kidnapped by Chinese officials in Thailand in 2015 and taken to the mainland. In a seemingly forced confession broadcast on Chinese television, he admitted to a driving offence over a decade earlier.

Many countries, naturally, are upset about covert actions by Chinese operatives on their soil. In 2015 the *New York Times* reported that the American authorities had complained to the Chinese government about agents working illegally in America, often entering the country on tourist or trade visas. Other foreign diplomats note that officials from China’s Ministry of Public Security sometimes travel as delegates of trade and tourism missions from individual provinces. Chinese police were caught in Australia in 2015 pursuing a tour-bus driver accused of bribery. Though France has an extradition treaty with China, French officials found out about the repatriation of Zheng Ning, a businessman seeking refuge there, only when China’s own anti-graft website put a notice up saying police had successfully “persuaded” him to return to China. The French authorities had not received a request for his extradition.

This pattern is especially disturbing since the anti-corruption campaign is sometimes used as an excuse to pursue people for actions that would not be considered crimes in the countries where they have taken refuge—including political dissent. It beggars belief that the Chinese authorities would have worked so hard to capture Mr Gui, the kidnapped Swede, just to answer for a driving offence. His real crime was to have published salacious books in Hong Kong about the Chinese leadership. By the same token, last year the Chinese embassy in Bangkok reportedly asked the Thai government to detain the wife of a civil-rights lawyer after she escaped over China's south-western border. Her only known offence was to have married a man who had the cheek to defend Chinese citizens against the state.

Increasingly, China is trying to use Interpol, an international body for police co-operation, to give its cross-border forays a veneer of respectability. Interpol has no power to order countries to arrest individuals, but many democratic states frequently respond to the agency's "red notices" requesting a detention as a precursor to extradition. In 2015 China's government asked Interpol to issue red notices for 100 of its most-wanted officials. To date, the government says half of those on the list have returned, one way or another. Small wonder that Xi Jinping, China's president, has said he wants the agency to "play an even more important role in global security governance".

Since 2016 Interpol has been headed by Meng Hongwei, who is also China's vice-minister of public security. That year alone China issued 612 red notices. The worry is that China may have misrepresented its reasons for seeking arrests abroad. Miles Kwok, also known as Guo Wengui, a businessman who fled China in 2015, stands accused of bribery. But it was only when he was poised to give an interview last summer in which he had threatened to expose the misdeeds of the ruling elite that China asked Interpol to help secure his arrest. When America refused to send him home, the Chinese government requested a second red notice, accusing Mr Kwok of rape.

China's covert extraterritorial activity suggests that foreign governments are right to be cautious about deepening ties in law-enforcement. If nothing else, the fate of those who do return provides grounds for concern. Although few would shed any tears for corrupt tycoons or crooked officials, the chances of any of them getting a genuine opportunity to prove their innocence are all but zero. Nearly half of the repatriated officials who were subject to red notices have been sentenced to life in prison; the other half have not yet been tried. Chinese courts have an astonishingly high conviction rate. In 2016, the latest year for which figures are available, it was 99.9%.

*This article appeared in the China section of the print edition under the headline "Forbidding kingdom"*

Nowhere to hide

# China is trying to prevent the formation of a vocal Uighur diaspora

*It has persuaded friendly countries to send lots of them home*

**Print edition | China** Mar 28th 2018

WHEN the authorities manage to lure or drag home a fugitive accused of corruption, they crow. But they are quieter about their equally successful campaign to repatriate Uighurs, a mostly Muslim ethnic group from Xinjiang, in China's far west. Many Uighurs chafe at the growing presence of Han Chinese in their region, and at increasing restrictions on their personal and religious freedom. Some travel abroad, both to escape this repression and for more mundane reasons. A small number have become radicalised, and have launched terrorist attacks in Xinjiang and elsewhere. But in addition to hunting for fugitive extremists, China is also trying to prevent a big Uighur diaspora forming that could foment support for Uighurs in China, much as Tibetan exiles campaign to free their homeland.

According to human-rights groups hundreds of Uighurs have been forced back to China in the past decade from Egypt, Thailand, Vietnam and elsewhere. Far more have been detained and interrogated by Chinese agents on foreign soil. Several hundred languish in foreign jails. The actual number of returnees may be far higher, says Yun Sun of the Stimson Centre, an American think-tank. Along China's south-western borders and across Central Asia the Chinese government often recruits locals on both sides to report the arrival of "suspicious" individuals. It frequently succeeds in getting them sent back without ever going through any official legal process.



Returnees are often sent to "re-education camps" in Xinjiang. Detention of Uighurs within China has gathered pace and up to 120,000 may be being held in such centres, according to rights groups. Uighurs in Xinjiang who maintain ties with relatives abroad are sometimes put under surveillance or even locked up.

Only a handful of those detained are violent extremists. The Chinese government says some 300 Uighurs are fighting with jihadists in Iraq and Syria. Four Chinese Uighurs with suspected links to Islamic State were convicted in Indonesia in 2015 of conspiring with Indonesian militants. More have since been arrested. Two Uighurs travelling on fake Turkish passports were among those accused of bombing a shrine in Thailand the same year.

But the charges against most Uighurs abroad are woollier. Last year Egypt's government reportedly detained more than 200 Uighurs. Chinese security officials said they were terrorists, but many say their only crime was to study Islam. China's government may see that as threatening enough. In Xinjiang many everyday Muslim practices have been criminalised, including wearing long beards and giving children certain religious names.

The Uighur diaspora is thought to number 1m-1.6m, the vast majority of them in Central Asia, according to the World Uyghur Congress, an activist group. That is much bigger than the Tibetan equivalent. Yet without a figurehead comparable to the Dalai Lama, a Tibetan Buddhist leader and a Nobel prizewinner, Uighurs have struggled to raise international awareness of their plight. The Chinese authorities seem determined to keep it that way, even if it means bringing them home.

*This article appeared in the China section of the print edition under the headline "Nowhere to hide"*

Banyan

# Can Xi Jinping make use of the power he has accumulated?

*Promoting the party at the expense of the bureaucracy deters reform*

**Print edition | China** Mar 31st 2018

MUCH has been made of Xi Jinping's consolidation of power, which began long before the National People's Congress (NPC) agreed in March to abolish term limits on the presidency. During his ascent, Mr Xi has displayed ruthless skill. The anti-graft campaign he launched in 2013 is what Kevin Rudd, a former Australian prime minister, calls a "masterclass in political warfare". In addition to reducing theft, Mr Xi used it to remove potential rivals, install loyalists and cement his own power at the top. A new super-agency, the National Supervisory Commission, will take the campaign outside the Communist Party to educational institutions, hospitals, village governments and more. Far more than any previous member of China's supposedly collective leadership, Mr Xi personally heads a score of top-level committees and commissions. In mid-March Xi Jinping Thought was incorporated into the constitution. The Chairman of Everything, as another Australian, Geremie Barmé, calls him, looks bent on staying in power throughout the 2020s—and perhaps for life.

That much has now sunk in in the West, which had not wholly grasped Mr Xi's—and China's—direction of travel. The question, as he enters his second term, is what he intends to use his power for. Mr Xi is no banana-republic dictator. He still holds the Communist Party, and not himself, as both pinnacle and embodiment of authority in China. Mr Xi, whose father was a fellow revolutionary with Mao Zedong, longs for a party driven by purity and zeal, as it supposedly was in the 1950s (along with a bent for bloody purges). He has warned that cynicism and corruption inside the party threaten not only the country's economic transformation, but the party's very survival. To save the party is to save China. Mr Xi's historic mission, therefore, is to safeguard the party's monopoly.



At the party's five-yearly congress in October, he declared that the "principal contradiction" facing Chinese society was no longer getting enough food on the table. It was, rather, aspiring to a better quality of life in the face of untrammelled development. One-party rule will survive the growth of a vast middle class, Mr Xi seems to be saying, only if it can provide what the middle class wants: better schools, cleaner air, good health care. To do that requires a fundamental shift in the state and party—and only Mr Xi, with all his extra powers, can force through such a change.

This overhaul, referred to by the wishy-washy slogan "Beautiful China" involves tougher trade-offs than the flat-out dash for growth of the past. How much growth do you sacrifice to protect the environment? Should subsidies go to the backward west of the country or to upgrade industry in the more prosperous east? The agenda will also be hard to fulfil. Not least, a decentralised bureaucracy is accustomed to pursuing breakneck local growth—and damn the consequences.

Mr Xi seems to understand the challenges. A big push is under way to streamline and centralise the bureaucracy, separating policymaking from its execution. At the annual gathering of the NPC in March, a new team of ministers and advisers was unveiled that stressed technocratic competence. (It may be one-man rule, but Mr Xi needs good underlings.) In the provinces the reward structure for officials is being reconfigured. You really can get ahead on your environmental record.

There is a snag with much of this, however. At their heart, Mr Xi's moves aim to restore the Communist Party to a centrality that it has not enjoyed for years. He is doing that by seizing the state's policy machinery for the party. That undoes administrative changes made two decades ago by the reformist prime minister of the time, Zhu Rongji, intended precisely to separate party and state, professionalise government and spur market-led change.

Minxin Pei of Claremont McKenna College in America says millions of lower-level officials resent the new orthodoxy. They hate the compulsory ideological indoctrination under Mr Xi that recalls the era of Mao. The unchecked powers of the anti-corruption campaign strike fear. And the centralisation of authority makes it hard for the party's entrenched system of patronage to operate. Paralysis is one plausible outcome, Mr Pei contends. But Mr Xi can hardly back down now.

This suggests broader worries about the momentum of reforms, argues Mr Rudd, now the head of the Asia Society Policy Institute in New York. Five years ago China launched an ambitious blueprint to move from low-wage manufacturing and preferential financing for state enterprises to a model based on domestic consumption, services and a more vibrant private sector. Yet progress has been marginal, in part because of Mr Xi's obsession with party control, which hampers and intimidates administrators. The NPC has just promised to re-emphasise the market. Mr Xi's policy speech in early April at the annual Bo'ao gathering, China's Davos, will give a powerful clue about whether his inner control-freak will leave any slack in the system for reformists.

### Peak power

Once you accrue power, says Mr Pei, you have to show what you can do with it. It is, in other words, delivery time. Mr Xi will not only be judged on domestic challenges, including today's loyalists jockeying for position in a post-Xi era. Three external uncertainties are mounting, each of which will also test Mr Xi's leadership. The first is handling the summitry around North Korea, whose leader, Kim Jong Un, paid a visit to Mr Xi in Beijing this week (see article ). The second is America's increasingly aggressive demands on trade, which are a terrible backdrop for domestic reforms and threaten to back China into a corner. A third and growing worry for Mr Xi is America's new Taiwan Travel Act. It encourages high-level exchanges with Taiwan, to which China could feel bound to respond forcefully. Missteps risk being magnified. And that is the downside of being the Chairman of Everything: you will get blamed for everything that goes wrong.

*This article appeared in the China section of the print edition under the headline "Chairman of Everything"*

**Iraq after Islamic State**
Moving forward

Under construction

# Fifteen years after America's invasion, Iraq is getting back on its feet

*With Islamic State defeated, a new sense of unity prevails. But it is fragile*

**Print edition | Middle East and Africa** Mar 31st 2018

WHISKY is back on the tables in Mosul, one of Iraq's biggest cities. Until last year, boozing was punishable with 80 lashes. These days a refurbished hotel with a nightclub on the roof, set in a wood that had sheltered the high command of the so-called Islamic State (IS), is fully booked. Shops around the ruins of Mosul's university have new fronts. Families queue at restaurants on the banks of the Tigris. There is not a niqab, or face-veil, in sight.

The revival of Mosul is a metaphor for Iraq as a whole. When IS captured the city in 2014, Iraq seemed a lost cause. Its armed forces had fled. The government controlled less than half the country and the jihadists stood primed to march into Baghdad. With the collapse of oil prices in 2015, the government was broke. Iraq was a byword for civil war, sectarianism and the implosion of the Arab state order established at the end of the first world war.



Now Iraq, home to nearly 40m people, is righting itself. Its forces have routed the would-be caliphate and regained control of the borders. A wave of victories has turned Iraq's army into what a UN official calls the Middle East's "winniest". Baghdad feels safer than many other Middle Eastern capitals. The government is flush with money as the oil price has doubled since its low in 2016 and production has reached record levels. No wonder 2,000 foreign investors packed hotel ballrooms earlier this year at an Iraq-reconstruction conference in Kuwait.

Remarkably, given its belligerent past and the region's many conflicts, Iraq enjoys cordial relations with all its neighbours. America and Iran may be bitter rivals, but both give Iraq military and political backing. Gulf states, overcoming decades-long sectarian and security fears, have restored diplomatic relations and want to invest. To cap it all, Iraq remains a rarity—the only Arab state, other than Tunisia, to get rid of its dictator and remain a democracy. Its fourth multiparty election since 2003 will take place on May 12th. In a region of despots, Iraqis talk freely. Media and civic groups are vibrant.

**Counting the cost**

Some think the war was needed to bring Iraqis to their senses. If so, it was a terrible form of therapy. In the 15 years since America's invasion of Iraq, some 300,000 Iraqis and 4,400 American soldiers have been killed (see chart). Of the many rounds of strife, none matched the viciousness of the fight against IS. At least 7,000 civilians, 20,000 security personnel and over 23,000 IS fighters were killed, according to a think-tank in Baghdad. Priceless heritage, like Mosul's old city, was reduced to rubble. About 6m people, most of them Sunnis, lost their homes.

In quick succession, three ideologies tearing the country apart have been tamed. Revanchism by the Sunni Arab minority, who are about 15-20% of the population but have dominated Iraq since Ottoman times, was a cocktail of Saddam Hussein's brutal Baathist nationalism and even more brutal jihadism. It spawned al-Qaeda in Iraq and IS. But today it seems weaker than ever. "Sunnis finally felt what it meant to be Kurdish or Shia," says an influential government adviser. "They know they are no longer top dogs."

Triumphalism by the long-repressed Shia Arab majority, making up about 60% of the population, also turned violently sectarian. But this seems to have lost much of its appeal after 14 years of misrule by Shia religious parties. The Shia south may have most of Iraq's oil, but it looks as wrecked and neglected as the Sunni north.

And Kurdish nationalism lies in tatters, too. Denied independence in the 1920s, the Kurds are scattered across four countries. In Iraq they have long enjoyed quasi-independence in an enclave in the north-east. But last September Masoud Barzani, the Kurdish president, overreached by calling a referendum for a fully fledged state, defying Baghdad as well as protests from America and Iran. When he refused to back down, Iraqi forces snatched back the disputed territories that Kurds held beyond their official autonomous region (about 40% of their realm); the Iraqi government also imposed an embargo on foreign flights (now lifted). Kurdish leaders are negotiating a way out of their isolation. But many Kurds seem none too upset, given how autocratic and dirty Mr Barzani's regime is. "It would have been a Barzanistan, not a Kurdistan," says a teacher.

Iraq has not looked so united since 1991, when Kurds and Shias rose up against Saddam after his occupying forces were pushed out of Kuwait by an American-led coalition. Many Shia volunteers died delivering Sunnis from the barbarous rule of IS. About 45,000 Sunnis mustered alongside the Shia-led *Hashd al-Shaabi*, or "popular mobilisation units". And millions of Sunnis fled the would-be caliphate to seek refuge in Kurdish and Shia cities.

Revenge killings by Shia militias have been rarer than many had feared. "We expected much worse," says a local councillor in Falluja, a Sunni city recaptured in 2016. The *Hashd* still display their religious insignia at checkpoints on the highways (softened with plastic flowers), but in Sunni cities the policing is largely local. *Hashd* barracks are low-key and often mixed. "Half of them are Sunni," says a *Hashd* commander in Tikrit, Saddam's home town, pointing at the dozen men in his mess. A Kurdish politician who supported the referendum expresses relief. "No one threatened me or my job," says Dara Rashid, a deputy housing minister.

As security improves, barriers within the country are coming down. Many of the checkpoints snarling traffic in central Baghdad have gone. The curfew was lifted in 2015. The Suqur checkpoint separating Baghdad from Anbar province, notorious for delays and maltreatment, still shuts at sundown. But Anbar's Sunnis no longer need a sponsor to enter Baghdad. For the first time since 2003, your correspondent drove the length of Iraq, from the border with Kuwait to the one with Turkey, without a security escort or special permits.

The calm is drawing Iraqis home. Worldwide it takes five years on average for half of those displaced by conflict to return home after a war, says the UN. In Iraq it has taken three months. "We've seen nothing like it in the history of modern warfare," says Lise Grande, who headed UN operations during the war on IS. Millions returned without compensation, electricity or water. Rather than wait for the government to provide homes, they are repairing the wreckage themselves.

Lecturers at Tikrit University have raised funds from private evening classes, rebuilt their war-battered campus and re-designed the curriculum "to promote peaceful coexistence", says the dean of Sharia Studies, Anwar Faris Abd. In this staunchly Sunni city, trainee clerics now study Shia as well as Sunni schools of law. In the spirit of reconciliation, half of the university's 30,000 students are Shia.

Religious minorities feel safer, too. Over 70% of the 100,000 Christians who fled to Kurdistan have returned to their homes on the Nineveh plains, says Romeo Hakari, a Christian parliamentarian in Erbil. Sunnis from Mosul joined Chaldean Catholics to celebrate mass at their church in Bakhdida, whose icons IS used for target practice.

There has been a striking backlash against organised Islam. Mosque attendance is down. Although Sunnis are rebuilding their homes in Falluja, the minarets and domes in the city once known as "the mother of mosques" lie abandoned and ruined. "Only old men go to pray," explains a 22-year-old worker mixing cement. Designer haircuts and tracksuit tops are the latest male fashion, because IS banned them. "Our imams radicalised us with IS and terror but refuse to admit it," says a Sunni final-year student at Tikrit University with a bouffant hairdo.

Mistrust of clerics is as keenly felt in the Shia south. The turbaned Iranians gracing Basra's billboards invite scorn. Cinemas banned since 1991 are reopening. Iraq's first commercial film in a generation went on release this month. "The Journey" tells of a female suicide-bomber who, just as she is about to blow herself up, questions how she will rip apart the lives of people around her. It pours compassion on perpetrator and victim alike.

Secularism is making inroads even in the holy city of Najaf, the seat of Iraq's ayatollahs, which has thrived on Shia pilgrimage since the American invasion. The new public library at the golden-domed shrine of Imam Ali includes sizeable collections of Marx's tracts and non-Muslim scriptures. Shia clerics who until recently banned Christmas trees and smashed shop windows displaying love-hearts on Valentine's Day now let them pass.

Iraq's dominant religious parties used to flaunt their sectarian loyalties to get out the vote at elections. Now many hide them. An opinion poll last August showed that only 5% of Iraqis would vote for a politician with a sectarian or religious agenda. Yesteryear's Shia supremacists these days promise to cherish the country's diversity, and recruit other sects to their ranks.

All this produces strange bedfellows. Muqtada al-Sadr, a Shia cleric with a base in the shantytowns of Baghdad and Basra, has allied with communists, whom he once damned as heretics. Iraq's branch of the Muslim Brotherhood, an Islamist party, has joined forces with al-Wataniya, an anti-sectarian party led by a former Baathist, Iyad Allawi. As old alignments break apart, the Iraqi National Alliance, which grouped the main Shia parties, has split into its constituent parts. Kurdish and Sunni blocs are fragmenting too. Several religious factions have assumed secular names. "At least five masquerade behind the word 'civil'," complains the leader of the Civil Democratic Alliance, a genuinely secular party.

Against this background one worry stands out. Iraq's politicians are mostly failing to rise to Iraq's new spirit. If not on the international conference circuit, the government can be found in the Green Zone, the city within a city that the Americans carved out of Baghdad with six-metre-high concrete blast walls. The fortress provides a safe space for foreigners and officials to do business, say its residents. But for many Iraqis it is where officials conspire to siphon off public money.

The main government jobs are still dished out by sect and ethnicity. In healthy democracies the opposition holds the executive to account. In Iraq the government is a big tent. Factions name their own ministers, and they in turn appoint ghost workers to claim salaries. Ports, checkpoints and even refugee camps are seen as sources of cash and divvied out between factions. Appointment is rarely on merit. The head of Najaf's airport is a cleric. Opinion polls suggest that most Iraqis want new faces, but Iraq's leaders remain mostly the ones America installed in 2003.

Reasons for disillusion include the slow pace of reconstruction and the lack of jobs. Many Iraqis praise the speed with which the UN helped the displaced get home; they think their own politicians were remiss. Three million children are still out of school. A quarter of Iraqis are poor.

Iraq's economy has fluctuated as wildly as its geopolitical fortunes. GDP per person collapsed after the war for Kuwait in 1991 and during the American-led invasion of 2003. A gradual recovery was interrupted by the upheaval of 2014 and 2015 (see chart). Economic activity may now be set to take off again. Oil output has risen from a low of 1.3m barrels a day (b/d) in 2003 to 4.4m. Iraq is already OPEC's second-biggest producer, with output predicted to rise to 7m b/d by 2022. It has amassed over $50bn in reserves, about a quarter of GDP.

There are small signs of government investment: fancy lampposts in Falluja and Mosul, astro-turf pitches in Hilla and a grass verge with fountains along Baghdad's airport road. But some of the Middle East's largest factories still lie idle—everything from steel and paper mills to factories that made syringes, textiles and more. Since most sanctions were lifted in 2003 a country that used to make things has come to rely far more on oil. It uses its oil money to finance patronage in the bloated public sector and imports almost everything, including petrol, from its neighbours. Officials pocket commissions and bribes in the process.

As a result, foreign governments are wary of giving aid. "It's a bottomless pit," despairs a Gulf minister. The country has an anti-corruption watchdog, the Commission of Integrity, but that too is said to have succumbed to factional profiteering.

Suspicion of foreigners, a relic of the Saddam era, risks lowering the appetite of potential investors. Iraq's Safwan border crossing lies an hour's drive away from the Kuwait conference where Haider al-Abadi, the prime minister, declared Iraq open for business. It could not be less inviting. Rubble left over from American bombing 15 years ago spills over the pavements. Four sets of officials had to sign and stamp entry papers before your correspondent could bring in his laptop. "We still think foreigners are spies or imperialists bent on plunder," grumbles an Iraqi fund manager.

Disgruntlement carries great dangers. It is common to hear Iraqis long for a military strongman like Egypt's general-cum-president, Abdel-Fattah al-Sisi, or a Chinese-style autocrat, to rid Iraq of democracy's curse. Many even express nostalgia for Saddam, most notably in the south, where his yoke fell heaviest. They recall how, despite UN sanctions, he repaired bombed bridges and power plants within a year of the war of 1991. He somehow kept the hospitals and electricity running, criminals off the streets and the country self-sufficient in rice, sugar and vegetable oil. "Before 2003 the state still cared about art, theatre and the preservation of antiquities," says a sculptor who works above Basra's old canal, which now flows black with sewage.

For all the war fatigue, the threat of renewed violence is never far away. Mr Barzani's humiliated Peshmerga fighters threaten to hit back if their marginalisation continues. "Just as they destabilised Kurdistan, we can destabilise Iraq," says one of his advisers. He threatens to send fighters to pillage Iran, which he holds ultimately responsible for the Iraqi army's strike against the Kurds. The *Hashd*, for their part, are armed and expect to be treated like heroes, not sent home empty-handed.

On a map of northern Iraq, a UN official draws five large red boxes, covering most of its main cities. Each, she warns, indicates where IS could resurface. "Many IS fighters shaved their beards, put on dirty sandals and walked out," says an international observer. In February a squad hiding in the Hamrin mountains north of Tikrit ambushed and killed 27 soldiers. There have been frequent strikes since. The refugee camps are thought to be full of sleeper cells, padlocked behind wire fencing. The rain floods their tents, watering grievances. Just as Egypt's prisons nurtured Ayman al-Zawahiri, al-Qaeda's leader, and America's Camp Bucca in Iraq bred Abu Bakr al-Baghdadi, the IS leader, Iraq's prisons may now be "incubating a new generation of trauma and terror", says Nada Ibrahim, a Sunni doctor in Baghdad.

**Break the curse**

Iraq has known, and wasted, other hopeful moments. The overthrow of Saddam was botched by America, which shut Sunnis out of the new order. The respite won by its surge of troops in 2007-08 was botched by Nuri al-Maliki, the then prime minister from Dawa, a Shia Islamist party, who ran a sectarian government. Can Mr Abadi break the cycle?

Iraq holds much promise, given its abundant oil and water and its educated population. And Mr Abadi is remarkably popular among Sunnis even though he, like Mr Maliki, is from Dawa. "We want elections and we want Abadi to win," cheers a female lawyer in Mosul's courthouse, surrounded by nodding colleagues.

Yet Mr Abadi has failed to turn his military victory into political gain. Some of his own advisers compare him to Churchill, who led Britain to victory over Nazi Germany only to be voted out of office. Iraq's leaders seem unlikely to act as Britain's did, turning from war to social reform; instead they are risking a reversion to civil strife. Confronted with a dispirited population, powerful militias, lurking jihadists and scheming politicians, Iraq's governing class has yet to show it knows how to win the peace.

*This article appeared in the Middle East and Africa section of the print edition under the headline "Moving forward"*

Escape from Libya

# Europe is sending African migrants home. Will they stay?

*Facing horrible conditions in Libya, many Africans are accepting free flights home. But some are ashamed to return*

**Print edition | Middle East and Africa** Mar 28th 2018

ONCE considered the smartest hangout in town, the Benin Plaza motel in southern Nigeria's Benin City has seen better days. Its chalet-style rooms are normally empty, and the Moat Bar, which promises "groovy nights and exotic cocktails", has fallen into disrepair.

For the Plaza's recent influx of guests, though, the motel is the first comfortable night they have had in rather a long time. Requisitioned by the government for migrants repatriated from Libya, it offers new arrivals free accommodation for a few days while they find their feet.



The repatriation programme is part of a joint UN and EU effort to stem the flow of migrants to Europe. It encourages those who have made it to Libya to go home voluntarily, rather than risk a rickety boat across the Mediterranean. People who turn back get a free flight—cutting out the need for a perilous return journey across the Sahara.

The programme, launched in December 2016, repatriated some 15,000 migrants to various west African countries in its first year. Most of them were in squalid Libyan detention centres or destitute on the streets of Tripoli. This barely scratches the surface. The International Organisation for Migration (IOM), part of the UN, has registered more than 400,000 migrants in Libya, but it reckons there are between 700,000 and 1m of them in the country.

Nigeria's repatriation scheme did not start until late last year. But it proved timely. In November video emerged showing Nigerian and other African migrants being sold for the equivalent of $400 each in what appeared to be Libyan slave markets. The chilling footage, and interviews with rescued migrants, spelled out some of the risks of the crossing far better than any government-run campaign could. About 3,000 Nigerians have been brought home and another 15,000 are expected by June, says Solomon Okoduwa, an adviser to Godwin Obaseki, the governor of Edo state, of which Benin City is the capital.

Those who return are given 100,000 naira ($278) to tide them over for the first three months, and training on how to start their own businesses. Options include fashion design, hairdressing and farming on land set aside by the state.

The Nigerian leg of this programme is funded by Edo state, but Nigeria is one of 14 African countries sharing a €140m reintegration package from the EU's Emergency Trust Fund for Africa. This €3.2bn pot, set up in 2015, gives African states money and help in resettling migrants returning from Europe and Libya in exchange for trying to stop illegal migration at its source. A study released earlier in March by Pew, a think-tank, estimated that at least 1m sub-Saharan Africans moved to Europe between 2010 and 2017.

Many of them are Nigerian. Of those flown home from Libya by the IOM, the great majority are from Edo, says Mr Okoduwa. The state has a long tradition of migration, much of it by illegal means. In the late 1980s local women who went to Italy as tomato-pickers found they could earn more as prostitutes. When they came back rich, others followed. Trafficking networks evolved to help would-be migrants get into Europe. Kevin Kyland, a former Scotland Yard detective who is now Britain's anti-slavery commissioner, guesses that 90% of Nigerians working in brothels in Europe are from Edo.

Mr Obaseki hopes to stop the traffickers, likening them to the slave traders who did business in his region in colonial times. He has enlisted the help of local pastors, who now warn of the dangers of traffickers from their pulpits.

But the downbeat mood of many of the Plaza motel's new guests shows how difficult it is to stand between people and their dream of a better life. Most paid to be smuggled to Europe, in the hope of becoming richer than their parents. Take Abibu, a tough-looking 25-year-old whose mother sold her last plot of land to raise the 150,000 naira demanded by smugglers for the trip across the Mediterranean. His boat was stopped by Libyan coastguards and he was taken back.

"I don't want to go back to my village, because if I hear people saying: 'This is the guy who got nowhere,' I'd probably kill them," he says. "If the government doesn't train me in something decent, I might be forced to go into crime to get the money to buy my mother's land back."

Abibu's hopes of a better life abroad are widely shared. In a Pew poll, about 40% of respondents in countries such as Nigeria, Ghana and Senegal said they planned to move to another country within five years. Asked whether they would move at once if they had the means and opportunity, 75% of Nigerians and Ghanaians said yes. Polling by Afrobarometer in Nigeria last year suggests why. Most of those thinking of leaving said it was to find work or escape economic hardship.

Mr Okoduwa admits that some who are returning can be hard to please, as can their parents. One mother, on receiving her daughter from Libya, said she would simply try to fly her to Europe instead.

He insists, though, that most are grateful for the help. Yes, the scheme could do with much more funding, he says, and no, he cannot guarantee that some will not try again to go to Europe. Those who do will be "a minority, just two or three per cent". Yet even if he is right that those returning will stay at home, the queue of young Nigerians who want to seek their fortune abroad is long and wide.

*This article appeared in the Middle East and Africa section of the print edition under the headline "Homeward bound"*

A very black market

# How illegal charcoal fuels war and harms the environment

*Stopping the dirty business is not easy*

**Print edition | Middle East and Africa** Mar 28th 2018

DRESSED in a faded T-shirt bearing the face of the American rapper 50 Cent, Samson Okenye leans on a shovel in Nyakweri forest in south-western Kenya. A 62-year-old from the Rift Valley, he has a new gig for his retirement. Having worked in a factory for most of his life, he is now chopping down trees and burning them for charcoal. He sells each bag he produces from his crude earthen kilns for 400 Kenyan shillings (about $4). Men carry it off on motorbikes to Nairobi, the capital, and Kisumu, Kenya's third-largest city.

Charcoal is one of the biggest informal businesses in Africa. It is the fuel of choice for the continent's fast-growing urban poor, who, in the absence of electricity or gas, use it to cook and heat water. According to the UN, Africa accounted for three-fifths of the world's production in 2012—and this is the only region where the business is growing. It is, however, a slow-burning environmental disaster.



In Nyakweri, the trees are ancient and rare. Samwel Naikada, a local activist, points at a blackened stump in a clearing cut by burners. It is perhaps 400 years old, he says. The effect of burning trees spreads far. During the dry season, the forest is a refuge for amorous elephants who come in from the plains nearby to breed. The trees store water, which is useful in such a parched region. It not only keeps the Mara river flowing—a draw for the tourists who provide most of the county government's revenue. It also allows the Masai people to graze their cows and grow crops. "You cannot separate the Masai Mara and this forest," says Mr Naikada.

Short-term financial interests are doing just that. Most of the burners are not from nearby, where people are mostly Masai. Instead, like Mr Okenye, they come from farther north-west. At the moment the forest is communally owned, but local power-brokers illegally sell parcels of it to the burners. "The problem is the need for quick money," says Johnson Mopel of the Transmara Wildlife Scouts Association, a local NGO. "Charcoals are like hot cakes in the marketplace."

Nyakweri is hardly the only forest at risk. The Mau forest, Kenya's largest, which lies farther north in the Rift Valley, has also been hit by illegal logging. Protests against charcoal traders broke out earlier this year, after rivers that usually flow throughout the dry season started to run dry. In late February a trader's car was reportedly burned in Mwingi, in central Kenya, by a group of youngsters who demanded to see the trader's permits. At the end of February the government announced an emergency 90-day ban on all logging, driving up retail prices of charcoal by 500%, to as much as 5,000 shillings a bag in some cities.

The problems caused by the charcoal trade have spread beyond Kenya. In southern Somalia, al-Shabab, a jihadist group, funds itself partly through the taxes it levies on the sale of charcoal (sometimes with the help of Kenyan soldiers, who take bribes for allowing the shipments out of a Somali port that Kenya controls). The logging also adds to desertification, which, in turn, causes conflict across the Sahel, an arid belt below the Sahara. It forces nomadic herders to range farther south with their animals, where they often clash with farmers over the most fertile land.

In the power vacuum of the eastern Democratic Republic of Congo, rampant charcoal logging has destroyed huge swathes of Virunga National Park. That threatens the rare gorillas which tourists currently pay as much as $400 a day to view, even as it fuels the conflict.

In theory, charcoal burning need not be so destructive. In Kenya the burners are meant to get a licence. To do so, they have to show they are replacing the trees they are cutting down and that they are using modern kilns that convert the trees efficiently into fuel. But, admits Clement Ngoriareng, an official at the Kenya Forest Service (KFS), the rules are laxly enforced. Some suspect that powerful politicians stymie efforts to police burners.

In Nyakweri forest, trade has slowed since logging was banned in February. But Mr Naikada does not think the prohibition will change much. In 2015, after environmentalists kicked up a fuss in the Kenyan press about the loss of Nyakweri, a KFS camp was set up to protect the forest from loggers. A helicopter buzzed over the trees, putting out fires. Yet by the end of 2016, after the forest service's budget was cut, the camp had closed. As the dry season gives way to rains, protests will die down and the new ban will probably be lifted. And then the logging will start again.

*This article appeared in the Middle East and Africa section of the print edition under the headline "A very black market"*

Marvellous marketing

# The success of "Black Panther" is spurring demand for African comics

*Superheroes from real sub-Saharan countries get a boost from Wakanda*

**Print edition | Middle East and Africa** Mar 28th 2018

SINCE the release of "Black Panther", a film based on a Marvel comic, internet searches for African travel have spiked. But those seeking the African kingdom over which the titular superhero reigns will be disappointed. Wakanda does not exist, unless one counts a water park of that name in Wisconsin.

Africa has been affected in more tangible ways by "Black Panther", which has a predominantly black cast and is one of the highest-grossing superhero movies of all time. Its popularity extends to the continent, where filmgoers from Lagos to Nairobi dress in Afro-futurist garb for screenings. Fashion designers have received a boost from the film's distinctive mix of traditional and contemporary African styles.



African comic-book artists are perhaps the biggest beneficiaries. Take "Kwezi", a comic by Loyiso Mkize about a South African superhero who battles baddies in Gold City, a proxy for Johannesburg. Kwezi is a cocky teenager, but as his powers grow he draws closer to his ancestors and embraces his heritage. South Africans love it; bookshops sell out fast. At one in Johannesburg, customers demand versions in Zulu and Xhosa (which, incidentally, is what Wakandans speak in the film). "Our superhero", says a display box.

Bill Masuku, the Zimbabwean creator of a comic about a vigilante superhero called Razor-Man, says "Black Panther" has made it easier to market his work in a part of the world where geek culture is unfamiliar. More interest has come from comic fans in America and Europe, who are curious about the African scene. The team behind "Kugali", a slick anthology of African comics due out in June, is hoping the enthusiasm lasts.

It probably will. Nnedi Okorafor, a Nigerian-American writer, has been commissioned to write a comic series titled "Wakanda Forever", about the king's all-female bodyguards. Black Panther will also appear in the next Marvel movie, due out in April. That isn't soon enough for Nollywood, Nigeria's film industry. Cheesy spin-offs are already circulating. One, also called "Wakanda Forever", is set in a Nigerian village. It lacks the technological splendour of the Marvel universe. But the crowing roosters give it an air of authenticity.

*This article appeared in the Middle East and Africa section of the print edition under the headline "Sub-Saharan superheroes"*

**Europe's "identitarian" right**
White, right and pretentious

White, right and pretentious

# How "identitarian" politics is changing Europe

*Having learned from the identity politics of the left, right-wingers are shaping the conversation*

**Print edition | Europe** Mar 28th 2018

THE Flemish city of Ghent is so packed with medieval antiquities that it is in no danger of forgetting its history. Nonetheless, cultural identity is a burning political issue there. On March 22nd marchers led by a conservative Flemish student group, the Nationalist Student Union (NSV), filed into the square of the Cathedral of St Bavo. The march was a protest over the large number of murders of white South African farmers by blacks. It was also part of a growing movement led by young European activists aimed at reshaping identity politics, long the province of the left, into a right-wing cause.

White Afrikaners, like Flemings, speak a form of Dutch, so there is a cultural bond. The NSV, founded in 1976 as part of the Flemish independence movement, wanted to show solidarity with them, said Bavo Janssens, one of the group's leaders. Behind him flew flags bearing the Flemish lion and a banner reading "ANC murderers". In a jab at multiculturalism everywhere, Mr Janssens said the Belgian media were too politically correct to admit that "the rainbow nation of Nelson Mandela has failed."



All over Europe, studious youths with neat haircuts are changing the face of right-wing activism. Some embrace the new populist parties that have sprung up across Europe, like the Netherlands' Forum for Democracy (FvD) or Italy's CasaPound (after the fascist-sympathising poet Ezra). Others become social-media personalities, or run websites and publishing houses like Sweden's Red Ice and Arktos.

This new "identitarian" right sprawls across borders; activists from Scandinavia, Italy, Germany and America often collaborate. In electoral terms, it is tiny. But it also aims to change politics by spreading ideas and setting the terms of political debate. Its activists call this "metapolitics", a concept borrowed from Antonio Gramsci, an Italian Marxist of the 1920s and 1930s.

Western Europe's elections last year were widely seen as dealing a blow to populism. But they also brought victory to new parties focused on identity. In the Netherlands Thierry Baudet, the leader of the FVD, which won two seats in parliament, has warned that immigration may mean the "homeopathic watering-down" of Dutch culture. In Germany the Alternative for Germany (AfD) party brought far-right nativism into the Bundestag. In Italy this year the two big winners, the Northern League and the Five Star Movement, propose strict limits on immigration. Increasingly, identity is a key issue in European elections, and the identitarian right is starting to frame the debate.

One way it gains influence is by prompting authorities to overreact. In early March Martin Sellner, an Austrian identitarian activist, was barred from entering Britain, where he had planned to deliver a speech in Hyde Park. Mr Sellner's expulsion was big news on alt-right and identitarian websites for weeks. He condemned it as "a new totalitarianism": "We are being replaced, conquered by radical Islam, and we are not allowed to talk about it!"

Mr Sellner is among the biggest figures in the Identitarian Movement (IM), a network with branches in most European countries. The movement, which began in France in 2003, often uses a black-and-yellow flag with a symbol that represents the Spartans' shields at the battle of Thermopylae (when Europeans resisted a Persian horde). They share common ideas: the need to stop mass immigration, the undesirability of Islam and the corrupt authoritarianism of the EU. The IM does not endorse parties. Instead it stages politically charged stunts, such as disrupting a play by a Jewish playwright with refugee actors in Vienna. The most ambitious IM action yet was Defend Europe, a project last August by the movement's Italian branch, which hired a boat to discourage NGOs from rescuing migrants in the Mediterranean. The influence of far-right media is just as significant. The website Red Ice, based in both Sweden and Texas, connects European identitarians to American alt-righters.

**Boomerang**

Identitarians largely avoid old-fashioned national conflicts by concentrating instead on what they see as the civilisational clash between Europe and other continents. Many of them even advocate a European-level political body that can hold its own against superpowers like America and China. But they disagree about liberalism. Some see it as part of Europe's identity, threatened by Muslims who do not respect women or gay people. Others, including Daniel Friberg, the Swedish CEO of Arktos, see liberalism as the "disease" that made Muslim immigration easy in the first place.

Such attitudes, and the ironic tone of much far-right discourse, make for strange detours. In the social-media channels where identitarians congregate, on Twitter, Gab and 8chan, a pseudo-movement calling itself NazBol has popped up, combining Nazi and Bolshevik iconography. No one knows whether it is serious.

There is not much risk of NazBols marching through the streets of Ghent. Much more important is how identitarian language migrates from these fringe groups towards the political centre. In the Dutch municipal elections this month, ads for the governing Liberal party assured voters that they were “not racist” for celebrating the holiday of Sinterklaas in blackface. The German interior minister, Horst Seehofer, announced this month that Islam “is not a part” of Germany, forcing Angela Merkel to contradict him. In Denmark the Social Democrats now want to ship even legitimate asylum-seekers back to the regions they come from. The metapolitics, as the identitarians put it, is working.

*This article appeared in the Europe section of the print edition under the headline ”White, right and pretentious”*

Vladimir Putin, defiant pariah

# Western governments expel Russian diplomats

*Appalled by a chemical attack on Britain, America joins its allies in protest*

**Print edition | Europe** Mar 28th 2018

*The article now includes an update added on March 30th 2018*

IT IS one thing to stand defiant and aloof on the world stage, another to be a pariah. That is the message that Western governments hope President Vladimir Putin will absorb as he digests the co-ordinated expulsion of over 130 Russian diplomats by more than two dozen countries, in response to a nerve-agent attack in Britain. America's decision to throw out 60 Russian officials accused of spying under diplomatic cover was that country's largest such action, exceeding even expulsions in the chilliest years of the cold war. President Donald Trump's government also ordered the Russian consulate in Seattle to close, citing its proximity to a nuclear submarine base and to the headquarters of Boeing, an aircraft maker.



Foreign leaders, notably those from Britain, France and Germany, used a European Union summit and a flurry of telephone diplomacy to urge allies to act in concert. Suspected spooks were given their marching orders from Oslo to Ottawa, and from Copenhagen to Canberra. New Zealand shyly admitted it knew of no undeclared Russian agents on its soil, and so could not join the effort. The NATO military alliance asked seven Russians to leave and ordered Russia's mission at its Brussels headquarters to shrink by a third.

Western leaders took care to explain that their confrontation is with Mr Putin and his cronies. A Trump aide's briefing on the expulsions on March 26th began with an expression of condolences for scores of children and adults killed in a fire in a Siberian entertainment complex. The blaze in the city of Kemerovo inspired public protests after investigators said a fire alarm had been switched off and exits blocked. America draws "a distinction between the Russian people and the actions of their government", the Trump aide said.

The same White House briefing called the expulsion of 60 alleged spooks, including 12 at the UN in New York, an act of solidarity with America's closest ally after "a reckless attempt by the [Russian] government to murder a British citizen and his daughter on British soil with a military-grade nerve agent".

Mr Trump himself did not announce or explain the expulsions on March 26th. His thumbs were busy in the days after Britain said Russia's government used a nerve agent, Novichok, in the streets of an English cathedral city in a bid to kill a former Russian spy, Sergei Skripal, and his daughter, Yulia. Trump tweets condemned a terrorist attack in France and denied that he is struggling to recruit good lawyers. The president tweeted that he would win a fight with the former vice-president, Joe Biden, who would "go down fast and hard, crying all the way". But his Twitter account was silent as 60 Russians were ordered out of his country. Indeed, Mr Trump has never breathed a word of criticism of Mr Putin. The most benign account, from Mr Trump's defenders, is that he takes a monarchical view of geopolitics, seeking respectful relations with leaders who impress him, even as underlings scrap. Others have less flattering explanations.

Russia's state media and proxies denied Russia's involvement in the Skripal poisoning and offered some fanciful alternative theories. They claimed that America invented Novichok, that Britain carried out the poison attack to frame Russia or accidentally allowed nerve agents to leak from a chemical-weapons-research facility, that Ukraine is behind the whole thing and that defectors are prone to suicide.

To Russian propagandists, confusion is a friend. Their aim is to not to convince but to foment cynicism, apathy and a sense that believing official accounts is for chumps. Russia also likes to divide Europe. Austria, Greece, Cyprus and Portugal declined to expel Russians. In Italy and the Czech Republic pro-Putin nationalist politicians questioned the expulsions.

Still, Russia's brazenness is raising the costs of being a Putin apologist. Brexit Britain and Mr Trump's America are *re-learning* the power of alliances such as the EU and NATO. Isolation has its downsides.

*Update, March 30th 2018*

*The inevitable Russian retaliation, when it came on March 29th, both escalated tensions with the West and sought to contain them. The escalation took the form of an order to close the American consulate in Russia's second city, St Petersburg—an asymmetric response to the earlier closure of Russia's consulate in Seattle, a less important post. Sergey Lavrov, the Russian foreign minister, also announced the expulsion of 60 American diplomats, matching precisely the number of Russians ordered to leave by the Trump administration.*

*Mr Lavrov called the co-ordinated expulsion of Russians by Western governments "absolutely unacceptable". Mr Putin's spokesman, Dmitri Peskov, called the suggestion that Russia was behind the nerve agent attack in Britain "unprecedented impudence".*

*But Russian authorities also focused their indignation narrowly on two countries, America and Britain, which they accused of putting EU and NATO allies under "the greatest pressure" to join their diplomatic campaign. For his part Mr Trump continued his near-total silence about Russia. While giving a rambling and wide-ranging speech in Ohio, he failed to mention the fact that 60 of his diplomats had just been accused of spying and ordered to return home.*

*This article appeared in the Europe section of the print edition under the headline "The defiant pariah"*

Coalition of the angry

# Italy's populists edge closer to forming a government

*They jointly agree on parliament's speakers*

**Print edition | Europe** Mar 27th 2018

THE first duty of a newly elected Speaker of the chamber of deputies, Italy's lower house, is to visit the president in his palace on the Quirinal hill. On March 24th Roberto Fico of the maverick Five Star Movement (M5S) was chosen for the job. But instead of following custom by slipping into an official limousine for the one-kilometre journey, Mr Fico walked up with his partner.

His election signalled not just a change of style, but a shift in the political landscape that shortened the odds on an all-populist government emerging from the consultations that President Sergio Mattarella is to initiate after Easter. Mr Fico, who began in politics as an environmental activist, won with the help of the populist-right Northern League and Silvio Berlusconi's conservative Forza Italia party. Yet more strikingly, his colleagues in the Senate voted to make Elisabetta Casellati the new Senate president. Ms Casellati was the candidate of an electoral alliance including the League and Forza Italia. She is known for her loyalty to Mr Berlusconi, whose scandal-strewn past represents much that the M5S was founded to oppose.



Ms Casellati's election was anything but a victory for the former prime minister, however. Mr Berlusconi, whose party trailed the League in the election, had backed another senator. Just to show who now leads the right, the League's Matteo Salvini refused to support him, torpedoing his chances. The former prime minister fumed that it was an "act of cold hostility". Mr Berlusconi's troubles continue to deepen: on March 26th he was ordered to stand trial, accused of paying witnesses to lie for him in earlier proceedings in which he was acquitted of paying for underage sex.

A coalition of the League and the M5S, which won the most votes of any party at the general election on March 4th, could offer the country stability. It would have clear majorities in both houses. But it would send tremors of apprehension through markets and European chanceries, for it would put into office two parties that have vowed to defy the euro zone's budget-deficit limits and whose electoral pledges, if implemented, would add tens of billions of euros to Italy's already worryingly high public debt (more than 130% of GDP).

The League and the M5S have very different policies and constituencies. The M5S swept the south in the election. The League, despite Mr Salvini's efforts to make it a national party, still has many supporters who view southerners with disdain. He and Luigi Di Maio, the M5S's leader, both know they could face mutinies if they link up. But the two men have developed a rapport. On March 26th Mr Salvini expressed qualified backing for Five Star's pledge of a universal basic income.

Italian government talks are unpredictable, however. Other possible combinations include a coalition with Forza Italia; a link-up between the M5S and the centre-left Democratic Party (PD); and even a broad government of national unity. In any case, an all-populist coalition could give itself a limited mandate to alter Italy's hotchpotch of an electoral law, enact a few popular reforms and then go back to the country. Their aim then would be to wipe Forza Italia and the PD off the map and install a new, populist two-party system.

*This article appeared in the Europe section of the print edition under the headline "Birds of a feather"*

It's an Erdogan-eat-Dogan world

# Turkey's last big independent media firm is snapped up by a regime ally

*The Dogan group gets an offer it can't refuse*

**Print edition | Europe** Mar 27th 2018

RECEP TAYYIP ERDOGAN has been on a roll lately. On March 18th the Turkish president announced the army's capture of Afrin, a Kurdish stronghold in Syria, after two months of relentless attacks. Barely a week later, he scored another victory when a pliable mogul snapped up the last bastion of semi-independent journalism in Turkey, the Dogan group, for $1.2bn.

For one of the country's largest media conglomerates, the sale must have felt like a *coup de grâce.* Dogan outlets, including two of the country's four biggest newspapers, *Hurriyet* and *Posta;* a leading television channel, CNN Turk; and a news agency, among many others, have been squirming under government pressure for years. The group's ageing owner, Aydin Dogan, one of the symbols of Turkey's deposed secular order, has been hounded by tax inspectors and prosecutors. People close to his group say Mr Dogan conducted the sale without consulting any associates. Some believe the mogul faced arrest unless he sold his empire to one of the president's men. Had that happened to the 81-year-old, he would have joined over a hundred other Turkish journalists already in prison, most of them jailed since the failed coup of 2016.



The move leaves Mr Erdogan and his allies in control of almost all big media outlets ahead of parliamentary and presidential elections due next year. According to Esra Arsan, an analyst, two out of every three newspapers in Turkey, representing a crushing 90% of total national circulation, are now in the hands of businessmen close to the government. Some are closer than others. The current CEO of one big media group is the brother of Mr Erdogan's son-in-law (who happens to be energy minister). Others, including the Dogan group's new owner, Erdogan Demiroren, have been pushed into the business by a government that wants all media to be run by people it can boss around. In a leaked phone conversation from 2013, Mr Demiroren got such an earful from Turkey's president after one of his newspapers published details of secret peace talks with the leader of a Kurdish insurgent group that he suffered both an epiphany and a breakdown. "Why did I ever get into this business?" he was heard asking Mr Erdogan through his tears.

The Turkish strongman had been putting the screws on the Dogan group for much longer. In 2009, after *Hurriyet* aired corruption allegations against a religious charity close to Mr Erdogan's government, the finance ministry slapped the group with an extortionate tax fine of $2.5bn (later reduced to about $600m). The move forced Mr Dogan to sell two newspapers, *Milliyet* and *Vatan,* to Mr Demiroren on the eve of a parliamentary election in 2011. Dogan outlets have since sacked journalists deemed too critical of the president and toned down their coverage. In the summer of 2013 the group's flagship news channel stopped reporting from the scene of the biggest anti-government protests in years—to air a documentary about penguins. Amid the mass purges that followed the coup attempt, Dogan newspapers have toed the government line even more closely. Last spring *Hurriyet* censored an interview with Orhan Pamuk, in which the Nobel laureate for literature outlined why he opposed constitutional changes giving Mr Erdogan a range of substantial new powers as a consequence of transforming Turkey's broadly parliamentary system of government into a presidential one. (The changes were narrowly approved by a referendum last year, though opponents say the ballot was invalid.)

Journalists at Dogan outlets, for whom the inevitable sale of the businesses still came as a shock, describe the mood in their newsrooms as funereal. Those known for their past outspokenness are expected to get the boot in the coming months. "Even if we behave and continue censoring ourselves, that's not enough for them, because they know what's going on in our hearts," says one writer, referring to Mr Erdogan's government. "It's not what we write that matters anymore, but what we represent."

*This article appeared in the Europe section of the print edition under the headline "It's an Erdogan-eat-Dogan world"*

Putin's sour grapes

# Noroc (cheers) for Moldovan wine

*Russia tried to crush Moldova's wine industry like a grape. But others are happy to chug Moldovan merlot*

**Print edition | Europe** Mar 31st 2018

"LET'S try this!" Victor Bostan selects a 1984 red from the cellar of his Purcari winery. He is in a bullish mood. Last month Purcari shares began trading on the Bucharest stock exchange. In 2017 sales from his four wineries were up 35% on 2016. Bad weather in the big western European winemaking countries caused production to plummet to its lowest level in 60 years. But in Moldova, where the weather was good, producers can scarcely contain their excitement at how well things are going.

In Soviet days almost all Moldovan wine went to the rest of the Soviet Union. In the 1980s its vineyards were uprooted when Mikhail Gorbachev began his anti-alcoholism campaign. With the collapse of the Soviet Union much of Moldova's industry also collapsed; but the wine and brandy businesses did not. Indeed, says Mr Bostan, these were the best times ever. Russia, to which 80% of the country's booze went, had an unslakable thirst for it. "It was like pumping oil from the ground."



Moldova is wedged between Romania and Ukraine. A breakaway sliver, Transdniestria, is controlled by Russia. In 2006, when Moldova rejected a deal to end the frozen conflict over Transdniestria, Vladimir Putin's Russia slapped an embargo on Moldovan wine. Millions of bottles already in Russia were poured away or never paid for. "The sector was dead," says Gheorghe Arpentin of the National Office for Vine and Wine. The embargo was relaxed a little later, but Mr Putin redoubled it in 2013 when Moldova annoyed him by signing an association agreement with the European Union.

Since then the industry has transformed itself. Like Purcari, all Moldova's wineries have redirected their sales to the EU. The embargoes have forced producers to make better plonk: European oenophiles are picky. The main customers are former communist countries where Moldovan wine was already known, such as Poland and Romania. Chinese buyers are keen, too. Russia allows some imports, but only from Transdniestria, Gagauzia (a small pro-Russian region) and a handful of wineries lucky enough to have close Russian links.

The Moldovans' hard work is paying off. In 2017 exports were 19.4% higher than in 2015. Winemakers, unlike grapes, cannot easily be trampled underfoot.

*This article appeared in the Europe section of the print edition under the headline "Cheers for Moldovan wine"*

The long arm of the law

# Catalonia’s separatist leader is arrested in Germany

*What Carles Puigdemont’s detention portends*

**Print edition | Europe** Mar 31st 2018

SPAIN’S intelligence service was humiliated last year when it failed to stop supporters of Carles Puigdemont’s separatist Catalan government from smuggling in ballot boxes for an unconstitutional independence referendum. The spies got their revenge on March 25th when they tipped off German police, who arrested Mr Puigdemont after he drove across the border from Denmark. He was remanded to prison and is likely to be extradited to Spain within two months.

Mr Puigdemont’s arrest ended five months of self-imposed exile, mostly in Belgium, after he organised a post-referendum declaration of independence on October 27th. It came two days after a judge of the supreme court in Madrid charged Mr Puigdemont and 24 other separatist leaders with crimes ranging from rebellion to disobedience. He sent five to prison (four more were already there) and ordered European arrest warrants against six, including Mr Puigdemont.



Tens of thousands demonstrated in Barcelona to denounce what they see as repression of a peaceful, democratic cause. A minority attacked police and blocked motorways. Many other Spaniards see Mr Puigdemont and his fellow separatists as people who used intimidation to try to break up their country and oppress the majority of Catalans who don’t want independence (only 41% do, according to the latest poll). Judge Llarena accuses them of “contemptuous and systematic” flouting of judicial orders, and the mobilisation of crowds to thwart police action.

Whether that amounts to “rebellion” (a charge which entails violence and is punishable by up to 25 years in jail) or its German equivalent of “high treason” is debatable. But the German government of Angela Merkel has been a strong supporter of Mariano Rajoy, Spain’s prime minister, and his handling of Catalonia. “Spain is a democratic state,” her spokesman said. “This conflict has to be settled according to Spanish law.”

The conflict has deprived Catalonia of a regional government since Mr Rajoy imposed emergency rule by Madrid in the wake of the independence declaration last October. After an election in December in which the separatists gained a slim majority, the Constitutional Tribunal and the Catalan parliament’s own lawyers ruled illegal attempts to elect as regional president the absent Mr Puigdemont or two others facing charges.

Divisions among the separatists have also conspired against forming a government. Mr Puigdemont and the more radical elements want to continue “building the Republic”. Others want to remain within the law, and may seek to form a government by allying with the non-nationalist left. Unless that happens by May 22nd, Catalonia will face yet another election that nobody wants.

The state’s robust response to the separatists has halted the independence drive. But it may be storing up problems. Such widespread use of pre-trial detention worries some. Separatists have to be won over, not crushed, said Felipe González, a former prime minister, warning of “government by judges”. A lasting political settlement of the Catalan issue looks far away.

*This article appeared in the Europe section of the print edition under the headline ”The long arm”*

Charlemagne

# How the Dutch will take Britain's place in Europe

*For the Netherlands Brexit is a threat—and an opportunity*

**Print edition | Europe** Mar 31st 2018

"ALL the North Sea's people are connected to each other," muses Hans de Boer, president of VNO-NCW, the Dutch business lobby, as he gazes from his 12th-floor office in The Hague. It is not a bad place for a Dutchman to consider the consequences of Brexit. The port of Rotterdam, Europe's busiest, is just visible in the morning haze. Eighty thousand Dutch firms trade with Britain; 162,000 lorries thunder between the two countries each year. Rabobank, a Dutch lender, calculates that even a soft Brexit could lop 3% off GDP by 2030. Bar Ireland, no country will suffer more. "Brexit was not our preferred option," offers Mr de Boer, drily.

Dutch governments spent the 1950s and 1960s trying to get their British friends into the European club; when Britain voted to leave, in June 2016, some wondered if they might drag the Dutch out with them. The EU's economic and migration traumas had tested the patience of voters for years, and Mark Rutte, prime minister since 2010, seemed unwilling to make the case for Europe. Eurosceptic strains found a vessel in Geert Wilders, a platinum-haired race-baiter who urged "Nexit". Just over a year ago, with an election approaching, Europeans braced for trouble.



What happened next was more interesting. Mr Rutte won the election, although Mr Wilders's success forced him into a four-party coalition with a tiny majority. But rather than continue to play the spoiler, Mr Rutte, with some prodding from his advisers, joined the European debate with a vigour few knew was in him. In early March he visited Berlin to deliver a detailed speech on the EU, his first major intervention since taking office in 2010. Soon afterwards the Dutch and seven like-minded small northern and eastern European countries (one official calls it the "bad-weather coalition") issued a paper laying out a common EU vision.

Arguably, there is no substantive policy change involved. The Dutch still want to limit risk-sharing and common spending in the euro zone, and to boost intra-EU trade. With a Calvinist finger-wag, they urge governments to mind their own yard before seeking common solutions. But Mr de Boer says this is about reassuring Dutch voters rather than attacking the EU. And the Berlin speech marks a change of style for a prime minister long reluctant to engage in European debates. Mr Rutte used to return from EU summits moaning about windbaggery. Now he jumps right in. "I've never seen him so pro-European," says a colleague.

To explain why, Mr Rutte notes cheerfully that Brexit requires the Dutch to recalibrate their four-century diplomatic balancing-act between France, Germany and Britain. That means two things. First, an unabashed commitment to Europe. The Dutch want the EU to forge a strong trading relationship with Britain, but will not break ranks to help bring it about. Second, a willingness to form ad hoc coalitions on specific issues. Mr Rutte reels some off: the Germans on migration, trade and the euro; some central European countries on the EU internal market; the French on climate change. "Brexit is a wake-up call," says Ben Knapen, a former Europe minister. Where the Dutch were often content to let Britain take the lead, now they must step up themselves.

In part this is a hedging strategy against a big-power stitch-up. Fear of being steamrollered by the Franco-German engine, now cranking into gear again, sits in the DNA of Dutch diplomats. Yet they are cautiously optimistic that the Germans will not sell them out on matters like the EU budget or euro-zone reform. Indeed, the Germans are happy to have the group of eight as attack dogs because it places them at the centre of the debate. Peter Altmaier, Germany's economy minister and a confidant of Angela Merkel, has lent the bad-weather coalition his tacit support.

But Mr Rutte is also investing in Emmanuel Macron. After twice hosting Mr Rutte in Paris, France's president dropped into The Hague last week. French-Dutch enmity runs deep, especially on the euro zone; the Dutch want stronger national buffers to protect against crises, whereas Mr Macron is impatient to build supranational bodies and a hefty common budget. Mr Rutte acknowledges the differences, but suggests that if he and Mr Macron can strike a deal, the rest of the EU may follow in their wake. (Germany might have something to say about that.) Trade-loving Dutch diplomats used to shudder at Mr Macron's call for a "Europe that protects". Now, glancing nervously at rapacious Chinese investment, Russian menaces, Donald Trump's tariffs and the terrorist threat, they wonder if he has a point.

### Not a mouse, and roaring

It is a delicate moment for the Dutch. Brexit eliminates an ally, but creates an opportunity to take the initiative. The renewal of the Franco-German relationship presents a hazard, but also a chance to shape the debate. The EU's deal with Turkey to stem illegal immigration in 2016, which the Dutch helped construct, taught Mr Rutte that there is a role for European action in fixing national problems. Dutch officials admit that they are still finding their feet in this new world. But there is a fresh swagger to their diplomacy. Mr Rutte bristles at any suggestion that his country is "small".

Nonetheless, he must be careful to avoid a backlash at home, which makes him careful what he says. MPs, including members of the ruling parties, and the media are alert to the merest hint of being dragged into an EU "transfer union". The Dutch are increasingly weary of eastern Europeans who refuse refugees but lap up EU subsidies. The Eurosceptic right also has a new champion in Thierry Baudet, a well-groomed, piano-playing political entrepreneur. Mr Baudet is dismissed by the establishment as a pseud-in-a-suit, but his calls for the Dutch to leave the EU resonate. His Forum for Democracy has vaulted past Mr Wilders in the polls.

That alone will force Mr Rutte to take a tough line in the coming EU debates on asylum reform, the budget and the euro zone. For many Europeans, the Dutch will only ever be a stalwart member of the awkward squad. But having spent so long on the sidelines, they are at least now taking part.

*This article appeared in the Europe section of the print edition under the headline "Going Dutch"*

**Evidence in schools**
The big education experiment

The big classroom experiment

# England has become one of the world's biggest education laboratories

*A third of its schools have taken part in randomised controlled trials. The struggle is getting teachers to pay attention to the evidence*

**Print edition | Britain** Mar 31st 2018

ASH GROVE ACADEMY, a state primary which sits in Moss Roe, a poor suburb on the outskirts of Macclesfield, is an excellent school. Recently, its team won a local debating tournament, besting fancier rivals; its pupils are exposed to William Shakespeare and Oscar Wilde; lessons are demanding and there are catch-up sessions for those who fall behind. Most important, teaching is based on up-to-date research into what works in the classroom. It is the sort of school that ministers dream of replicating across the country.

But how to do so? When the Conservative-Liberal Democrat coalition came to power in 2010, it set about freeing schools from local-authority control. International studies have suggested that such freedom improves results. But giving teachers autonomy doesn't automatically mean that all will make good decisions. So in 2011 the government provided a grant of £135m ($218m) to establish the Education Endowment Foundation (EEF), a laboratory for education research which would provide teachers with the information to make smart choices.



In the seven years since its foundation, the EEF reckons it has commissioned 10% of all randomised controlled trials ever carried out in education research. In doing so it has turned the English school system into a giant test-bed, with a third of all state schools involved in at least one of its trials. Its work has been used in other parts of the world, like Australia and Latin America, and other countries are considering copying England's example.

But at home, its efforts have raised difficult questions. Does providing teachers with evidence of what works change their behaviour? And if not, what next?

**Where the evidence leads**

The EEF was given two main jobs. First, it dished out cash to researchers with interesting ideas, becoming, on its creation, by far the biggest funder of schools research in the country. Educationalists are inclined to small-scale research projects—the sort of studies, says Stephen Gorard of Durham University, where "academics would write up three interviews with head teachers and call it research." The EEF has prodded them in a more rigorous direction.

Some of its results have been influential. On March 19th the government set aside £26m to fund breakfast clubs, after an EEF study found that they boosted attainment. Just as significant, studies have disproved numerous teaching methods, which is important in a field where fads are common. One recent study found that a programme in which 13- and 14-year-olds assisted 11- and 12-year-olds with their reading did not help the youngsters improve.

Its second job is to disseminate existing research. Its online "teaching and learning toolkit" summarises the findings of more than 13,000 trials from around the world, rating initiatives on the basis of their cost, the strength of the evidence behind them, and their impact, which is measured in the number of months by which they advance children's learning. Getting a pupil to repeat a year, for example, is expensive and there is adequate evidence to suggest that it sets them back by the equivalent of four months. The EEF also provides broader evidence summaries on areas of interest for schools, such as written marking and digital technology.

Teachers claim to pay attention. A report by the National Audit Office, an official spending watchdog, found that two-thirds of head teachers say they turn to EEF evidence for guidance. But the EEF has come to the realisation that the "passive presentation of evidence is not enough," says Sir Kevan Collins, its boss. Naturally, it did this by testing its approach. Results published last year found that providing schools with high-quality evidence about teaching led to no improvement in pupils' performance. The study did not investigate why this was the case. One possibility is that teachers did not take up the ideas. Another is that successful strategies are hard to replicate.

Thus the EEF is increasingly focused on working out how to change behaviour. "One thing we know", says Sir Kevan, "is that teachers really trust other teachers." The EEF has joined with officials who work with groups of schools, either in academy chains, local authorities or charities, to spread the evidence-based gospel. It has also increased its meetings with head teachers and has provided extra funding for trials of promising schemes in poorer parts of the country. As ever, all approaches will be scrutinised to see if they work.

The most ambitious shift is the recruitment of 23 "research schools", of which Ash Grove is one. As a research school, it gets money to help around 150 other local schools, by putting on events to spread the latest research, training teachers and helping them to evaluate the effectiveness of classroom innovations. Jo Ashcroft, the director of education at Ash Grove's group of academies, notes that the schools "don't have endless amounts of money", so every penny has to make a difference.

It is too soon to judge whether such an approach will work. Most educationalists agree that teachers have become more focused on research in recent years. A hard-core minority spend their weekends at conferences debating the merits of star scholars such as John Hattie and Carol Dweck. The challenge for research schools will be reaching beyond these enthusiasts.

It will not be easy. Tellingly, one of the most popular briefs published by the EEF found there was little evidence to support most marking schemes employed by schools, which often infuriate teachers with their pernicketiness. Teachers "like proof they are right", says Becky Francis of the UCL Institute of Education; it is more difficult to change behaviour when they are wrong. The EEF hopes that evidence will be more compelling when it comes from a friendly face.

*This article appeared in the Britain section of the print edition under the headline "The big education experiment"*

Boxed in

# Shetland Islanders are sick of being misplaced on maps

*Islanders are worried about their place in the world, in the most literal sense*

**Print edition | Britain** Mar 31st 2018

It is 100 miles north-east from John O' Groats to the Shetland Islands, a windswept outpost of 23,000 souls. Yet on many maps it looks about the same distance east, with the islands transported in an enclosed box to nearer the mainland, so that less space is taken up by sea. Locals are unhappy, and Tavish Scott, their Lib Dem MSP, has proposed an amendment to a bill devolving power to the islands that would require the Scottish government to place the islands "accurately" in official publications. "Given the amount we've put into the exchequer over the past 40 years with oil and gas revenues, it's about frickin' time they put us in the right place," he says.

*This article appeared in the Britain section of the print edition under the headline "Cartographical controversy"*

Refighting the referendum

# Did Vote Leave cheat to win the Brexit referendum?

*Claims of rule-breaking by Leavers will mean the battle with Remainers goes on*

**Print edition | Britain** Mar 27th 2018

IT WAS not perhaps the most propitious way in which to celebrate this week's first anniversary of Theresa May's letter invoking the Article 50 process for leaving the European Union. Even as Jacob Rees-Mogg, a prominent Brexiteer, was ridiculing Remainers as being like the Japanese soldier who surrendered only 30 years after the second world war, Parliament was debating a fresh scandal over the financing of the Vote Leave referendum campaign in 2016. The official watchdog, the Electoral Commission, is also investigating the matter.

The scandal centres on claims that, as Vote Leave neared the £7m ($10m) spending cap imposed on it by the commission, it handed £625,000 to another group, BeLeave. The rules would have permitted this only if BeLeave were wholly independent of Vote Leave. But Shahmir Sanni, a whistleblower who worked as a volunteer with BeLeave, has come forward to say that, far from being independent, the group was told exactly what to do with the money. If such co-ordination were proved, it would be a criminal offence. An extra frisson arises because most of the cash seems to have been spent on a digital-marketing firm linked to Cambridge Analytica, the political-research group that is in the news for misusing Facebook data.



The story inevitably has a political angle. Boris Johnson, the foreign secretary, and Michael Gove, the environment secretary, were leading members of Vote Leave. Mr Johnson has called the claims against the organisation "utterly ludicrous" and insisted that the referendum was won legally. Stephen Parkinson, Mrs May's political secretary, also worked for the group. Mr Sanni claims that he cleared most of his actions during the campaign with Mr Parkinson, who has responded by saying that the two were in a relationship at the time—news that has outed Mr Sanni as gay. Mrs May is resisting calls to sack Mr Parkinson.

Does any of this matter beyond Westminster? If Vote Leave is found to have breached the rules, that will support the notion that Leavers played fast and loose in 2016. Yet Remainers spent a lot more, and benefited from a government leaflet costing £9m that openly backed their cause. On the evidence so far, it is hard to conclude that the 52:48 result was changed by digital marketing, however cleverly done. A more plausible contention is that Leavers misled voters by claiming there were no economic downsides to Brexit, no risks to Britain's single-market advantages and fully £350m a week extra for the National Health Service. But Remainers had plenty of opportunities and money to debunk these claims at the time.

The broader conclusion is that the argument between the two sides will go on, even as crucial talks begin on Britain's future trade arrangements. On March 23rd the EU formally approved its guidelines for the talks, along with the terms for a 21-month transition period after March 2019. At an event on March 26th with the Institute for Government, a think-tank, Carolyn Fairbairn, head of the Confederation of British Industry, welcomed the transitional deal for giving greater certainty to business. She was also pleased that the threat of a cliff-edge Brexit with no deal at all had sharply diminished. But she noted that the gap between the two sides on a future trade agreement was very wide.

Based on past experience, the odds are that Britain will end up having to accept the terms of the EU's guidelines. Because of Mrs May's red lines, which call for leaving the single market, the customs union and the European Court of Justice, these terms point clearly to a free-trade deal that is little broader than the one the EU has with Canada. And that will leave unsolved the problem of avoiding a hard border in Northern Ireland (see Briefing ).

Coming on top of the row over campaign spending, this will surely fuel demands for a meaningful parliamentary vote on the Brexit deal this autumn, which implies more than the simple take-it-or-leave-it option being suggested by the government. It could even increase calls for a referendum on the final deal. Voters bored by the whole subject may blench at the prospect. But one unwelcome side-effect of the Brexit process is to suck attention away from all other political issues. Even a Japanese soldier marooned on a South Pacific island might find this dispiriting.

*This article appeared in the Britain section of the print edition under the headline "Did Leave cheat?"*

The Cambridge Analytica scandal

# Britain moves to rein in data-analytics

*A new and rapidly growing British industry gets a shock*

**Print edition | Britain** Mar 28th 2018

THEY looked distinctly like G-men, except that they had the letters ICO emblazoned on their backs instead of FBI. On March 23rd 18 "enforcement" agents from the Information Commissioner's Office launched an evening raid on the premises of Cambridge Analytica. Having combed through everything the last of them emerged only at 3am.

Visits from the heavy mob were supposed to happen to drug gangs, not nerdy analytics companies. But Cambridge Analytica is accused of harvesting the data of 50m Facebook profiles without permission, in order to microtarget voters for the presidential campaign of Donald Trump in 2016. The company has also been accused of breaking election laws in America that ban foreign citizens from participating. Facing several legal challenges, the company's boss, Alexander Nix, has been suspended. There are doubts as to whether the firm can survive the storm.



But it is also a moment for the whole of Britain's burgeoning data-analytics industry to take stock. Cambridge Analytica's parent company, Strategy Communications Laboratories (SCL), was officially launched in 2005 and specialises in what it calls "behavioural-change programmes". It has worked for the British and American governments, and other clients such as NATO, on initiatives to counter Islamist and Russian propaganda. SCL has deployed many of the techniques that London's public-relations companies have used to influence elections overseas, but it has also used advanced data analytics, benefiting from being part of a London-based industry that lags behind only America's in size and innovation.

PwC, a consultancy, estimated in 2016 that the data-analytics industry in Britain was already worth up to £500m ($700m), employing 6,700 people. It was also the fastest-growing bit of the market-research sector, having grown by 350% in the previous four years. PwC found that market research as a whole was worth as much as £4.8bn, already more than the PR and communications industry.

There are several reasons why London has become such an industry hub. In the slipstream of a strong advertising industry, the country developed an early lead in "ad tech", the application of digital tools and analytics to inform marketing and advertising campaigns. Ad tech uses some of the same techniques to microtarget consumers that SCL used to microtarget voters. Meanwhile, data scientists are being churned out by British universities, especially University College London, Imperial College London and Cambridge University. As one of their number says, with academic jobs scarce and the City "uncool" after the financial crash, data-analytics companies are an obvious destination.

So far, data analytics have been lightly regulated. But that was due to change even before the rumpus over Cambridge Analytica. The ICO had already started an investigation into the use of data analytics for political purposes last year. Eileen Burbidge, chairwoman of Tech City, a government-backed initiative to promote the tech industry, observes that election rules have not been modernised for digital campaigns. "This is the most immediate area for reform," she says. The government is also spending £9m on setting up a new centre for "data ethics and innovation", which may propose new regulations.

But it is a new European directive, the General Data Protection Regulation, that will have the most immediate impact. This comes into effect in May, and will make it harder for companies to give information to third parties for unauthorised use. It might have prevented what happened at Cambridge Analytica.

*This article appeared in the Britain section of the print edition under the headline "A new industry grows up fast"*

A quizzical country

# Why is Britain obsessed with quizzes?

*Fully grown Britons seem to love setting each other exams*

**Print edition | Britain** Mar 28th 2018

"THE pub quiz is a uniquely British invention," says a character in James Graham's latest play, "Quiz", which opens in London's West End on March 31st. "It combines our two great loves: drinking, and being right." Mr Graham might be on to something. A conservative estimate suggests at least 100,000 punters compete each week, making such quizzes arguably Britain's biggest assembly rooted in conversation.

When they're not in the pub, they're on the sofa. "University Challenge", "Mastermind" and "The Weakest Link" are all British formats. At its peak, 19m watched "Who Wants to be a Millionaire?" Their catchphrases are famous: Starter for ten. I've started so I'll finish. But we don't want to give you that!



Why are Britons so obsessed? *The Economist* sent a large reporting team to The Crown & Two Chairmen, a London pub, to find out. "The idea of going to the pub for a pint and having a test while you're there is a very British thing," says the quizmaster, a barber named Chris.

Mr Graham has three theories. Britons love nostalgia. They venerate fair play, which is crucial to pub-quiz discipline in an age of smartphones. And they delight in a forum where insecure people can prove themselves. "They enjoy that little moment of glory before they retreat back into their shells," says Brian Thompson of the Merseyside Quiz League. Others love quizzing too, especially Indians. But there has only been one non-English winner of the annual World Quizzing Championship, which began in 2003.

Quiz leagues may have begun in Bootle in 1959. Yet it was not until the 1980s that quizzing took over pubs, which had traditionally been reserved for darts, billiards and serious drinking. In Mansfield, where Mr Graham grew up, pubs tried bingo and raffles first.

The watershed came in 1998, when "Who Wants to be a Millionaire?" was first screened. The format was sold to 106 countries. Until then, says Mr Graham, "Apart from the news, when you got murdered, there were very few outlets for normal people on television." True to its title, "Millionaire" made its British production company at least £190m ($270m) in America alone.

Quizzes have also made Britons happier. Regardless of whether a team wins or loses, the panic as they grapple for the right answer and the hilarity if they get it wrong releases endorphins that promote group bonding, says Robin Dunbar, a psychologist at Oxford University. The questions also represent a "shared folk wisdom" that bind us together.

So how did your correspondents fare? They failed to name the cow in "The Magic Roundabout", and attributed an Oscar Wilde quote to Dolly Parton. The £52 jackpot remained out of reach.

*This article appeared in the Britain section of the print edition under the headline "A quizzical country"*

How to spend it

# The NHS looks due to get more money. Where should it go?

*Looking at where Britain lags behind other rich countries offers some clues*

**Print edition | Britain** Mar 28th 2018

CHANGE is afoot in England's NHS. After years of demand growing faster than funding, the government looks poised to loosen the purse strings. On March 21st a cap on pay rises for NHS staff, which had been in place since 2010, was lifted. Four days later Jeremy Hunt, the health secretary, repeated his call for a ten-year spending plan and suggested that cash could be raised through "innovative models of taxation" like an earmarked NHS levy. Then, on March 27th, Theresa May told MPs that she wanted a long-term funding plan for the health service. "In this, the 70th anniversary year of the NHS's foundation, we need an answer on this," the prime minister declared.

If the taps are loosened, new funding might initially be used to balance the books. About half of hospital trusts are forecast to be in deficit at the end of this financial year, to the tune of a total of around £4bn ($5.7bn), once one-off extra funding is accounted for. Sanctions for those in the red are not exacting, providing little incentive to be thrifty, notes Nick Bosanquet of Imperial College London.



But if there is any money left after making up these shortfalls, where should it go? Health services can aim at various targets, like patient satisfaction or life expectancy. A starting point might be to look at how Britain compares with other countries.

In an ideal world politicians would be able to direct money to target specific maladies. High on that list would be cancer. Britain ranks in the bottom quarter of the OECD, a club of mainly rich countries, when it comes to five-year mortality rates for cervical and colon cancer. One reason is late diagnosis. Compared with other countries, those with cancer symptoms in Britain are more reluctant to seek out medical help and less likely to be referred to a consultant by their family doctor. As a result, cancers are caught later, when mortality rates are higher.

Britain also performs badly when it comes to obesity, points out Anita Charlesworth of the Health Foundation, another think-tank. Some 27% of British adults are obese, the sixth-highest proportion in the OECD, up from 14% in 1990. And rates are expected to rise over the next ten years.

The NHS is also something of a laggard in child health. Britain has the ninth-highest rate of infant mortality out of 33 OECD countries, a deterioration of about ten places since 1990. Breastfeeding rates in England are among the lowest in rich countries, and the prevalence of neural-tube defects, which can be avoided by giving expectant mothers folic-acid supplements, are among the highest. This is partly because public-health measures in England do not put enough emphasis on the young, argues Ronny Cheung, a paediatrician at the Nuffield Trust, a think-tank.

Another area of concern, for which international data are patchy, is mental health. It takes up around 25% of the disease burden of the NHS, but roughly 12% of the budget. That is partly due to historical stigmas. Obtaining treatment can be slow, particularly for children. Patients often get a "second-class experience" compared with physical health treatment, says Paul Farmer, the boss of Mind, a charity.

### Diagnosis and prescription

But politicians cannot just throw money at particular diseases. Instead, they can only boost funding in different bits of the NHS and hope that helps. General practitioners (GPs), or family doctors, are one such part. Britain has fewer per person than other rich places. And they are quitting faster than they can be replaced, partly because of harder working conditions. By contrast, since 2014 annual growth in the number of hospital consultants has averaged 4%.

Studies show that hiring more GPs boosts myriad health outcomes, such as survival rates for heart disease. Moreover, increasing their number reduces the strain on other, more expensive bits of the health service. The average trip to the GP costs the NHS about £38, compared with £140 for a visit to an accident and emergency ward. Hospital admission rates in Britain for asthma, a condition which can usually be treated in primary care, are 50% higher than the OECD average.

Capital investment—that is, spending on equipment and buildings—could do with more money, too. Stroll through most hospitals and it will not take long to find out-of-date equipment or a building that needs repairing, says Matthew Kershaw, a former boss of East Kent Hospitals University Foundation Trust. Britain spends 0.3% of GDP on investment in health, compared with an OECD average of 0.5%. The NHS has a building-maintenance backlog that would cost £6bn to clear. A surgeon reports that in one hospital, budget cuts were so severe that there were no surgical pens to mark which bit of a patient to cut up.

Though almost all health experts are keen to see the NHS get a cash injection, many, including Mr Hunt, worry about the long-run pattern of feast and famine. Between 2000 and 2009, NHS spending grew at 6% per year in real terms. Since then it has slowed to 1%. In the fat times, managers could be careless with money; staff complained about spending on fripperies, such as making surroundings more pleasant. But the lean times have also become inefficient. Some of the savings that hospitals have been forced to make have become counter-productive, such as laying off nurses who care for patients immediately after surgery, meaning fewer operations can take place.

That is why Mrs May’s endorsement of a longer-term settlement is a relief to those who work in the NHS. Simon Stevens, its chief executive, called it “very welcome, timely and significant”. The question now is how generous the long-term plan will be—and where the promised money will come from.

*This article appeared in the Britain section of the print edition under the headline ”How to spend it”*

Bagehot

# Jeremy Corbyn's anti-Semitism problem

*Labour's leader will not rid his party of the scourge until he understands what it means*

**Print edition | Britain** Mar 31st 2018

JEREMY CORBYN has spent a remarkable proportion of his life on "demos"—indeed, it is no exaggeration to say that protesting is his core competence. This week, however, the Labour leader found himself on the receiving end of a demonstration. Two Jewish groups, the Board of Deputies of British Jews and the Jewish Leadership Council, organised a protest in Parliament Square to draw attention to Mr Corbyn's anti-Semitism problem.

The demonstration was only about a thousand strong. The organisers forgot to bring a PA system so it was impossible to hear what was being said. Only a handful of people joined in with the chant of "Mural, mural on the wall, who is the biggest racist of them all—Corbyn!" But this was nevertheless a significant moment: a group of Jews standing outside Parliament, protesting about the prevalence of anti-Semitism not on the fascist extreme but at the heart of one of Britain's two biggest parties.



The immediate cause of the protest was a recently unearthed comment that Mr Corbyn posted online in 2012 in response to a piece of London street art. The mural in question is a blatantly anti-Semitic portrait of a group of capitalists, most of them with hook-noses, playing Monopoly on a table resting on the backs of naked workers. The local authority ordered the mural be painted over. Mr Corbyn leapt to the artist's defence, writing on his Facebook page: "Why? You are in good company. Rockerfeller [sic] destroyed Diego Viera's [Rivera's] mural because it includes a picture of Lenin." The discovery of the post proved too much for many leading British Jews, who have written to Mr Corbyn with three complaints: that the Labour Party contains pockets of anti-Semitism; that Mr Corbyn has repeatedly turned a blind eye to such noxious attitudes; and that previous attempts to deal with it have proved inadequate.

They are right on all three counts. Jewish Labour MPs such as Luciana Berger have been subjected to anti-Semitic rants and intimidation from supporters of the hard left. Jewish students have abandoned Labour groups because they feel threatened and vilified. One source of the anti-Semitic infection is the hard left, which is almost defined by its hostility to Israel and capitalism. There is nothing necessarily anti-Semitic about either position. But in the heat of political debate, distinctions can blur and ancient hatreds flame. Hard-leftists habitually refer to Jews as "Zios". The artist behind the London mural said it was not an attack on Jews but on capitalists such as Rockefeller and Warburg.

Another source of Labour's anti-Semitism is British Muslims. A poll last September found that 55% of Muslims held anti-Semitic attitudes, with 27% believing that "Jews get rich at the expense of others", compared with 12% of the general population. Mehdi Hasan, a Muslim writer, says that "weird and wacky anti-Semitic conspiracy theories are the default explanation for a range of national and international events." For all their disagreements on issues like gay rights, hard-leftists and Muslims forged a lasting alliance in the Stop the War movement against the invasion of Iraq.

Mr Corbyn has done more than turn a blind eye to anti-Semitism. He has had tea in Parliament with Islamist radicals such as Sheikh Raed Salah, who has claimed that "a suitable way was found to warn the 4,000 Jews who work[ed] every day in the Twin Towers" to stay at home on September 11th 2001. He has appeared on Iranian national television, despite the fact that the regime issues wild threats to destroy Israel. One of his old friends, Ken Livingstone, has repeatedly asserted that Hitler supported Zionism in the early 1930s.

This week's row was proof in itself that previous attempts to tackle the problem have failed. Several Labour MPs joined the protests in a public rebuke to the party leadership. But is there also a chance that it marks a turning-point? Mr Corbyn has issued a statement recognising that "anti-Semitism has surfaced within the Labour Party", apologised for his misjudgment over the mural and offered to meet Jewish leaders. His aides are reportedly "rattled" by the fallout from the row, which represents more of a threat to his reputation for sanctity than his links to IRA activists.

### Speak no evil

But there are powerful reasons for believing that the problem will not be tackled. One is biographical. Mr Corbyn has spent his life moving in far-left circles since arriving in London in the early 1970s. His instinct is that there are no enemies to the left—that fellow protesters in the Socialist Workers Party or International Marxist Group should be forgiven their peccadillos (such as believing in armed revolution) because they believe in social justice. Mr Corbyn's supporters have the same attitude. This week they rallied to his defence, claiming that the establishment was conjuring up the anti-Semitism row to discredit their champion.

Another reason is strategic. British Jews—particularly those who support Israel—are being marginalised in the Labour Party. There are 3m Muslims in Britain compared with about 284,000 Jews, and they are concentrated in areas vital for Labour's future, such as Birmingham and Manchester. The philo-Semitic tradition in the Labour Party, exemplified by Harold Wilson and James Callaghan, is dying.

The most important reason is philosophical. Mr Corbyn has devoted much of his life to protesting against racism. But for him, racism is linked to class and exploitation. It is about privileged people doing down the marginalised, and saintly activists like Mr Corbyn riding to their rescue. But the Jews are perhaps the world's most successful ethnic minority. They have almost always succeeded by the sweat of their brow rather than the largesse of activists or government programmes. They are often hated precisely because they have succeeded where other marginalised groups have failed. The danger is not that Mr Corbyn will continue to ignore anti-Semitism after this week's protests. It's that he doesn't understand what anti-Semitism is.

*This article appeared in the Britain section of the print edition under the headline "Nothing to see here"*

**The Iran nuclear deal**
A kettle of hawks

A kettle of hawks

# The deal that curtails Iran's nuclear ambitions seems doomed

*John Bolton's appointment as national-security adviser sounds its death knell*

**Print edition | International** Mar 28th 2018

EVER since Donald Trump's election, he has had in his sights the "worst deal ever"—the one reached in 2015 that sought to circumscribe Iran's nuclear ambitions. For a while the threat to the survival of the agreement looked more rhetorical than real. No longer. On January 12th the president signed the waiver that prevents the reimposition of nuclear-related sanctions on Iran for a further 120 days. But, against the advice of his national-security team at the time, he warned that this would be the last such waiver unless the European parties to the deal—Britain, France and Germany—worked with America to fix what he regards as the fatal flaws in the agreement.

The prospects for the deal became even bleaker on March 13th, when Mr Trump announced the sacking of Rex Tillerson. His replacement as secretary of state is Mike Pompeo, a fierce critic of the agreement, known more formally as the Joint Comprehensive Plan of Action (JCPOA). The replacement of H.R. McMaster as national security adviser nine days later by John Bolton almost certainly sounded its death knell. Mr Bolton was an abrasive American ambassador to the UN under George W. Bush. Despite a stint as under-secretary for arms control and international security in the same administration, Mr Bolton appears never to have seen an arms-control agreement he liked.



Unlike other self-declared haters of the Iran deal, Mr Bolton does at least have an answer to the question "what next?" if it is jettisoned. A few months before the deal was signed in July 2015, Mr Bolton boomed: "The inconvenient truth is that only military action…can accomplish what is required." Air strikes on Iran's nuclear facilities, he argued, could set the programme back by "three to five years".

In an article this year Mr Bolton struck a less bellicose note, claiming that the reactivation of nuclear-related sanctions, plus some new ones, could bring the "seemingly impregnable authoritarian" Iranian regime to its knees. America's declared policy, he argued, should be to end Iran's Islamic revolution before its 40th birthday in 2019. But it is unlikely that sanctions, combined with unspecified "material" support for Iranian opposition groups, could bring about regime change, and unclear whether Mr Bolton really believes that they could.

About North Korea, he is equally blunt. In August Mr Bolton called talking to the hereditary Marxist dictatorship "worse than a mere waste of time". If China would not agree to work with America to dismantle Kim Jong Un's regime (an implausible scenario), the only alternative was "to strike those [nuclear] capabilities pre-emptively". In this view, if the proposed summit between Mr Trump and Mr Kim takes place, it may be no more than the prelude to an ultimatum and perhaps even to war.

After his appointment, Mr Bolton said that opinions previously stated "in private" (an odd way to describe newspaper articles) were now "behind" him. Playing down his image as a warmonger, sources claim that in his new role he sees himself as an honest broker between agencies. They cite Brent Scowcroft, a respected national security adviser under the senior George Bush, as a model. That seems far-fetched. Mr Bolton is both an ideologue and a ferociously effective bureaucratic infighter, with a history of reshaping intelligence reports to suit his own purposes.

Mr Bolton's appointment alarms the "E3" (Britain, France and Germany), which signed the Iran deal along with Russia, China and Iran itself. It casts an even darker cloud over their efforts to find a way of appeasing Mr Trump's demands before hitting the 120-day buffer on May 12th.

**Spirit measures**

The JCPOA is a highly technical 159-page document. But Mr Trump's two main objections are straightforward. The first is that, even if Iran is sticking to the letter of the deal, its actions often violate its spirit. So it does not matter that over the past two years inspectors from the International Atomic Energy Agency (IAEA) have filed 11 reports judging that Iran is keeping its promises to curb its nuclear programme.

The Iran deal was designed as a pragmatic arms-control agreement that cuts off Iran's route to a nuclear weapon for a period of time. But its opponents have always wanted it to do far more. Some wish it would also check Iran's prolific meddling across the Middle East. Iran backs Shia militias in Syria and Iraq, stokes the war in Yemen and supports Hizbullah—a Lebanese Shia militia that threatens Israel with thousands of missiles and occasionally fires them. For the accord's critics, Iran is a "bad actor" to be isolated, not engaged.

They also want a deal that curbs Iran's ballistic-missile programme, which has continued apace since 2015. Under UN resolution 2231 that enshrines the nuclear deal, Iran is "called upon" to refrain from work for up to eight years on ballistic missiles for nuclear weapons. But it does not impose sanctions if Iran carries on regardless. Congress has imposed new missile-related sanctions on Iran in the past year. The E3 have not, though they are reported to have sounded out EU support for them.

Mr Trump's second gripe is that even on its own terms, as an arms-control pact, the Iran deal falls short. It allows for unprecedented levels of inspection, but critics say that it still allows the Iranians to keep anything they classify as a military site off-limits to inspectors. This is not strictly true—an admittedly slow and cumbersome procedure allows access to such sites if evidence emerges of their being used nefariously.

What most concerns the deal's detractors are the "sunset" provisions. These allow key constraints on Iran's nuclear programme to lapse over time. For example, after eight years (ie, in 2023), limits on the use of faster-spinning uranium-enrichment centrifuges are relaxed; in 2028 Iran can ramp up the number of centrifuges it employs; after 2030 constraints on Iran's stockpile of enriched uranium disappear. However, the IAEA's uniquely intrusive monitoring continues until 2040.

The Europeans do not disagree with these criticisms of the Iran deal. Nor are they more relaxed than the Trump administration about Iran's regional troublemaking. Where they differ is in their belief that blowing up the deal would make everything its critics complain about even worse. That includes perhaps putting Iran back on a path to developing nuclear weapons and thus starting not just the war that Mr Bolton has long thirsted for, but also a helter-skelter of proliferation in a volatile region close to Europe.

Working with a joint team from the State Department and the National Security Council, the E3 have been desperately trying to find a way for Mr Trump to claim enough of a win on May 12th to sign the sanctions waiver again. European diplomats had thought that they were making some progress on two crucial issues—ballistic missiles and inspections.

Aniseh Bassiri Tabrizi of RUSI, a London-based think-tank, believes that, like the Americans, the E3 could impose sanctions related to Iranian ballistic-missile tests without violating the Iran deal. Sir Simon Gass, a former British ambassador to Tehran who led the British team negotiating the deal, says that it might be possible to get an agreement from Iran not to develop an intercontinental-range ballistic missile (ICBM) capable of hitting America. An ICBM, he points out, only makes sense if it carries a nuclear warhead, so testing one should prompt broad economic sanctions. Patricia Lewis of Chatham House, another London think-tank, believes that the Europeans may already be talking to the Iranians about a future regional missile-deal that would ban long- and intermediate-range nuclear missiles.

On inspections, Sir Simon believes that the existing regime is more than adequate. But the E3 could reach clearer understandings with the Americans: about the instructions given to national intelligence agencies monitoring Iran's nuclear programme; and about how they would jointly deal with Iranian obfuscation if a breach were suspected.

As for "sunsetting", the E3 have made it clear that the issue cannot be dealt with quickly. Sir Simon reckons that there is, however, broad agreement it must be tackled. The trick will be to get the Iranians to start thinking about what comes after the expiry of the constraints imposed by the nuclear deal. It must be made clear to them that continuing to reap the benefits of it will depend on maintaining a nuclear programme with entirely peaceful purposes. Installing thousands of new centrifuges and building a huge uranium stockpile will not pass muster.

Mr Trump could claim on May 12th that his toughness had pushed the Europeans into tackling the flaws in the Iran deal and that he would hold his fire. That has been the E3's hope. But with Mr Trump's instincts fortified by Mr Pompeo and Mr Bolton, it looks remote. After May 12th, the E3's priorities will be to convince Iran to keep complying with the deal; to limit the harm to the transatlantic relationship that will follow if America abandons it; and to try to buy some time for the European firms and banks trading with Iran that will be exposed to American secondary sanctions.

Some are optimistic that Iran will stick to the deal. But Iranian hardliners have always opposed it and will argue, with some justice, that their warnings of American perfidy have been borne out. Ellie Geranmayeh of the European Council of Foreign Relations says that Iran will see advantages in "winning the blame game" and will want to "delegitimise US sanctions" in the eyes of China, Russia and most of Asia by sticking to its obligations. The Iranians may also calculate that if they swiftly crank up their nuclear programme, they would give the White House and Israel cause to threaten military action and Saudi Arabia the excuse to start enriching uranium. (Ironically, both the Saudis and the Israeli security establishment, despite their public opposition to the Iran deal, would these days probably prefer it to survive.)

**Stuck in the middle with EU**

Mark Fitzpatrick of the International Institute for Strategic Studies hopes that Mr Trump, having quit the deal, might cut the Europeans some slack and not enforce secondary sanctions. Ms Geranmayeh agrees that is possible but thinks it more likely that America's Treasury would allow only a grace period for existing deals, such as those struck by Total and Shell, two energy giants, and some "carve-outs" for other firms. She does not think the European Union would achieve much by reinstating "blocking regulations" to penalise European firms that comply with American sanctions. The firms may well fear being shut out of American markets more than fines imposed by Brussels. One option, says Sir Simon, is that EU member governments could extend non-dollar lines of credit and credit guarantees to European companies that would face stiff penalties for sticking to plans to do business in Iran.

Europe will find itself in a horribly uncomfortable place. It will be further distanced from its most important ally on a matter of principle. It will at the same time find itself sharing a bed with traditional adversaries (Russia, China and also Iran). And it will face a new threat to its own security—Syria has shown that when bad things happen in the Middle East, Europe is vulnerable as a target for terrorism and as a destination for displaced people.

But America will suffer, too, if Mr Trump refuses to sign the waiver. Its reputation as a country that keeps its word will have been further trashed. It will find that the international coalition on sanctions patiently put together by the Obama administration to bring Iran to the negotiating table cannot be rebuilt. It will have done yet more damage to relations with its allies. And it will have increased the chances of both a big new war and a nuclear-arms race in the Middle East.

*This article appeared in the International section of the print edition under the headline "A kettle of hawks"*

GrAIt expectations

# Non-tech businesses are beginning to use artificial intelligence at scale

*Artificial intelligence is spreading beyond the technology sector, with big consequences for companies, workers and consumers, says Alexandra Suich Bass*

**Print edition | Special report** Mar 28th 2018

LIE DETECTORS ARE not widely used in business, but Ping An, a Chinese insurance company, thinks it can spot dishonesty. The company lets customers apply for loans through its app. Prospective borrowers answer questions about their income and plans for repayment by video, which monitors around 50 tiny facial expressions to determine whether they are telling the truth. The program, enabled by artificial intelligence (AI), helps pinpoint customers who require further scrutiny.

AI will change more than borrowers' bank balances. Johnson & Johnson, a consumer-goods firm, and Accenture, a consultancy, use AI to sort through job applications and pick the best candidates. AI helps Caesars, a casino and hotel group, guess customers' likely spending and offer personalised promotions to draw them in. Bloomberg, a media and financial-information firm, uses AI to scan companies' earnings releases and automatically generate news articles. Vodafone, a mobile operator, can predict problems with its network and with users' devices before they arise. Companies in every industry use AI to monitor cyber-security threats and other risks, such as disgruntled employees.



Instead of relying on gut instinct and rough estimates, cleverer and speedier AI-powered predictions promise to make businesses much more efficient. At Leroy Merlin, a French home-improvement retailer, managers used to order new stock on Fridays, but defaulted to the same items as the week before so they could start their weekend sooner. The firm now uses algorithms to take in past sales data and other information that could affect sales, such as weather forecasts, in order to stock shelves more effectively. That has helped it reduce its inventory by 8% even as sales have risen by 2%, says Manuel Davy of Vekia, the AI startup that engineered the program.

AI and machine learning (terms that are often used interchangeably) involve computers crunching vast quantities of data to find patterns and make predictions without being explicitly programmed to do so. Larger quantities of data, more sophisticated algorithms and sheer computing power have given AI greater force and capability. The outcomes are often similar to what an army of statisticians with unlimited time and resources might have come up with, but they are achieved far more quickly, cheaply and efficiently.

One of AI's main effects will be a dramatic drop in the cost of making predictions, says Ajay Agrawal of the University of Toronto and co-author of a new book, "Prediction Machines". Just as electricity made lighting much more affordable—a given level of lighting now costs around 400 times less than it did in 1800—so AI will make forecasting more affordable, reliable and widely available.

Computers have been able to read text and numbers for decades, but have only recently learned to see, hear and speak. AI is an omnibus term for a "salad bowl" of different segments and disciplines, says Fei-Fei Li, director of Stanford's AI Lab and an executive at Google's cloud-computing unit. Subsections of AI include robotics, which is changing factories and assembly lines, and computer vision, used in applications from identifying something or someone in a photo to self-driving-car technology. Computer vision is AI's "killer app", says Ms Li, because it can be used in so many settings, but AI has also become more adept at recognising speech. It underlies voice assistants on phones and home speakers and allows algorithms to listen to calls and take in the speaker's tone and content.

### Techtonic shifts

Until now the main beneficiary of AI has been the technology sector. Most of today's leading tech firms, such as Google and Amazon in the West and Alibaba and Baidu in China, would not be as big and successful without AI for product recommendations, targeted advertising and forecasting demand. Amazon, for example, uses AI widely, for tasks such as guiding robots in its warehouses and optimising packing and delivery, as well as detecting counterfeit goods and powering its speaker, Alexa. Alibaba, a Chinese rival, also makes extensive use of AI, for example in logistics; and its online-payments affiliate, Ant Financial, is experimenting with facial recognition for approving transactions. Sundar Pichai, Google's boss, has said that AI will have a "more profound" impact than electricity or fire.

Bosses of non-tech companies in a broad range of industries are starting to worry that AI could scorch or even incinerate them, and have been buying up promising young tech firms to ensure they do not fall behind. In 2017 firms worldwide spent around $21.8bn on mergers and acquisitions related to AI, according to PitchBook, a data provider, about 26 times more than in

2015 (see chart). They are doing this partly to secure talent, which is thin on the ground. Startups without revenue are fetching prices that amount to $5m-10m per AI expert.

As AI spreads beyond the tech sector, it will fuel the rise of new firms that challenge incumbents. This is already happening in the car industry, with autonomous-vehicle startups and ride-hailing firms such as Uber. But it will also change the way other companies work, transforming traditional functions such as supply-chain management, customer service and recruitment.

The path ahead is exhilarating but perilous. Around 85% of companies think AI will offer a competitive advantage, but only one in 20 is "extensively" employing it today, according to a report by MIT's *Sloan Management Review* and the Boston Consulting Group. Large companies and industries, such as finance, that generate a lot of data, tend to be ahead and often build their own AI-enhanced systems. But many firms will choose to work with the growing array of independent AI vendors, including cloud providers, consultants and startups.

This is not just a corporate race but an international one, too, especially between America and China. Chinese firms have an early edge, not least because the government keeps a vast database of faces that can help train facial-recognition algorithms; and privacy is less of a concern than in the West.

There will be plenty of opportunities to stumble. One difficult issue for companies will be timing. Roy Bahat of Bloomberg Beta, a venture-capital firm, draws a parallel between now and the first dotcom boom of the late 1990s: "Companies are flailing to figure out what to spend money on." If they invest huge sums in AI early on, they run the risk of overcommitting themselves or paying large amounts for worthless startups, as many did in the early days of the internet. But if they wait too long, they may leave themselves open to disruption from upstarts, as well as from rivals that were quicker to harness technology.

Some may have been misled by glowing media reports, believing AI to be a magic wand that can be installed as easily as a piece of Microsoft software, says Gautam Shroff of Tata Consultancy Services, an Indian firm. AI systems require thorough preparation of data, intensive monitoring of algorithms and a lot of customisation to be useful. Gurdeep Singh of Microsoft speaks of AI systems as "idiots savants"; they can easily do jobs that humans find mind-boggling, such as detecting tiny flaws in manufactured goods or quickly categorising millions of photos of faces, but have trouble with things that people find easy, such as basic reasoning. Back in 1956, when academic researchers held their first gathering to discuss AI, they were looking for a way to imbue machines with human-like "general" intelligence, including complex reasoning. But that remains a distant aspiration.

The excitement around AI has made it hard to separate hype from reality. In the last quarter of 2017 public companies across the world mentioned AI and machine learning in their earnings reports more than 700 times, seven times as often as in the same period in 2015 (see chart). There are so many firms peddling AI capabilities of unproven value that someone should start "an AI fake news" channel, quips Tom Siebel, a Silicon Valley veteran.

Bosses must keep several time horizons in mind. In the near future AI will reshape traditional business functions such as finance, HR and customer service, according to Michael Chui of the McKinsey Global Institute, a think-tank within a consultancy. But over time it will also disrupt whole industries, for example by powering the rise of autonomous vehicles or the discovery of entirely new drug combinations. Whereas humans may have preconceptions about which product designs or drug combinations are likely to work best, algorithms are more likely to come up with novel solutions.

In private, many bosses are more interested in the potential cost and labour savings than in the broader opportunities AI might bring, says John Hagel of Deloitte, a consultancy. That is certainly not good for workers, but nor, ultimately, is it good for business. "If you just cut costs and don't increase value for customers, you're going to be out of the game," he says. Some companies may not actually eliminate existing jobs but use technology to avoid creating new ones. And workers who keep their jobs are more likely to feel spied on by their employers. Some firms already use AI to comb through their workers' communications to ensure that they are not breaking the law. Such practices will spread, raising privacy issues.

A longer-term concern is the way AI creates a virtuous circle or "flywheel" effect, allowing companies that embrace it to operate more efficiently, generate more data, improve their services, attract more customers and offer lower prices. That sounds like a good thing, but it could also lead to more corporate concentration and monopoly power—as has already happened in the technology sector.

*This article appeared in the Special report section of the print edition under the headline "GrAIt expectations"*

In algorithms we trust

# How AI is spreading throughout the supply chain

*AI is making companies swifter, cleverer and leaner*

**Print edition | Special report** Mar 28th 2018

DELIVERING 25 PACKAGES by lorry or van might seem straightforward enough, but it is devilishly complex. The number of possible routes adds up to around 15 septillion (trillion trillion), according to Goldman Sachs, an investment bank. Integrating AI into the complex web of production and distribution—the supply chain—will have a bigger economic impact than any other application of the technology and affect a larger number of businesses, says Sudhir Jha of Infosys, a large IT company. McKinsey estimates that firms will derive between $1.3trn and $2trn a year in economic value from using AI in supply chains and manufacturing (see chart). Many firms are already using robots powered by machine learning to improve the running of their factories and warehouses. But AI will transform several other aspects of supply chains as well.



One is the unglamorous work of managing finances and paying suppliers. Just as Microsoft's Excel spreadsheets changed finance departments, AI will make routine back-office work more efficient, says Morag Watson, BP's chief digital-innovation officer. Some early adopters are starting to use AI to scan invoices and predict payments. Workday, a software firm, offers a financial-planning tool using AI to forecast which clients are going to pay late.

Another opportunity is to improve manufacturing through computer-vision systems that can inspect products on assembly lines and spot flaws. These systems are more accurate than humans, says Andrew Ng of Landing.AI, a startup that works with Foxconn, a big Taiwanese contract manufacturer, and others. Nvidia, a chipmaker, already uses computer vision to ensure that its chips are properly assembled.

Companies will also use AI to predict when their equipment might fail. This will benefit firms that operate large assets, such as airlines, oil firms, energy companies and industrial giants, where unexpected breakdowns come at a big cost. Companies can combine data on past performance with those generated by smart sensors on machinery (part of the much-hyped "internet of things") to predict when a jet engine or a wind turbine is likely to fail, so they can do maintenance before that happens. America's air force and defence department are working with C3 IoT, a startup, to scan maintenance logs and past technical problems for signs that aircraft are wearing out. Companies are also building "digital twins"—virtual representations of assets—to run simulations of how weather and other factors affect machinery.

**Next year's hits**

Better predictions will improve inventory management and demand forecasting, too, freeing up cash and storage space. This is especially important for retailers, which often have very thin margins, says Chen Zhang, chief technology officer of JD.com, a Chinese e-commerce firm. In 2015 the cost to companies of overstocking was around $470bn and of understocking $630bn worldwide, according to IHL Group, a research firm. Amazon now has algorithms to predict demand for hundreds of millions of products it sells, often as much as 18 months ahead. Among the most difficult items are clothes, where the company must decide which sizes and colours to stock at which warehouses, depending on nearby buyers' shapes and tastes, says Ralf Herbrich, Amazon's director of machine learning.

Lineage, a firm that keeps food cold for clients such as grocers and restaurants, uses AI to forecast in what order items will arrive at and leave a warehouse, so that it can put the pallets in the right position. "I put the toothbrush by my sink because I use it three times a day, and my Christmas tree in the attic for a reason," says Greg Lehmkuhl, Lineage's boss, adding that using AI for smart placement has boosted efficiency by 20%.

AI is also helping firms track the movement of their goods. Most of the businesses in global shipping, from ports and lorries to container ships, have been technological laggards, so their customers never knew when their goods might show up. This is starting to change. Systems are getting better at routing items efficiently and predicting their arrival, and companies are investing more in them. To forecast arrivals, they can put sensors on shipments or design whole systems to use data like the GPS signals put out by lorries. Packages are also being routed more efficiently, with big potential gains. Jack Levis, director of process management for United Parcel Service (UPS), a package-delivery firm, says that for every mile that its drivers in America are able to reduce their daily route, the firm saves around $50m a year.

Goldman Sachs expects AI to bring logistics costs down by at least 5%, which could generate additional profits of $25bn over the next ten years. That would make a big difference in this cut-throat and low-margin business. It may also introduce new competitors who completely rethink old processes. "When you build a new jet, you don't just put a jet engine on the Wright Brothers' plane," says Ryan Petersen of Flexport, a logistics startup. Many firms, including JD.com, are investing in AI-powered drone delivery technology.

Now mighty Amazon is moving into the logistics business, piloting a service in Los Angeles for picking up packages from businesses and delivering them to customers, which puts it in direct competition with FedEx and UPS. The e-commerce giant has become "everyone's competitor", says Ibrahim Gokcen, chief digital officer of Maersk, a global shipping firm. "Everybody in the supply chain has a heightened awareness they have to up their game, in part because of the capabilities of Amazon," says Rich Carlson of Savi, a smart-logistics startup. Amazon's rivals may fret, but consumers will be pleased.

*This article appeared in the Special report section of the print edition under the headline "In algorithms we trust"*

Here to help

# Customer service could start living up to its name

*How AI can make businesses look more caring*

**Print edition | Special report** Mar 28th 2018

"YOUR CALL IS important to us," a recorded voice tells resigned customers as they wait endlessly to speak to a human agent. AI is starting to help companies improve the quality and consistency of their service in order to persuade customers that they do in fact care about them.

Ocado, a British online grocer, receives around 10,000 e-mails from customers every day and uses AI to detect the prevailing sentiment in them. It now replies to the most urgent ones first, and is planning to route complaints to agents with expertise in the relevant field. "Like other applications of AI, it's about trying to make humans more efficient, not take them out of the process entirely," says Paul Clarke, Ocado's chief technology officer. Between 2017 and 2021 the share of customer-service interactions worldwide handled entirely by AI will rise fivefold, to 15%, and by 2019 at least 40% of such interactions will involve an element of AI, according to Gartner, a research firm.



AI will change customer service as much as the telephone did in its day. Before the phone started to spread in the early 20th century, companies handled customer inquiries by post or by visiting in person. Phones helped agents to become more productive, and AI will boost productivity even more dramatically, because it can handle large numbers of customer inquiries more quickly than humans can. This has become more important as communications channels have multiplied to take in e-mail, mobile messaging apps and social media. And consumers have got used to dealing with automated services. Surveys suggest that around 40% of American internet users would rather use digital customer services than speak to someone on the phone.

Virtual agents are on the rise. Some 30% of companies now offer standalone "bots" that can answer questions and solve problems, although their range remains narrower than that of a human. Many of these use some AI. They are trained on logs and transcripts of past customer interactions, and as they are fed more data they become better at solving more complex queries. Such bots enable businesses to deal with many more inquiries without hiring extra people. China Merchants Bank, a commercial bank, uses a bot on the popular Chinese app WeChat to handle 1.5m-2m queries every day, a workload equivalent to around 7,000 human staff. Caesars, the hotel and casino group, offers a virtual concierge, Ivy, at two of its hotels, which answers guests' queries by text, many of them automatically if the inquiry is simple to answer. This has reduced calls to the human-concierge desk by 30%.

AI will also enhance customer-service agents' knowledge, performance and speed. Some companies are experimenting with "voice-printing" technology which recognises clients' voices and alerts agents if a caller is impersonating someone else. This will be especially helpful in financial services.

One Australian bank is experimenting with a standalone smart voice-controlled speaker to listen in on agents' conversations about loans. If the agent forgets something or makes a mistake, it jumps in. Some companies are also using AI to suggest responses to customer queries which a human agent can approve or adapt before sending. Over the past year this has allowed KLM, the Dutch flag carrier, to double the number of text-based customer inquiries it handles to 120,000 a week while increasing the number of agents by only 6%, says Dmitry Aksenov of Digital Genius, a firm that helps automate customer support.

A few companies have started offering AI-enabled services that listen to calls to judge agents' performance and send them suggestions for improvement in real time. One startup, Cogito, whose customers have included insurance firms such as Humana and MetLife, focuses on recognising "compassion fatigue" in agents. It takes in details such as how fast agents are talking and what words callers are using to detect emotion and gauge whether the interaction is going well. If there is a problem, it cues agents to act more empathetically. A tool like this can help large companies monitor their agents' performance, but the agents may also welcome the feedback. Call-centres have a turnover of 30-40% a year, partly because agents have had little help with improving their performance, says Joshua Feast, Cogito's boss.

Marty Lippert, head of technology for MetLife, reckons that in areas like customer service and human resources AI offers a return on investment of around 20%. Most companies buy AI services from outside providers, but firms with technical know-how often prefer to create their own. For example, a team at Uber, a ride-hailing firm, has built a system using AI to deal with e-mailed queries (there is no telephone option). It sends the agent ranked options for what to do next, which has cut the time it takes to resolve a complaint by around 10%.

One hope for AI is that it will free customer-service agents from routine tasks so they can sell customers other services and generate new revenue. KLM has been able to generate millions of dollars of extra sales since it started using AI because agents now have more time to help customers book upgrades and new flights, says Mr Aksenov of Digital Genius. But not all customers will appreciate more sales pitches.

Services that make customers' lives easier will generate more customers, who will provide more training data to make the AI systems smarter

AI will certainly change the way selling is done. Many firms are experimenting with developing AI-enhanced recommendation tools, like those used by Amazon and Netflix, to help salespeople with their jobs. Google, Facebook and Amazon have been using AI to target consumers with ads and special offers online for years, with great success. Similar practices could spread to other businesses. For example, when sales staff at Goldman Sachs, an investment bank, take orders for corporate bonds, they can now see instant suggestions of bonds with similar risk profiles to pitch to their clients. Caesars uses AI to work out customers' potential daily spending, choose the clients who will receive personal phone calls and in what order, and decide what specific promotions to offer them. The company's boss, Mark Frissora, says that refining marketing to a "message of one" boosts customer loyalty over time.

**Don't call us**

Gartner, a research firm, expects the number of phone-based customer-service agents worldwide to decline by 10% by 2019. That would increase the workload of those who are left. But companies need to be careful not to dilute their interactions with customers too much. The rise of virtual communication has left them with fewer opportunities to establish deep relationships, so customer service will become ever more important.

Clever firms will use AI not just to improve existing services but to engineer new ones. Metro Group, a German retailer, is testing the use of computer vision at the checkout: the items in a basket are recorded by cameras and the shopper is charged accordingly. Amazon uses similar technology in a convenience store in Seattle. Timo Salzsieder, chief information officer of Metro Group, reckons these new unmanned, vision-enhanced checkouts can handle 50 customers per hour, more than double the number for a manned checkout.

Some insurers, including Ping An of China, use AI to let customers file a claim after a car accident. Instead of having to phone the insurance company and fill in lots of forms, customers take photos of the damage to their car and submit them through an app for a quick quote for repairs. Building a tool like this is a technological challenge, but getting in early is a good idea. Services that make customers' lives easier will generate more customers, who will provide more training data to make the AI systems smarter. Ping An gets 15m claims a year and handles 30% of them on its app. "It takes an enormous amount of cost out of the system and puts customers in control," says Jonathan Larsen, Ping An's chief innovation officer. Such offerings also reinforce firms' direct relationship with their customers.

Conversely, voice-controlled smart speakers, as offered by Amazon, Google, Microsoft and Apple, could come between the companies and their targets. Some of these speakers host other firms' apps. For example, UPS has built a tool enabling customers to track their packages through Amazon's Alexa, which they might previously have done online or by phone. Companies worry they could be disintermediated, so that the firm that makes the speaker becomes the customer's primary relationship, says Paul Daugherty of Accenture, a consulting firm, and co-author of a new book, "Human + Machine: Reimagining Work in the Age of Artificial Intelligence". And, since voice-controlled speakers guide customers to a single answer rather than offering them multiple choices of firms to interact with, those that cannot or do not want to use these speakers may miss out on forming a relationship in the first place. Much will depend on how quickly voice speakers spread. Currently only about one in six American adults owns one, but that is already more than double the figure a year ago. And as speech recognition improves further, the appeal of speakers will grow, especially among youngsters.

*This article appeared in the Special report section of the print edition under the headline "Here to help"*

Hire education

# Managing human resources is about to become easier

*AI is changing the way firms screen, hire and manage their talent*

**Print edition | Special report** Mar 28th 2018

HUMAN RESOURCES (HR) is a poorly named department. It usually has few resources other than overworked staff, clunky technology and piles of employee handbooks. Hassled recruiters have to sort through reams of applications that vastly outnumber the jobs available. For example, Johnson & Johnson (J&J), a consumer-goods company, receives 1.2m applications for 25,000 positions every year. AI-enabled systems can scan applications far more quickly than humans and work out whether candidates are a good fit.

Oddly enough, they may also inject more humanity into hiring. According to Athena Karp of HiredScore, a startup that uses algorithms to screen candidates for J&J and others, only around 15-20% of applicants typically hold the right qualifications for a job, but they are rarely told why they were not hired, nor are they pointed to more suitable jobs. Technology is helping “give respect back to candidates”, she says.



Nvidia, a chipmaker, also gets more résumés than it can comfortably cope with, so it spent a year building its own system to predict which candidates are worth interviewing. It has recognised patterns that recruiters might not: for example, candidates who submit especially long résumés turn out to do less well than others, so those extra words will count against them. Hilton, a hotel chain, has shortened the average time it takes to hire a candidate from 42 days to five with the help of HireVue, a startup. It analyses videos of candidates answering questions and uses AI to judge their verbal skills, intonation and gestures. This can be especially helpful when the candidate comes from a different culture or speaks another first language, says Ellyn Shook, chief leadership and HR officer of Accenture, a consultancy with 435,000 employees that also uses HireVue.

Employers tend to hire candidates who are like themselves, which makes for undiversified workplaces. Orchestras, for example, used to be mostly male. Recruitment of female musicians went up only when they introduced “blind” auditions behind a screen. Algorithms can act as virtual screens, making hiring fairer. Pymetrics, a startup whose clients include companies such as Unilever, a consumer-goods giant, and Nielsen, a research firm, offers a set of games for candidates to play, usually at an early stage of the recruitment process, that ignore factors such as gender, race and level of education. Instead they test candidates for some 80 traits such as memory and attitude to risk. Pymetrics then uses machine learning to measure applicants against top performers and predict their suitability for a role. This can help candidates without conventional qualifications.

Another firm that is helping companies become more diverse is Textio, a startup that uses AI to improve job descriptions. For example, it has found that corporate jargon like “stakeholders” and “synergies” tend to drive away certain candidates, especially non-whites, and that women are less likely to apply for a job that is described as “managing” than “developing” a team. Tweaking job descriptions can get 25% more qualified people through the door and boost recruitment among minorities, says Kieran Snyder, Textio’s boss.

**Another time**

Recruiters often come across candidates who have good qualifications but are not the right fit for the particular position they are trying to fill. In the past, there was no way of redirecting them to other jobs as they became available. AI will make it possible to “repurpose candidates we have attracted before”, says Sjoerd Gehring, vice-president of talent acquisition for J&J. The health-care giant uses HiredScore, a startup, to grade candidates. When a vacancy opens up, the system automatically generates a shortlist of candidates that could be a good fit. This will bring big cost savings, says Mr Gehring.

AI can also help with managing employees. HR professionals and recruiters at big firms cannot possibly know all their own talented workers across countries and departments, says Chris Louie of Nielsen. His company is using AI to improve internal mobility. Twine Labs, a startup that is working with Nielsen, suggests internal candidates for new roles, based on employee data and job requirements, taking in hundreds of variables. Around half the candidates it suggests are approved and promoted, says Joseph Quan, Twine Labs’ boss. That is about the same success rate as for a human recruiter.

Another use for AI is to help employers reduce staff turnover. On average, replacing a worker takes around 20% of annual salary, sometimes much more. Workday, a software firm, has started to predict how likely employees are to leave. It looks at around 60 factors—such as pay, time between holidays taken and turnover in managers to whom the employee reports—and flags those at risk of quitting so companies can try to retain them.

Arena, a startup that works with hospitals and care-home companies, where turnover is high, considers retention even before it takes someone on. By using data from job applications and third parties to predict which applicants are likely to stay for more than a year, Arena has reduced its clients’ median turnover by 38%, says Michael Rosenbaum, Arena’s boss.

In future AI may also be used to determine pay. Infosys is looking into using AI to decide when to give employees a rise, based on their performance and their pay relative to that of colleagues. The technology will make pay fairer by taking biases and personality traits out of consideration, says Sudhir Jha, head of product management and strategy at Infosys. But there is a risk that workers will try to game the system.

All this points to a broader issue in AI: transparency. Companies will need to ensure that algorithms are being constantly monitored. In America, where it is illegal to discriminate against protected groups such as racial minorities, firms must be able to prove that they are hiring from these groups roughly in proportion to the population and are not introducing any bias, says Mr Rosenbaum. Startup bosses say they offer their clients transparency and regularly check their algorithms to make sure they are free of bias. But as AI becomes more prevalent, concerns will grow that algorithms could reinforce discrimination.

Recruitment is just one example of the technological disruption that AI will bring to the workforce. The number of recruiters will come down, because AI will handle many of the mundane tasks they used to do, and face-to-face interviews will become rarer. At Unilever only shortlisted candidates are now interviewed, after several rounds of AI-enabled screening and recorded interviews through HireVue. For the remaining recruiters, though, AI will make work easier and more interesting.

It may even help some of the workers it displaces. Accenture is rolling out a custom-built tool called Job Buddy which tells employees how vulnerable their job is to automation and predicts what training they might need so they can develop the right skills for the future. Ms Shook of Accenture says that around 80% of the people who have tried it are taking the advice it offers. But they may not have much choice.

*This article appeared in the Special report section of the print edition under the headline "Hire education"*

Smile, you're on camera

# There will be little privacy in the workplace of the future

*AI will make workplaces more efficient, safer—and much creepier*

**Print edition | Special report** Mar 28th 2018

WALK UP A set of steep stairs next to a vegan Chinese restaurant in Palo Alto in Silicon Valley, and you will see the future of work, or at least one version of it. This is the local office of Humanyze, a firm that provides "people analytics". It counts several *Fortune* 500 companies among its clients (though it will not say who they are). Its employees mill around an office full of sunlight and computers, as well as beacons that track their location and interactions. Everyone is wearing an ID badge the size of a credit card and the depth of a book of matches. It contains a microphone that picks up whether they are talking to one another; Bluetooth and infrared sensors to monitor where they are; and an accelerometer to record when they move.

"Every aspect of business is becoming more data-driven. There's no reason the people side of business shouldn't be the same," says Ben Waber, Humanyze's boss. The company's staff are treated much the same way as its clients. Data from their employees' badges are integrated with information from their e-mail and calendars to form a full picture of how they spend their time at work. Clients get to see only team-level statistics, but Humanyze's employees can look at their own data, which include metrics such as time spent with people of the same sex, activity levels and the ratio of time spent speaking versus listening.



**We can see through you**

Such insights can inform corporate strategy. For example, according to Mr Waber, firms might see that a management team is communicating only with a couple of departments and neglecting others; that certain parts of a building are underused, so the space should be redesigned; that teams are given the wrong incentives; or that diversity initiatives are not working.

Hitachi, a Japanese conglomerate, sells a similar product, which it has cheerily branded a "happiness meter". Employee welfare is a particular challenge in Japan, which has a special word, *karoshi*, for death by overwork. Hitachi's algorithms infer mood levels from physical movement and pinpoint business problems that might not have been noticed before, says Kazuo Yano, Hitachi's chief scientist. For example, one manufacturing client found that when young employees spent more than an hour in a meeting, whole teams developed lower morale.

Employers already have vast quantities of data about their workers. "This company knows much more about me than my family does," says Leighanne Levensaler of Workday, a software firm that predicts which employees are likely to leave, among other things. Thanks to the internet, smartphones and the cloud, employers can already check who is looking at a document, when employees are working and whether they might be stealing company files and contacts. AI will go further, raising concerns about Orwellian snooping by employers on their workers. In January Amazon was granted a pair of patents for wristbands that monitor warehouse workers' exact location and track their hand movements in real time. The technology will allow the company to gauge their employees' productivity and accuracy. JD.com, the Chinese e-commerce firm, is starting to experiment with tracking which teams and managers are the most efficient, and using algorithms to predict attrition among workers.

The integration of AI into the workplace will offer some benefits to workers and might even save lives. Companies with a high-risk work environment are starting to use computer vision to check whether employees are wearing appropriate safety gear, such as goggles and gloves, before giving them access to a danger area. Computer vision can also help analyse live video from cameras monitoring factory floors and work environments to detect when something is amiss. Systems like this will become as "commonplace as CCTV cameras are in shops", says Alastair Harvey of Cortexica, a firm that specialises in building them.

Employees will also be able to track their own movements. Microsoft, the software giant, already offers a programme called MyAnalytics which puts together data from e-mails, calendars and so on to show employees how they spend their time, how often they are in touch with key contacts and whether they multitask too much. It also aggregates the data and offers them to managers of departments so they can see how their teams are doing. "It doesn't have that 'big brother' element. It's designed to be more productive," insists Steve Clayton of Microsoft. The idea is that individuals' data are not given out to managers, though it is not clear whether workers believe that. As part of a broader investment in AI, Microsoft is also starting to use the technology to translate the monthly question-and-answer session held by the company's boss, Satya Nadella, for its workers worldwide, and analyse employees' reactions.

It does not take much imagination to see that some companies, let alone governments, could take this information-gathering too far. Veriato, an American firm, makes software that registers everything that happens on an employee's computer. It can search for signals that may indicate poor productivity and malicious activity (like stealing company records), and scans e-mails to understand how sentiment changes over time. As voiceenabled speakers become more commonplace at work, they can be used to gather ever more data.

This is of particular concern in authoritarian states. In China increasing numbers of firms, and even some cities, use cameras to identify employees for the purpose of giving them access to buildings. More troubling, the government is planning to compile a “social credit” score for all its citizens, pooling online data about them to predict their future behaviour.

All this may require a new type of agreement between employers and employees. Most employment contracts in America give employers blanket rights to monitor employees and collect data about them, but few workers are aware of that. Mr Waber of Humanyze thinks these data should have better legal protection, especially in America (Europe has stronger privacy laws).

As more companies rely on outside firms to collect and crunch employee information, privacy concerns will increase, and employees may feel violated if they do not think they have given their consent to sharing their data. Laszlo Bock, who used to run Google’s human-resources department and now heads a startup focused on work, reckons that “it’s going to play out in a bad way before it plays out in a good way.”

*This article appeared in the Special report section of the print edition under the headline ”Smile, you’re on camera”*

Leave it to the experts

# AI providers will increasingly compete with management consultancies

*A thriving ecosystem has sprung up to offer AI expertise and technical help*

**Print edition | Special report** Mar 28th 2018

MANY TECH FIRMS' offices boast luxurious perks such as nap pods, massages and soda fountains that offer employees a choice of exotically flavoured sparkling water. Corporate bosses like to think that finding customised AI solutions is just as easy as selecting a fizzy drink with a hint of grapefruit. They are wrong. Buying AI takes time, can feel like hard work, and the results are often imperfect.

A number of vendors are scurrying to come to would-be users' aid. The leaders are the West's biggest providers of cloud storage: Amazon, Google and Microsoft. Cloud computing is a vast market worth $300bn, and fiercely competitive. All three firms offer pre-trained models that corporate clients can use to build AI-enabled systems. For example, they all sell "vision" tools that enable customers to use computer vision to improve their existing services and build new ones. Uber, the ride-hailing firm, worked with Microsoft's toolset to design a system that scans drivers' faces to confirm their identity when they start a shift. C-Span, a television network, used Amazon's vision system to compile a database of politicians so it can quickly name them when they appear on screen.



A broad range of tools is available to help mainstream companies build anything from search and recommendation engines to speech-recognition and translation systems, customer-service bots and more. Jeff Dean, director of Google Brain, the search giant's AI-research arm, reckons there are 10m organisations in the world that "have a problem that would be amenable to a machine-learning solution. They have the data but don't have the experts on staff."

The potential corporate market for AI software, hardware and services is vast: around $58bn by 2021, compared with $12bn last year, according to IDC, a research firm. Amazon has a clear lead in the broader cloud market, with a 44% share of the total, compared with Microsoft's 7% and Google's 2.3%, but for AI tools the field remains wide open. Paul Clarke, chief technology officer of Ocado, an online grocer, says it can be good for clients to be promiscuous and use the best tools from each. He thinks it unlikely that any one of them will sweep the board.

Cloud providers try to differentiate their AI offerings in two ways: by ease of use, through a well-designed interface, and by offering better algorithms. Each of the tech giants draws on where its "strength is today", says Joseph Sirosh of Microsoft. For example, Google offers an excellent tool which companies can use to create or redesign their own search engines, and has especially good engineering talent. Microsoft and Amazon have solid tools for voice recognition. Microsoft's interface currently has the best design, says Pedro Domingos, a professor of computer science at the University of Washington and author of "The Master Algorithm", a book about AI and business.

In future tech firms will develop more specialised hardware that will help companies crunch enormous data piles more quickly. Google has a lead in this area; it has built some remarkably powerful custom chips, called Tensor Processing Units (TPUs), and uses other customised accelerators to increase the processing speed of its data centres. The tech firms are also offering free open-source libraries to clients' machine-learning experts that can be used to design AI-enabled programs. This is "not altruistic", says Matt Turck of FirstMark Capital, a venture investor. Tech firms want to provide great tools in order to attract clients to their platforms and impress AI experts.

Microsoft has more experience than either Amazon or Google of catering to large firms' software needs, so it is well placed to serve mainstream companies in need of help with AI. But most such offerings still require a lot of customisation and technical work to make them useful, says Oren Etzioni of the Allen Institute for Artificial Intelligence, a non-profit research group.

The cloud providers are trying to fill the gap by offering consulting services. Google has opened an "Advanced Solutions Lab" that is part consulting service, part tech bootcamp. Whole teams from client companies can come to acquire machine-learning skills and build customised systems alongside Google engineers. Courses typically last from four weeks to several months. Demand has been "overwhelming", says Vats Srivatsan of Google Cloud, who is now hoping to roll this out much more widely. That is a new departure for tech firms, which in the past have been strong on technical infrastructure but light on people.

The cloud providers will increasingly compete with management consultancies, which charge fat fees for helping clients navigate technological disruption. "The Googles, Amazons and Microsofts of the world may take over from the McKinseys, Boston Consulting Groups and Bains," says Roy Bahat of Bloomberg Beta, a venture-capital firm. "Consultancies are built for two-by-two matrices. AI's matrices are a million by a million." In this race, consultancies with deep expertise in data and technology are better placed than those that focus on general strategy.

### Straight from the horse's mouth

The generalists know they are vulnerable. McKinsey has been investing heavily to beef up its expertise in data, for example by buying QuantumBlack, an advanced-analytics firm, for an undisclosed sum in 2015. But many clients seek advice direct from tech firms, which are themselves pioneering users of AI. “All consultants do is listen to you and tell you back what you’ve already told them,” says Morag Watson of BP, an oil giant.

IBM is trying to bridge the gap between the tech wizards and the conventional consultants. “People think this will go the way the digital and mobile revolutions went. I would argue the opposite. If people get their AI right, it’s a great way to extend their incumbent advantage,” says David Kenny, the boss of Watson, IBM’s AI offering. Watson has been heavily marketed on television and enjoys strong name recognition, aided by its victory over human contestants in a game of Jeopardy in 2011. But its bespoke solutions for clients take lots of time to develop, running up hefty bills for consulting hours. “Watson is a branding concept that’s being portrayed as a product,” says Tom Siebel of C3 IOT, an AI startup. “You can’t easily buy it, and you can’t install it.”

IBM also suffers from the same problem as any tech firm other than Google, Amazon and Microsoft: it finds it hard to get hold of the best talent. None of the top doctoral candidates in AI goes to work for IBM, says Mr Domingos of the University of Washington. The old saying that “nobody ever got fired for buying IBM” may no longer apply in the AI era.

Startups, too, are hoping to jump on the AI bandwagon. Many offer services like helping clean up and label data, and take on specific tasks that large tech firms are not yet offering, like helping firms recruit, scan job descriptions and improve customer service. For large companies it makes sense to outsource most of their AI work, except where it directly affects their strategic edge. For example, BP would not want to build AI tools to automate back-office or HR functions, but it would want to develop its own AI system for interpreting seismic imaging to detect oil, says Ms Watson.

If companies want to get products rolled out quickly, they have to work with multiple vendors, says Mr Lippert of MetLife. That may be good for startups, which can be nimble. But the incumbent tech firms’ size, computing infrastructure, proprietary data and balance-sheets give them an unassailable advantage. “Right now everyone thinks they can win. The field will become considerably less democratic,” predicts Martin Reeves of Boston Consulting Group. Having used AI to boost their own fortunes, the incumbents will move on to selling the technology to customers who may become AI-fuelled giants in their own right.

*This article appeared in the Special report section of the print edition under the headline ”Leave it to the experts”*

Two-faced

# The sunny and the dark side of AI

*AI will mainly be good for business, but mind the pitfalls*

**Print edition | Special report** Mar 28th 2018

MENTION ARTIFICIAL INTELLIGENCE, and most people will think of robots. But a more fitting image may be that of Janus, the Roman god of beginnings, transitions and endings, who has two faces looking in opposite directions. On one side are the positive changes that AI will bring, enabling people to achieve more, far more quickly, by using technology to enhance their existing skills. Recruiters will be able to pinpoint the best candidates more easily, and customer-service staff will be able to handle queries faster. Jobs that never existed before could be created. And getting machines to do routine work can make professional lives more fulfilling and stimulating.

Consumers, too, will benefit from AI-enhanced services such as personalised recommendations and faster and more efficient delivery, as well as from radical changes in industries like health care and transport that could lead to new drug discoveries and treatments and safer ways to move around.



Look the other way, though, and there are plenty of potential pitfalls. Technological change always causes disruption, but AI is likely to have a bigger impact than anything since the advent of computers, and its consequences could be far more disruptive. Being both powerful and relatively cheap, it will spread faster than computers did and touch every industry.

**Sunny with a chance of thunderstorms**

In the years ahead, AI will raise three big questions for bosses and governments. One is the effect on jobs. Although chief executives publicly extol the broad benefits AI will bring, their main interest lies in cutting costs. One European bank asked Infosys to find a way of reducing the staff in its operations department from 50,000 to 500. This special report has shown that AI-enhanced tools can help pare staff in departments such as customer service and human resources. The McKinsey Global Institute reckons that by 2030 up to 375m people, or 14% of the global workforce, could have their jobs automated away. Bosses will need to decide whether they are prepared to offer and pay for retraining, and whether they will give time off for it. Many companies say they are all for workers developing new skills, but not at the employer's expense.

A second important question is how to protect privacy as AI spreads. The internet has already made it possible to track people's digital behaviour in minute detail. AI will offer even better tools for businesses to monitor consumers and employees, both online and in the physical world. Consumers are sometimes happy to go along with this if it results in personalised service or tailored promotions. But AI is bound to bring privacy violations that are seen as outrageous. For example, facial-recognition technology has become so advanced that it may be able to detect someone's sexual orientation. In the wrong hands, such technology could militate against fair and equal treatment. Countries with a record of surveillance and human-rights abuses, such as China, are already using AI to monitor political activity and suppress dissent. Law-enforcement officials around the world will use AI to spot criminals, but may also snoop on ordinary citizens. New rules will be needed to ensure consensus on what degree of monitoring is reasonable.

Janus, the Roman god, contained both beginnings and endings within him. That duality characterises AI, too

The third question is about the effect of AI on competition in business. Today many firms are competing to provide AI-enhanced tools to companies. But a technology company that achieves a major breakthrough in artificial intelligence could race ahead of rivals, put others out of business and lessen competition. This is unlikely to happen in the near future, but if it did it would be of great concern.

More likely, in the years ahead AI might contribute to the rise of monopolies in industries outside the tech sector where there used to be dynamic markets, eventually stifling innovation and consumer choice. Big firms that adopt AI early on will get ever bigger, attracting more customers, saving costs and offering lower prices. Such firms may also reinvest any extra profits from this source, ensuring that they stay ahead of rivals. Smaller companies could find themselves left behind.

Retailing is an illustration of how AI can help large firms win market share. Amazon, which uses AI extensively, controls around 40% of online commerce in America, helping it build moats that make it harder for rivals to compete. But AI will increase concentration in other industries, too. If, say, an oil company can use AI to pump 3% more efficiently, it can set prices 3% lower than those of a rival. That could force the competitor to shut down, says Heath Terry of Goldman Sachs. He thinks that AI has "the power to reshuffle the competitive stack".

It is too early to tell whether the positive changes wrought by AI will outweigh the perils. But leading a company in the years ahead is sure to be more challenging than at any time in living memory. AI will require bosses to rethink how they structure departments, whether they should build strategic technologies internally or trust outside firms to deliver them, whether they can attract the technical talent they need, what they owe their employees and how they should balance their strategic interests with workers' privacy. Just as the internet felled some bosses, those who do not invest in AI early to ensure they will keep their firm's competitive edge will flounder.

Janus, the Roman god, contained both beginnings and endings within him. That duality characterises AI, too. It will put an end to traditional ways of doing things and start a new era for business and for the world at large. It will be pervasive, devastating and exhilarating all at the same time. Look ahead.

*This article appeared in the Special report section of the print edition under the headline "Two-faced"*

**Ad agencies**
Mad men adrift

Mad men adrift

# Technology has upended the world's advertising giants

*Advertising agencies are under pressure to change archaic and inefficient elements of their business models*

**Print edition | Business** Mar 28th 2018

IN BUILDING the world's largest advertising company over the past 30 years, Sir Martin Sorrell, chief executive of WPP, has weathered two recessions and survived a global financial crisis. His firm nearly went bankrupt in the early 1990s. Now he must make his hardest advertising pitch yet, to convince the corporate world that image-making agencies like his are not dinosaurs on the brink of extinction.

The world's advertising giants are struggling to adapt to a landscape suddenly dominated by the duopoly of Google and Facebook. Some of their biggest clients, such as Procter & Gamble (P&G) and Unilever, are also being disrupted, in their case by smaller online brands and by Amazon. They are cutting spending on advertising services, and also building more capabilities in-house. Consultancies with digital expertise such as Deloitte and Accenture are competing with agencies, arguing that they know how to connect with consumers better, and more cheaply, using data, machine learning and app design.



The resulting picture is an industry under siege. WPP just had its worst year since the financial crisis, with declining revenues from like-for-like operations (ie, stripping out revenue from acquired businesses) and a slightly reduced profit margin. This year the company projects that organic growth will be flat, compared with 5% or so in better times. Its big rivals, including America's Interpublic Group and Omnicom Group and France's Publicis Groupe, have registered anaemic growth. Publicis posted 0.8% growth in its like-for-like operations in 2017. Investors are losing faith—none more so than WPP's, who have driven the company's shares down by 23% since mid-February (see chart).

The ad giants have conventionally made much of their money from huge fixed contracts with clients, which lock in long-term relationships with multiple agencies. Their holding-company structures include famous creative firms that design and make ads for TV and other media, but also a host of other businesses that bring in the bulk of their revenue, such as media-buying operations, digital services, brand consulting and public relations. This month Marc Pritchard, chief brand officer of P&G, criticised their model as a "Mad Men" operation that is "archaic" and overly complex in an era when campaigns and ads need to be designed and refined quickly across lots of platforms.

Technological forces are buffeting this model. The first big challenge is disintermediation. Despite the growing backlash against the tech giants, Google and Facebook make it easy for firms big and small to advertise on their platforms and across the internet via their powerful ad networks. The American advertising market grew by around 3% last year, to $196bn, but only because of the tech giants. MoffettNathanson, a research firm, estimates that Google and Facebook each accounted for more than $5bn of growth in advertising spend, and for almost 90% of online ad growth. All forms of conventional advertising, apart from outdoor, shrank.

The second headache is the rise of ad-free content for consumers, especially on Netflix, and the corresponding disruption of ad-supported television, which has declining viewership globally. This hurts agencies because their biggest clients, including the manufacturers of consumer goods, beverages and pharmaceuticals, use television the most. Planning campaigns and creating 30-second spots for television is a people-heavy, high-margin business that the agencies dominate. In America television advertising sales fell by $4.9bn in 2017, or 7.3%, to $62.1bn, according to Magna Global, which is owned by Interpublic. That is the biggest such drop in a non-recession year in two decades.

Third, Amazon's e-commerce might, and the growing clout of internet-era direct-to-consumer upstarts, have weakened the distribution muscle and pricing power of the advertising giants' biggest clients. In America Dollar Shave Club, a razor startup, significantly dented the market share of P&G's Gillette brand in just a few years, forcing price cuts. (Unilever bought Dollar Shave Club in 2016.) Consumer-goods companies are responding to such margin pressure by cutting spending on agencies; P&G has cut agency fees and production costs by $750m in three years, and expects to cut at least another $400m.

Such cost discipline among clients is driven partly by the influence of thrifty private-equity investors like 3G, the Brazilian owner of AB InBev, the world's largest brewer. It also stems from a perception that the ad agencies have exploited their complexity to boost billings. In 2016 an advertiser trade association issued a report accusing the agencies of using opaque practices, including in digital-ad placement, to extract higher margins. The holding firms strongly disputed the findings, but the report prompted many clients to review their contracts with agencies and insist on more transparency.

Nonetheless, some of the advertising holding companies' woes may prove less threatening than feared. It is far from clear that Google and Facebook will disintermediate agencies in the long run. The agencies all do programmatic buying of digital ads for clients. WPP, the only holding company that discloses its spending on the two giants, spent about $7bn of its clients' ad budgets with Google and Facebook in 2017, out of a combined $46bn in advertising sold by both companies that WPP considers agency-relevant business (that is, not counting small-business advertising). Sir Martin says that market share is "not dissimilar" to WPP's share of ad business with Comcast and Disney.

**Spot of bother**

Facebook's recent troubles over data privacy could lead to a regulatory crackdown that constrains both it and Google, potentially opening up the digital-advertising market to more competitors. Facebook's market share in digital ads in America is forecast to dip this year for the first time. The more options there are for placing ads besides Google and Facebook, the more likely advertisers are to seek the help of agencies.

Sir Martin argues that the budgetary pressures that have forced his clients to cut back on advertising are a cyclical problem, not like the structural challenges posed by technological disruption. He believes that big brands will invest more in advertising to protect their positions in disrupted markets. Some analysts agree with this rosy view. Agency executives further argue that digital consultancies will not be a threat to their core advertising business because they mostly compete for different, lower-cost services.

In private, however, a senior executive at a rival ad-holding firm rejects much of this optimism. Technological disruption and disintermediation, he says, will only deepen. The efficiency of targeted digital ads means companies can spend less for the same outcome in branding.

The advertising firms are responding by hiring away talent, acquiring businesses (in 2015 Publicis bought Sapient, a digital consultancy, for $3.7bn) and gradually changing how they make money. Their plans mostly boil down to two things: investing in digital services and consolidating their collections of businesses so that they can provide a range of services to one client more cheaply under one account.

That should be more than enough to keep them alive. "Everybody says that we're dinosaurs but we're not. We're cockroaches," explains Rishad Tobaccowala, chief growth officer for Publicis. "We know how to scurry around, we hide out in the corner, we figure out where the food is, we reconstitute ourselves."

*This article appeared in the Business section of the print edition under the headline "Mad men adrift"*

Grabbing back

# Uber makes a tactical retreat from South-East Asia

*The company's deal with Grab shows the influence of its biggest shareholder, the SoftBank Vision Fund*

**Print edition | Business** Mar 28th 2018

BEING a commuter in much of South-East Asia requires reserves of patience. In city after city, bar Singapore, jams confine people in taxis for hours, or force them onto the back of motorbikes that weave precariously through traffic. These qualities of perseverance are not shared by Uber, an American ride-hailing firm. This week it announced that after five years and $700m of investment in the region, it would be selling its business there to Grab, a Malaysian startup based in Singapore.

South-East Asia is not known for giving birth to Silicon Valley-beating tech companies, says Ming Maa, Grab's president. "This acquisition shows that this is changing," he boasts. Under the terms of the deal Uber will take a 27.5% stake in Grab, which is valued at $6bn. The deal makes Grab, which started in 2012 after its two co-founders met at Harvard Business School, the dominant ride-sharing app in a market of 634m people. It operates in 191 cities across eight countries, and will now hoover up customers of Uber, who have two weeks to make the switch to the local service.



For Uber, cracking the market was always going to be a struggle. With the exception of Singapore, most rides in the region are astonishingly cheap, particularly if perched on the back of a motorbike. In order to stay competitive, Uber has had to burn through cash.

Local companies such as Grab and an Indonesian competitor, Go Jek, which is valued at around $5bn, also offer more than just ride-hailing services. Indonesian users of Go Jek can order food, massages and manicures at the touch of the app. GrabPay provides mobile payment services, particularly useful for a region where an estimated two-thirds of people are "unbanked". Two weeks ago Grab also started providing microloans to businesses in a partnership with Credit Saison, a Japanese firm. With the acquisition of UberEats as part of the deal, it will also expand its food-delivery service.

In their core businesses, too, local companies have innovated successfully. "In San Francisco, most vehicles are four-wheel cars," points out Mr Maa. By contrast, most of Grab's fleet consists of two-wheeled motorbikes and drivers wearing lurid green helmets. In Cambodia three-wheel tuk-tuks also chug along, ready to be hailed through a smartphone. In Jakarta, the Indonesian capital, where motorbikes can outnumber people, the company also introduced a new kind of payment system: rather than hail a rider through the app, only to miss them in the crowd, a customer can now pick their rider on the spot and instantly book their journey.

This week's deal is also a coup for Masayoshi Son, chief executive of SoftBank, a Japanese telecoms and internet conglomerate. In January his SoftBank Vision Fund, with $93bn to spend, closed a deal to take a 15% stake in Uber. SoftBank itself was already Grab's biggest shareholder. Both firms could benefit from less competition. Grab gets the market, but Uber's losses of $4.5bn worldwide last year should shrink as it hunkers down before a planned initial public offering next year. Mr Son aims eventually to ensure that none of the many ride-hailing firms in which SoftBank holds stakes waste money fighting each other.

A similar deal in 2016 in China with Didi, in which Uber took a 17.7% stake, has worked out well for both: the initial value of the holding has risen from $6bn to $8bn. Dara Khosrowshahi, Uber's boss since November, recently visited two other markets where his firm is either still battling or preparing to rival another SoftBank-backed firm—India, where Uber competes with Ola, a local firm, and Japan, a nascent ride-hailing market where Uber and Didi both have big plans. Whatever happens in these markets, ride-sharing increasingly seems to mean firms divvying up the spoils.

*This article appeared in the Business section of the print edition under the headline "Grabbing back"*

Red hot

# Mexico switches on its government-run wholesale mobile network

*The idea of nationalised 5G networks is spreading*

**Print edition | Business** Mar 28th 2018

JAWS dropped when earlier this year a White House memo argued that the American government should build and run its own 5G mobile network. The reason given was national security. The memo cited Huawei, a Chinese maker of telecoms gear, as a strategic threat. Many assailed the idea of such massive state intervention and the idea was quickly squashed. South of the border, Mexico is experimenting with something that could be a more sensible version of the American officials' suggested venture: a wholesale mobile network.

Red Compartida ("shared network" in Spanish) went live on March 21st. The motive behind one of the world's most ambitious telecommunications projects is not national security. Rather, Mexico is trying to pull off a triple feat of expanding mobile coverage, lowering prices and creating a viable business environment for 5G, the next generation of wireless mobile internet.



The project is a $7.2bn public-private partnership that is part of the country's 2014 telecommunications reforms (and involves both Finland's Nokia and Huawei). The government will provide spectrum in the 700MHz band and 18,000km of fibre-optic cables. Altán Redes, a private consortium that won the right to build the network, will foot virtually the whole bill. It cannot sell internet services to customers but must instead offer capacity to other firms. The government, checking for fairness, signs off on each deal.

The venture, and the wider reforms, are badly needed. Internet speeds are slow. The mobile-phone penetration rate remains among the lowest in the OECD, a club of rich countries. In 2016 Mexico had just 60 mobile-broadband subscriptions per 100 mobile customers. That is partly because many Mexicans are poor, but also because existing service providers do not offer coverage to large parts of the country. Red Compartida will fill some of that gap. It covers 30% of the population now; it will cover 50% by 2020 and 92% by 2024.

Other elements of the telecommunications reforms have helped reduce Mexican mobile-broadband prices, from 30% above the OECD average in 2013 to 30% below it in 2016. Yet real competition remains elusive. América Móvil, the telecoms giant owned by Carlos Slim, a local tycoon, still controls around 70% of the mobile-broadband market. Two other companies—Movistar and AT&T—own and operate their own mobile networks. Mobile virtual network operators (MVNOs), meaning firms which rent their infrastructure from other companies, have a market share of 1% in Mexico, compared with 10-15% in most of Europe and North America.

Again, Red Compartida will change that. As an independent wholesaler, Altán has no interest in keeping new players out of the market and is obliged to offer its services to everyone. Edgar Olvera Jiménez, the under-secretary for telecommunications, expects MVNOs to make up 5% of the mobile market within two to three years, driving down costs. The government thinks the cost of internet per megabyte will fall by half almost immediately.

So far the network does not have any clients, but Eugenio Galdón, Altán's vice-president, says that several companies have signed contracts and will publicly announce their entry into the market after completing beta tests on the network. The big three players have so far resisted joining the network, but they might use it in future to reach parts of Mexico that their own networks do not cover.

Red Compartida's infrastructure is built for easy upgrading to 5G. Mexico will have it by the end of 2019, says Mr Olvera. 5G is hailed for its high connection speeds, low response times and flexibility, which will help to deliver on the promise of the internet of things, as connected devices are called. But the business case for building separate private networks is less convincing. The infrastructure of 5G costs far more than that of its antecedents. It uses higher-frequency radio waves that struggle to penetrate physical objects, so operators need to put up more antennae and connect them with fibre-optic cables. Red Compartida will spread the cost (once Altán has clients), making it more manageable.

The network also has risks. An obvious one is that Altán acts like the sluggish and underfunded telecoms monopolies of old. That has been the case with some of the fixed wholesale networks. The average speed of internet connections on Australia's government-owned National Broadband Network, for instance, lags behind that of most rich countries.

Mexico's government says the next step is to roll out the network across the country. Mexico is a step ahead of almost everyone else: only tiny Rwanda has built a wholesale mobile network before. But Mexico is unlikely to be the last. Governments in several other countries, from Chile to South Africa, are thinking of emulating the idea. They will watch to see whether Mexico's ambitious project quickly accumulates satisfied customers.

*This article appeared in the Business section of the print edition under the headline "Red hot"*

Compos menses

# A long overdue disruption in menstrual products

*Ninety years since the tampon, women are getting more choice*

**Print edition | Business** Mar 31st 2018

THE disposable sanitary pad debuted in the late 19th century. It was such a taboo that a purchase involved dropping the exact sum in a box at the chemist's counter. The pack was handed over, no words uttered. Menstrual products could not be advertised on American television until 1972. In 2015 an ad showing a runny egg yolk was questioned by New York's subway for being too suggestive of period flow (which was the point).

Squeamishness has hampered innovation. The applicator tampon, invented in 1931, was the last big novelty in menstrual devices to go into widespread use. Its cardboard applicator, a tube within a tube, allowed women to push a tampon inside without committing another no-no (touching their bodies).



In the decades since, big manufacturers such as Procter & Gamble, Kimberly-Clark and Essity have only made tweaks. Pads became thinner and acquired an adhesive strip. Plastic replaced cardboard in applicators. Compact tampons with no applicators that fit into pockets and small handbags appeared in the 1960s. Recent novelties include a black pantyliner to match the most popular colour of underwear.

Yet firms have shied away from bringing out alternatives to pads and tampons. With well-established brands and profit margins reaching over 50% the status quo makes for solid business. Startups struggled to sell new products with advertising that allowed only veiled allusions to how they are used. An insertable rubber cup, from a startup in the 1960s, flopped, in part because of these hurdles.

The rise of online marketing and e-commerce have spurred new products. Startups are trying to win a slice of the market (worth some $19bn globally) in America, Australia, Canada and Finland. THINX, Knix Wear, Dear Kate and Modibodi make knickers of absorbent, leakproof fabrics that can be tossed in the wash and reused. The Flex Company offers a menstrual "disk", a soft pouch to collect menses which is attached to a bendable polymer ring. When inserted, the ring creates a seal between the pouch and the cervix. It can be worn for 12 hours, including during sex—a feature that grabbed men's attention when she pitched for funding, says Lauren Schulte, the firm's founder. Diva, Intimina and Mooncup make reusable silicone cups that also go inside the body.

They can get off the ground without expensive television spots. Online ads direct intrigued consumers to websites with step-by-step instructions, videos and user reviews. E-commerce lets manufacturers bypass high-street retailers. Flex offers a subscription, paid monthly.

These newfangled products remain niche for now. Tampax Pearl tampons rake in $290m a year in America alone; Diva sold only around $20m-worth of cups worldwide in 2017. But that is up from $2.5m five years earlier. Its most popular model was the top-selling "feminine hygiene" product in Canada by dollar value in 2016, according to Nielsen, a market-research firm. Flex, too, has seen demand soar. "We had to pause marketing because we ran out," says Ms Schulte.

*This article appeared in the Business section of the print edition under the headline "Compos menses"*

Political football

# Mediapro offers a combustible mix of sport and politics

*Spanish police are scrutinising the company's links to Catalan pro-independence leaders*

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LIKE Jaume Roures and Gerard Romy, two of its founders, Mediapro is proudly Catalan. Too proud, according to the Spanish police. The television company, which launched in 1994, has been investigated for paying for a press centre for foreign journalists during an unconstitutional independence referendum in the region last October, and for producing a sympathetic documentary on the vote. Mediapro denies wrongdoing. At Madrid's main annual contemporary art fair last month its third co-founder, Tatxo Benet, purchased a contentious set of photographs which labelled the plebiscite's jailed Catalan organisers as political prisoners.

Pro-independence antics may be popular in Catalonia, which on March 25th again erupted in violent protest after German authorities arrested Carles Puigdemont, the former Catalan president. But they could be a headache for Mediapro's new Chinese owners. On February 15th Orient Hontai Capital, an investment firm from Beijing, bought 53.5% of Imagina, a holding firm which owns Mediapro, in a deal that valued the firm at €1.9bn ($2.4bn), including about €200m of debt. The day before, Mediapro issued a statement decrying the inclusion by the Spanish police of Mr Roures's name in an investigation into who organised the referendum.



The buyers would no doubt prefer excitement to be confined to Mediapro's business. Earlier this month the company reported revenue for 2017 of €1.65bn, and a net profit of €128m, up by 12% from 2016. Most of its earnings come from the resale of football rights. Orient Hontai's takeover was completed two weeks after Mediapro acquired the domestic television rights to Italy's prestigious Serie A, paying €1.1bn a year for the coming three seasons.

That deal sealed Mediapro's dominance of football from southern Europe; it already owns most of the rights to La Liga, Spain's top-flight league, until 2019. Mediapro has also designed a few football museums and is investing in a theme park dedicated to Lionel Messi, the star player for FC Barcelona, which is due to open in the Chinese city of Nanjing in 2020. It produces television series and feature films—a few were directed by Woody Allen, including "Vicky Cristina Barcelona".

Mr Roures and Mr Benet will each keep 12% of Mediapro and are to remain its bosses. (WPP, a British advertising giant, maintains a 22.5% stake; Mr Romy and some other minority investors have divested theirs.) Orient Hontai hopes they will continue to draw viewers keen to watch the likes of Mr Messi in action. Yet they may have their work qcut out.

Football rights no longer look the money-spinners they once were. In February Sky and BT Sport, two British broadcasters, bid only £4.5bn ($6.2bn) for the rights to broadcast 160 English Premier League matches for three seasons, starting in 2019, down from £5.1bn for the preceding three. In Italy Mediapro barely met the minimum bid threshold set by the league, yet François Godard, an analyst at Enders Analysis, still does not foresee the firm generating a positive return from Serie A.

Mediapro's vulnerability is that it is a middleman. It does not have its own subscribers, but relies instead on those of the providers to whom it sells the rights. That makes it vulnerable to streaming services with huge subscriber bases such as Amazon or Netflix, which are eyeing sports, says Miguel Jiménez of Renta4, a broker in Madrid. Mediapro could sell them rights, but they tend to prefer full control. Mediapro's current customers, meanwhile, murmur about getting out of football. In February, Telefónica, a Spanish telecoms operator, said it was reviewing whether to continue streaming football online.

Mr Benet describes this as nothing more than haggling before the contracts' renewal. He insists that Spaniards will still want to tune in to live football and are prepared to reward those who air it. His Chinese bosses must be hoping that political crosswinds, not trouble in the core business, will be all they come up against.

*This article appeared in the Business section of the print edition under the headline "Political football"*

From Mars to Venus

# Royal Dutch Shell and Total flirt with becoming utilities

*It looks like shrinkage. But small starts may mask big ambitions*

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IN AMERICA Big Oil remembers BP's attempt to go "Beyond Petroleum" in the 2000s as a toe-curling embarrassment. In Europe it is seen as being ahead of its time. Once again the oil industry is experimenting with cross-dressing. Statoil, a Norwegian oil firm, is abandoning a name given to it almost 50 years ago to become the wispier Equinor. The firm formerly known as Dong, for Danish Oil and Natural Gas, is now Ørsted, a big wind firm named after the founder of electromagnetism.

Royal Dutch Shell and Total, Europe's biggest private producers, are (mercifully) not changing their names. But they are toying with a strategy that could be far more adventurous—moving their core businesses from hydrocarbons to electrons.



Amid pressure to limit climate change, and the growth of renewable energy and electric vehicles (EVs), they expect low-carbon electricity to become a much bigger part of the world's energy mix within the next few decades. They have already invested heavily in building global natural-gas businesses for cleaner power generation. Now they plan to take on utilities in deregulated markets to provide electricity and gas direct to homes and businesses.

Last month Shell completed the acquisition of First Utility, a midsized British gas and electricity supplier that already operates under the Shell brand in Germany. The Anglo-Dutch firm plans to make a similar move in Australia. Late last year Total launched the supply of gas and green power to households in France, through its Total Spring brand. Both have invested in renewable energy and are installing EV charging points in their networks of petrol stations. "We don't see how we can be an energy major if we don't become a significant player in electricity," says Maarten Wetselaar, head of gas and new energies at Shell. A Total executive says: "Why should we limit ourselves to selling gas to a utility when we can sell to end-customers?"

At first glance the shift could be considered a shrinking of horizons. These firms are global beasts with vast balance-sheets. Customer-facing utilities are minnows by comparison. Centrica, the biggest of Britain's Big Six, is worth £7.6bn ($10.8bn), compared with Shell's market value of £190bn. They often operate in only one or two national markets, each a regulatory minefield. Bill-paying customers tend to loathe them far more than they do the purveyors of petrol and pain aux raisins.

Power-generating utilities have also performed poorly in recent years compared with their oil and gas counterparts. They piled on debts before the 2007-08 financial crisis and were then hit by the rise of wind and solar, which drove down wholesale electricity prices. Peter Atherton, of Cornwall Insight, a consultancy, says that whereas supermajors aim for returns on capital on big oil and gas developments of 15%, renewables provide returns of 7-9%. In Britain, the energy retailers aim for profit margins of 4-5%.

Yet Jake Leslie Melville of BCG, a consultancy, says the oil companies are right to "test the waters" in electricity. For instance, Shell's acquisition of First Utility, reportedly for $200m, may be deemed expensive considering the latter's 850,000 household customers. But as a way of exploring whether Shell's prowess in natural-gas supply and energy trading can be extended to providing services to millions of customers, some of whom will increasingly generate their own electricity, it may be a small price to pay—especially for a company that invests at least $25bn a year.

Moreover, small beginnings may mask big ambitions. Mr Wetselaar says his aim is to generate electricity returns of 8-12%, which he thinks is feasible because Shell, with its energy-trading experience, can profit from the heightened volatility of power markets in the era of renewables and EVs, as well as from more flexible demand from consumers. To become material to Shell, the electricity business would need to grow to $50bn-100bn, on a par with the size of its current gas business, he says. Scott Flavell of Sia Partners, a consultancy, mulls whether, having acquired BG, an upstream producer once owned by British Gas, Shell might covet Centrica, owner of the downstream part of British Gas.

There are reasons for caution. Julian Critchlow of Bain, a consultancy, compares the risks facing the oil industry with those of Eastman Kodak when its business was ruined by digital photography and photo-sharing. It is clear that increased electrification is bound eventually to cause upheaval. "The challenge, as with Kodak, is whether you can spot where the returns will be." Another risk is that technology firms may move into the domestic electricity market, making use of smart meters and digital devices, which would provide more alternatives to traditional energy suppliers. Yet if other oil and gas producers are not following in Shell and Total's tentative footsteps, they probably should be. It is time to plug in.

*This article appeared in the Business section of the print edition under the headline "From Mars to Venus"*

Schumpeter

# Getting a handle on a scandal

*Corporate crises drive the media and politicians wild. But do they damage shareholder value?*

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A POPULAR riff doing the rounds in tech circles is that, if data are the new oil, then Facebook's Cambridge Analytica fiasco is the equivalent of Deepwater Horizon. That was the name of an oil platform that exploded in April 2010, coating the Gulf of Mexico and the reputation of BP, the firm responsible, in a toxic slick.

Yet just how damaging are "Deepwater" incidents for firms and their owners over time? Perhaps they cease to matter after the initial burst of media purgatory, grovelling by executives, celebratory cant from competitors and politicians' grandstanding.



To answer this, Schumpeter has looked at eight of the most notable corporate crises since 2010, including those at Uber and Wells Fargo. The evidence shows that these episodes were deeply injurious to the companies' financial health, with the median firm losing 30% of its value since its crisis, when compared with a basket of its peers. Facebook should beware.

When a scandal first breaks, executives at the top of a firm and securities analysts outside it are often myopic, viewing it as a public-relations blip that will not alter a firm's operations or its competitive position. In the case of Facebook, 44 of the 48 Wall Street analysts who cover it still rate it a "buy", according to Bloomberg. Many have downplayed the scandal, even though Facebook's shares have dropped by 18% since the news broke on March 17th.

Of course, speculators and the media do frequently overreact to bad news. Credit Suisse, a bank, analysed 5,400 instances of American firms' shares dropping by over 10% in one day, between 1990 and 2014. On average the shares regained two-thirds of the lost value within the subsequent 90 days. But big corporate scandals are in a different league. They capture the public imagination and lead to heat from politicians and regulators. Infrequent and idiosyncratic, they defy easy analysis.

Consider two infamies from the 1980s. In 1982 Johnson & Johnson had to withdraw 31m bottles of the painkiller Tylenol from shops after seven people were poisoned in Chicago. Seven years later, the *Exxon Valdez*, a ship run by Exxon, struck a reef in Alaska's Prince William Sound and spilled 11m gallons of oil. Yet both firms' share prices recovered within a few weeks, and today they remain among the world's most valuable companies.

Since the 2008-09 financial crisis, plenty has changed. Social media mean that news of scandals spreads faster than ever and often in an exaggerated fashion. But consolidation has muted competition in many industries and made firms bigger and more resilient. Western governments may be willing to protect or bail out big firms, not just banks, because they worry about job losses.

The eight firms in the sample have all been seared by scandal. All were large before their calamity, with a market value of at least $15bn. Their problems were different, but all led to a media scrum and prompted politicians and regulators to intervene. In all but one case, the firm's boss left as a result. The figures measure returns in dollars, including dividends (for Uber, reports of private market valuations are used).

As well as BP, the infamous eight include another energy firm, Petrobras, a Brazilian giant at the centre of the "car-wash" corruption scandal that erupted in 2014. Two firms beginning with "V" are included for their antics in 2015: Volkswagen, which admitted fiddling emissions tests, and Valeant, a drugs firm accused of price gouging and publishing inaccurate accounts. Wells Fargo is included for a mis-selling scandal that blew up in 2016, as is Uber, where the wheels came off in 2017. The last two firms are Equifax, a credit bureau which last year said hackers had gained access to data on 143m clients, and United Airlines, which set new lows for airline conduct when it asked security staff to remove a passenger from an overbooked flight, who was injured in the process.

After their crises struck all these firms suffered an absolute drop in their share prices. At the lowest point the median share price was down by 33%, although it took anywhere from two weeks to two years for different firms to reach this nadir. In most cases the companies have clawed back the absolute losses they suffered. However, what matters is their relative performance compared with a basket of industry peers over the same time period. On this basis the median firm is worth 30% less today than it would have been had the scandals not happened. For the eight the total forfeited value is a chunky $300bn.

Fines and legal costs explain only a small part of this. A big scandal distracts management, leads to other kinds of painful regulatory scrutiny and, if a firm has a stretched balance-sheet, forces it to shrink. BP has spent years trimming its budgets while its longtime rival, Shell, stole a march on it by buying BG, a gas firm. Wells Fargo faces a cap on its size imposed by the Federal Reserve. Equifax may become more heavily regulated. Uber has lost market share to a reinvigorated domestic competitor, Lyft.

Two firms out of the eight come out relatively well. For Petrobras, the explanation is that its share price had already sunk before the car-wash affair began in earnest, reflecting cost overruns that were an augury of the epic mismanagement that the scandal revealed. Volkswagen is the only standout. It got hit by a huge $30bn bill for fines, product recalls and legal costs for "dieselgate", but reacted to its crisis by putting in place an efficiency drive and a big bet on new car models. Even so, it and the other six listed firms in the sample are valued on low multiples of profits compared with their peers, suggesting that investors remain nervous.

**Messing up, then fessing up**

The aftermath of a scandal is unpredictable. In Facebook's case the absence of established laws and regulations covering social media make it even harder than normal to predict how harsh the backlash will be. Its biggest advantage is its strong balance-sheet, which has $42bn of net cash. Its weakness is a management team that seems keen to downplay the severity of what has just happened. Recent experience suggests that is a mistake.

**US-China trade**
Tumbling down

War games

# America’s trade strategy has many risks and few upsides

*It is undermining the rules-based trade order and could start a series of tit-for-tat moves*

**Print edition | Finance and economics** Mar 28th 2018

AMERICA’S president claims to view China as a friend. But the friendship is going through a rocky patch, to say the least. America’s trade deficit with China, “the largest deficit in the history of our world”, is “out of control”, Donald Trump groused on March 22nd. “A tremendous intellectual-property theft situation” also irks him. And so, after laying out his concerns, he announced plans for some tough love. Litigation against China at the World Trade Organisation (WTO), investment restrictions and tariffs are all on the cards.

The announcement early in March of tariffs on steel and aluminium imports to America was chaotic, even prompting the resignation of Gary Cohn, the head of Mr Trump’s National Economic Council. The latest targeting of China, by contrast, is the culmination of months of planning and commands broader support. It was masterminded by Robert Lighthizer, the United States Trade Representative (USTR) and a seasoned trade lawyer. As a deputy USTR under Ronald Reagan in the 1980s, he used Section 301 of the Trade Act of 1974 to bully Japan into limiting exports to America. This time, using the same law, his department has penned a 200-page report outlining damage to America of “at least $50bn per year” arising from China’s unfair trade practices. In his telling, America is seeking no more than the compensation it is due.



The first of Mr Trump’s three measures lies squarely within the multilateral system created in 1995 to resolve trade disputes. On March 23rd the American administration lodged an official complaint at the WTO, claiming that China has been breaking the rules on intellectual property. Mr Lighthizer reckons that by pressing American companies to hand over their technology when they form partnerships with Chinese ones (this is often a condition of operating in China), and by making it hard to enforce intellectual-property rights once a technology-related contract ends, the Chinese state has rigged the system against American companies.

The case will now wend through the WTO’s legal procedures, which could take years. If America wins, China might respond by changing its ways. Its record of complying with rulings against it is no worse than those of America and the European Union. Or the two sides might negotiate a settlement. If that fails, then a victorious America could impose tariffs allowed by the WTO. This would be unusual. Such tariffs have been approved fewer than 15 times in the WTO’s history and, even then, WTO members have sometimes chosen not to impose them.

But the WTO dispute is just one part of the strategy. Mr Lighthizer’s team thinks some of China’s practices inflict damage on America but are not covered by WTO rules. The Section 301 investigation claimed to find evidence that the Chinese government directs its firms to invest in American firms as part of its industrial strategy, and sometimes to steal information from them. Mr Lighthizer thinks China wants to overtake America and make it less globally competitive. He wants the threat of unilateral action to fill in the multilateral system’s blanks.

If America decides to strike, the first blow would be tighter rules on investment between the two countries. The details are unclear. The president can already block investment on national-security grounds, using the Committee on Foreign Investment in the United States (CFIUS). Blocks on economic grounds might also be allowed, as, perhaps, might curbs on American investment in China.

The second hit involves tariffs of 25% on certain Chinese exports worth up to $60bn in 2017. Mr Lighthizer says that the list of products, which includes aerospace, information and communication technology and machinery, drew inspiration from “Made in China 2025”, the Chinese government’s plan to achieve global dominance in industries it regards as strategic.

Two clocks have thus been set ticking. The full list of proposed tariffs will be published by April 6th, after which it will remain open for public comment for 30 days. Stephen Mnuchin, Mr Trump’s treasury secretary, has until May 21st to come up with proposals for restrictions on investment. It seems possible that neither will actually go into effect. Even as Mr Trump talked tough on March 22nd, he also spoke of a big, ongoing negotiation with the Chinese government. He has asked it to reduce America’s bilateral trade deficit by $100bn. He seems to be presenting China with a choice: a grand bargain or a trade war.

### Fighting on many fronts

The first part of the plan seems sensible enough. WTO procedures are designed to reduce the risk that a trade dispute escalates, by giving countries a chance to vent their frustrations in a controlled setting and by setting out the consequences if the rules are broken. America could find support for its case from Japan and the EU, both of which share America’s concerns over China's technology-licensing practices. Using the WTO to resolve this trade tussle could be taken as a vote of confidence in the multilateral trade system.

A grand bargain, too, might contain some useful additional measures. The Trump administration is reportedly demanding that China lower its tariffs on imported American cars, liberalise its rules governing financial services and, perhaps, cut subsidies for state-owned enterprises. Similarly, more systematic scrutiny of incoming Chinese investment could be prudent, rather than nakedly protectionist.

But given the Trump team's attitude towards the rules-based multilateral trade system, such hopes seem fleeting. Mr Trump often blasts the WTO for being biased (there is no evidence that it is). That weakens its ability to resolve disputes. For the system to work, WTO members must support it and think that others will, too. If China thinks America may ignore a ruling against its interests, why should it play along? Meanwhile, the Trump administration is undermining the WTO by blocking the appointment of judges to its court of appeals. If America ends up wanting to appeal against a ruling in favour of China, this will become self-defeating.

As for Chinese investment in America, the CFIUS committee was already toughening its oversight. According to Rhodium Group, a research firm, this was part of the reason Chinese investment in America fell by 35% from 2016 to 2017 (a Chinese clampdown on outbound capital was the main factor). New rules that give wide discretion to the president, or block investment on economic rather than national-security grounds, could easily be abused.

In the short term, bullying could get results. Mr Lighthizer is not the only person in Washington frustrated by the limited results of years of talks with China about its economic strategy. The threat of stiff tariffs on South Korean steel imports and of withdrawal from KORUS, a trade deal between America and South Korea that came into force in 2012, speedily secured changes to that deal desired by the Trump administration and announced by South Korea's government on March 26th.

But browbeating tactics also weaken the rules-based trading system. They do this, in part, by encouraging managed trade. In the 1980s America could be bought off by other countries that promised "voluntary" restraints on their exports. But this made a mockery of the idea that markets, rather than bureaucrats, should determine trade flows. The revamped KORUS includes a cap on South Korean steel exports to America of 70% of the average between 2015 and 2017. (This arrangement would appear to flout the WTO's rules, though other members may choose not to challenge it.) China is reportedly offering to buy more American semiconductors to stave off tariffs. Wilbur Ross, the commerce secretary, recently suggested that China could buy more natural gas from America.

As the Chinese representative complained during a heated WTO committee meeting on March 26th, Article 23 of the WTO's rules includes a pledge not to claim violations of the trade rules unilaterally, but to use the WTO's dispute-settlement process. Article 23 refers only to commitments specified within the WTO. The Americans say that where such commitments have been broken, they have duly filed a WTO dispute. What they do regarding other misdemeanours, they argue, is their own business. But since America is threatening China in ways that would contravene its own WTO commitments not to break agreed tariff limits, the distinction is not so clear. And once WTO members start writing and enforcing their own rules, the existing rules could lose their force.

There is more potential for trouble if America's unilateral actions do not have their desired effect—especially if the multilateral system weakens. So far China has been keen to be seen to follow the WTO's rule book. On March 23rd it responded to steel and aluminium tariffs by announcing its own rebalancing tariffs on American goods, including pork products, fruit and recycled aluminium. It argues that such retaliation is allowed under the rules.

A new wave of tariffs on China would probably be met by claims that America had also broken rules, and perhaps an anti-dumping investigation into American soyabeans. In 2009, when Barack Obama imposed tariffs on Chinese tyres, China slapped anti-dumping duties on American exports of chicken feet.

China's desire to be seen to adhere to the rule book could weaken, however. Cui Tiankai, its ambassador to America, responded to Mr Trump's announcement by saying that "if people want to play tough, we will play tough with them and see who will last longer." At risk would be agricultural exporters and American companies operating in China. Mr Lighthizer told a congressional committee on March 21st that he would defend farmers' interests should they be hit, adding to the impression that Mr Trump would not shy away from a trade war.

Another risk stems from Mr Trump's obsession with the bilateral trade deficit. No deal can guarantee to bring it down. Whatever the two sides agree to, the fact is that trade is devilishly difficult to manage. Factors beyond China's control could easily overwhelm the impact of any deal on the bilateral trade deficit. Mr Trump's cuts to income and corporate taxes mean that America's economy is about to receive a large stimulus. All else equal, this will suck in imported goods.

American and Chinese trade negotiators thus have their work cut out. Any deal they reach must allow both sides to claim victory. And since it will be judged a success or failure according to outcomes that have little to do with their agreement, it is bound to be a fragile one.

*This article appeared in the Finance and economics section of the print edition under the headline "Tumbling down"*

Collateral damage

# Asia's small open economies may suffer in America's trade war

*As supply chains are unpicked, firms in China's orbit may lose business*

**Print edition | Finance and economics** Mar 31st 2018

CHINA is the stated adversary in Donald Trump's incipient trade war. But 30% of the value of the goods China exports to America is added elsewhere. If the row escalates, countries entwined in Chinese supply chains will suffer.



In absolute terms, Japanese suppliers will fare worst. Japan is the country that exports most to firms in China that export onwards to America. But relative to economic size, such suppliers are a bigger part of several small, open Asian economies (see chart). Between 1% and 2% of some countries' total output is shipped first to China and then on to America. If Chinese exports to America were to fall by 10%—an extreme but not impossible scenario—it could knock 0.1-0.2 percentage points off their economic growth.

China's competitors in industries that have been threatened with tariffs, namely aerospace, machinery and IT, however, would benefit. There are many of these in Mexico, Germany and Japan. Tariffs also encourage companies to switch their investment plans. When Ronald Reagan forced Japan to restrict its car exports to America in 1981 he (unintentionally) boosted Japanese investment in Thailand's fledgling car industry. Manufacturing has already started to shift from China to other, cheaper countries in the region. Tariffs on goods made in China would speed this up.

If the Chinese retaliate, an early target will be America's farm exports. Brazil, the world's second-largest producer of soyabeans behind America, would be happy to pick up the extra business. But America's and China's competitors should not cheer from the sidelines. A trade war would damage the world's two largest economies and hit global growth. That would be bad for everyone.

*This article appeared in the Finance and economics section of the print edition under the headline "Collateral damage"*

Buttonwood

# More market volatility seems likely

*Investors should fasten their seat belts*

**Print edition | Finance and economics** Mar 28th 2018

“FASTEN your seat belts. It’s going to be a bumpy night.” Those famous lines of Bette Davis in “All About Eve” may turn out to be the motto for the markets in 2018. After the “volatility vortex” in February, sparked by concerns about inflation, markets have thrown a “tariff tantrum” after President Donald Trump sparked fears of a trade war with China.



In February stocks sank on heavy hints of American levies on imported steel and aluminium. The prospect of trade measures against China, signalled on March 22nd, again hit shares. Then reports that China and America were making progress in trade talks caused the S&P 500 index to rise by 2.7% on March 26th, its best day since August 2015. It promptly fell again by 1.7% the next day (see chart).

Further volatility seems likely, not least after the appointment of John Bolton, an ultra-hawk on foreign policy, as Mr Trump’s national security adviser. That raises the possibility of increased tension with North Korea, despite the recent suggestion of a summit between Mr Trump and Kim Jong Un. The changes of tone from the White House have been so rapid that you might think policy is being set by Twoface, a Batman villain, whose decisions are controlled by the toss of a coin.

Last year was a bumper one for global stockmarkets. Investors shook off pessimism about growth, which had led to many earnest discussions about “secular stagnation”, and enthused instead that the world was experiencing a period of synchronised economic expansion. Tax cuts passed by America’s Congress in December were the icing on the cake, boosting both the American economy and payouts to the shareholders of multinational firms.

But this year has seen a number of worries come to the fore. “The entire complexion of this stockmarket is changing before our eyes,” says David Rosenberg, a strategist at Gluskin Sheff, a Canadian wealth-management firm. Central banks are withdrawing some of the monetary stimulus that has supported the market rally since 2009. And economic data have not been quite as positive as before. Citigroup’s “surprise” index, which is based on whether actual numbers turn out to be better or worse than forecast ones, has dropped back from the high levels reached at the end of last year. The price of copper, a commodity that is particularly sensitive to economic conditions, has fallen by 9% so far this year.

The prospect of further interest-rate increases has taken its toll on bank stocks, with America’s KBW NASDAQ Bank index dropping by 8% in the week to March 23rd. The technology sector has also taken a hit. Led by the FAANGs (Facebook, Apple, Amazon, Netflix and Google), the S&P 500 Information Technology index managed a five-year annualised return of 18.5%. But controversy over the use of Facebook data in the 2016 presidential election prompted a reversal. Fears of extra regulation caused more losses on March 27th. The index has dropped by 5.2% so far in March.

All this has taken a toll on sentiment. The latest survey of investors and strategists by Absolute Strategy Research (ASR), a consultancy, shows that they have become less confident about the economy. The survey responses generate only a 43% probability of the business cycle being stronger a year from now. That is down from 55% in the first quarter of 2017.

Investors think there is a 58% probability that equities will be higher a year from now. But that is not particularly optimistic. According to the Barclays CapitalEquity-Gilt Study, American shares rose in 64% of the years since 1926. And investors expect a more testing economic climate. Both inflation and bond yields are forecast to rise over the next 12 months.

The ten-year Treasury-bond yield has already risen from 2.4% at the start of the year to 2.79%, in part because the market expects America’s tax cuts to lead to a lot more debt being issued. It is not clear how far yields can rise before they start to have a palpable economic impact. “Debt becomes more of a problem with slower growth and higher interest rates,” says David Bowers of ASR.

As a sign of tightening liquidity conditions, the ASR team also points out that the real growth rate of the global M1money-supply measure has slowed sharply, from more than 9% to less than 4%, in recent months. Another warning sign is that the gap between short-term and long-term interest rates has shrunk. In the past, a flatter yield curve has signalled an impending economic slowdown. These signals may turn out to be false alarms. But even so, investors would be forgiven for checking their seat belts.

Economist.com/blogs/buttonwood

*This article appeared in the Finance and economics section of the print edition under the headline ”Buckle up”*

Chugging along

# India's economy is back on track. Can it pick up speed?

*Narendra Modi needs to pass further reforms if India is to fulfil its potential*

**Print edition | Finance and economics** Mar 28th 2018

IT IS easy to be awed by the Indian railway network. The 23m passengers it carries daily travel, in total, over ten times the distance to the sun and back. It is just as easy to find it unimpressive. Delays are frequent and trains antiquated. It takes 14 hours to get from India's capital, Delhi, to its commercial hub, Mumbai. The equivalent trip in China—from Beijing to Shanghai, a similar distance—takes just over four hours.

Similarly, India's economy can be seen in two lights. Its long-term growth rate of 7% a year has proved far more dependable than the rail timetable. GDP has doubled twice in the past two decades. Yet deep poverty still lingers and jobs are scarce. And Indian growth has been left in the dust by the Chinese express (see chart).



After slow running for much of 2017, India is now near to full throttle. Growth of 7.2% in the three months to December put it ahead of China (which grew at a relatively leisurely 6.8%) and made it once again the world's fastest-expanding big economy. Expectations for the rest of 2018 are similar.

Fans of Narendra Modi, India's prime minister, credit structural reforms he has made over the past four years. The more plausible explanation is that Indian growth has returned to trend after a bout of political meddling. "Demonetisation" in late 2016, when most banknotes ceased to be legal tender overnight, squeezed growth to 5.7% in the first half of last year. New notes were printed, but last July, even as life was returning to normal, a new goods and services tax replaced hundreds of local and nationwide taxes, once again throwing the economy into confusion.

At least the tax overhaul, which knits India into a single market for the first time, will eventually increase growth. Boosters speak of annual GDP gains of 8-10% in the years ahead. That would not be far short of China in its boom years.

Renewed economic vim would be welcomed by the government in the run-up to elections due by early 2019. Even at 7% growth, too few jobs are created to absorb roughly 1m new entrants into the workforce every month. More than 20m people recently applied for 100,000 railway jobs, as train drivers, technicians and porters. A third of 15- to 29-year-olds are not in school, training or jobs. Mr Modi's opponents have found that the theme of scarce employment opportunities has played well with voters. Faster expansion would help.

But predictions of Chinese-style growth seem over-optimistic in the absence of deeper economic reforms. Doing business in India has become easier in some ways, such as getting permits or bringing in foreign capital. But the labour market is as gummed up as ever. Private businesses find securing land for new factories near-impossible. Whole swathes of the economy, from coal and steel to banking and condom-making, remain at least partly under state control.

The hangover from a bout of over-exuberance dating from before the global financial crisis has left companies financially stretched and with enough production capacity to be able to delay capital expenditure. A few sectors are now contemplating investment—only to find that banks may be unable to provide finance. Loans written off or considered likely to turn sour are near a fifth of the loan book at state-owned lenders, which have about 70% of market share. The resulting losses have left banks short of capital for fresh loans, though a planned bail-out and new bankruptcy code should, belatedly, help clear up the mess. Worse, a recently discovered fraud at a state lender, where rogue employees allegedly facilitated $2bn of loans to a diamond merchant who is now nowhere to be found, has highlighted their weak governance.

Early in Mr Modi's premiership growth was helped by the tumbling price of oil, which India imports in vast quantities. But the price of crude, which fell from $110 to $30 a barrel during his first two years, has since rebounded to $65. Any higher and some familiar problems, namely current-account deficits, budget shortfalls and high inflation, will make an unwelcome return. Yields on Indian government bonds have risen from 6.4% last summer to around 7.5%, indicating some increase in investor concern.

Although India's growth has depended less than, say, China's on exports, it has benefited from a buoyant global economy and an open trade environment. The latter may be changing. Indian IT firms are facing restrictions on their employees working in America, challenging their business model. And India itself has taken a protectionist turn, recently imposing tariffs on a wide range of products, from mobile phones to perfume, in an ill-conceived bid to encourage domestic production.

"India is a country that disappoints both optimists and pessimists," notes Ruchir Sharma of Morgan Stanley, a bank. Naysayers who expected political meddling to hit the economy hard underestimated its resilience. Like commuters whose train has finally pulled in, optimists feel their time has come. All aboard?

*This article appeared in the Finance and economics section of the print edition under the headline "Chugging along"*

Crude gambit

# China wants to reshape the global oil market

*But talk of a petroyuan is premature*

**Print edition | Finance and economics** Mar 28th 2018

TRADITIONALLY, to count as an oil power a country had to be a big producer of the black stuff. China is the world's biggest importer but still wants to break into that exclusive club. On March 26th it launched a crude futures contract in a bid to gain more clout in the global market. Some think that, if successful, the yuan could start to displace the dollar in oil trading. For now, though, that is fanciful.

A previous attempt by China to introduce oil futures, in the early 1990s, failed because of unstable pricing. This time regulators prepared methodically. To ward off speculators, notorious in Chinese markets, they made the storage of oil very expensive. Volumes were light in the first few days of trading—less than a tenth of the averages for similar contracts in New York and London. But all went smoothly. It was a good, if modest, start.



China has two goals. The basic one is to help its companies hedge against volatility. Chinese refiners and traders have struggled to manage currency risks because of capital controls. An onshore contract that lets them lock in the future price of oil in yuan is thus appealing, says Michal Meidan of Energy Aspects, a research firm.

More ambitiously, China hopes to create a standard for oil pricing as a rival to Brent in Europe and West Texas Intermediate in America—a standard that reflects its own supply and demand. For that to happen it needs to attract overseas participation. So, in a first for commodities in China, the contract, hosted on the Shanghai International Energy Exchange, is open to foreigners. Trading runs until 2.30am Chinese time, to overlap with daytime in America and Europe. Glencore and Trafigura, two of the world's biggest commodity traders, got into the action on the contract's debut.

Nevertheless, the same restrictions that make it hard for domestic firms to trade abroad will deter foreigners from going deeply into China's market. To gain access to it they must open special onshore bank accounts. And they cannot use their profits for any other investment in China.

One group of producers who might in theory be tempted are those under American sanctions. For Iran, Russia and Venezuela, trading oil in yuan would wean them off dollar-based earnings and so help them steer clear of American banks. But they chafe under sanctions precisely because they want to be free to spend their cash as they see fit. So long as China quarantines its financial system from the rest of the world, talk of a petroyuan replacing the petrodollar will be premature.

*This article appeared in the Finance and economics section of the print edition under the headline "Crude gambit"*

Alternative stats

# The average American is much better off now than four decades ago

*Estimates of income growth vary greatly depending on methodology*

**Print edition | Finance and economics** Mar 31st 2018

JUST how bad have the past four decades been for ordinary Americans? One much-cited figure suggests they have been pretty bad. The Census Bureau estimates that for the median household, halfway along the distribution, income has barely grown in real terms since 1979. But a recent report by the Congressional Budget Office (CBO), a non-partisan think-tank, gives a cheerier rise of 51% for median household income between 1979 and 2014. Which is nearer to reality?



The gap between the two is accounted for by three methodological differences (see chart). First, the CBO takes demography into account. This seems sensible: more Americans are living alone and American women are having fewer children, so households have fewer mouths to feed.

The second is that the CBO uses the personal-consumption expenditures (PCE) index to measure inflation, whereas the Census Bureau uses the consumer-price index (CPI). These differ in two main ways. The CPI includes only what consumers spend on themselves, whereas the PCE index also includes expenditures on their behalf, such as employee health insurance. And the CPI's basket of goods is updated every two years, whereas that for the PCE index is updated quarterly. This means it is quicker to pick up substitutions: as the price of one item (apples, say) rises, consumers seek cheaper alternatives (for example, pears).

In 2000 the Federal Reserve's rate-setting body switched from the CPI to the PCE index for its inflation target, citing this reason. Growth in the PCE index has generally been half a percentage point below the CPI. The gap, small in the short run, grows wider with each passing year.

The third difference is that the Census Bureau uses pre-tax incomes, whereas the CBO takes taxes and transfers, such as government-funded health insurance, into account. Between 1979 and 2014 the average federal tax rate for families in the middle fifth of the pre-tax income distribution fell from 19% to 14%. Transfers rose from 0.8% of pre-tax income to 4.7%.

Other data also suggest that the CBO's methods paint a fairer picture. Bruce Sacerdote of Dartmouth College has calculated that household expenditure, converted to 2015 dollars using the CPI, has risen by 32% since 1972. Spending on food and clothing has fallen from 27% of the total to 16% in 2016, and the share spent on health care and housing has stayed roughly constant. That means more left over for luxuries. Homes have got bigger, and the number of cars per household has risen from 1 to 1.6.

The past four decades have been hard for many Americans. Trade and technology have upended the labour market, and many low-skilled men have left the workforce. Economic growth has been weak in non-coastal states, and the top few percent take home a greater share of all income. Wage growth, by any measure, has been far lower than in the post-war decades. But the idea that the typical American is little better off than four decades ago does not withstand scrutiny.

*This article appeared in the Finance and economics section of the print edition under the headline "Home improvement"*

Death and the salesmen

# Insurers and undertakers profit as people prepay their last bill

*Many people seek to spare grieving relatives an unexpected expense and to guarantee a decent send-off*

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"WHEN are you thinking of dying?" asks John Cleese, a British comedian, in a recent television ad. Dressed as the Grim Reaper, he addresses the viewer as he prepares a cup of tea. "Your loved ones could be left all alone and distressed and facing a whacking great bill," he warns. His advice? Phone in and buy a funeral plan.

As populations age, ads of this sort, imploring people to make financial preparations for their demise, are appearing on both sides of the Atlantic. Some 1.3m Britons now have a pre-paid funeral plan, up from just over 400,000 in 2005. An estimated 2.5m more have a funeral-insurance policy. Millions of Americans prepay some or all of their funeral costs.



The average American funeral now costs nearly $9,000, according to the National Funeral Directors Association (NFDA). In Britain prices have risen by 5.5% on average each year over the past decade, faster than inflation. Add to that stories in the press of bereaved people unable to afford the burial of their loved ones, and the scene is set for salesmen to proffer "peace of mind".

Consumer advocates worry about the value of some pre-paid funeral packages and insurance schemes, however. They wonder whether customers really know what they are signing up for. And since death is certain, why not simply save up so that a legacy can pay for a send-off?

The most straightforward option for people who want to spare relatives the cost of burying or cremating them is indeed to leave them money. A legacy used to pay for a funeral will, in most places, be exempt from inheritance tax. A funeral plan, known as "pre-need" in America, is bought from a plan provider or undertaker, and paid for in a lump sum or instalments. An alternative is funeral insurance, often sold as "final expense" or "over-50s" insurance, which is also paid in instalments.

Funeral insurance works like other life-insurance policies, with monthly premiums that vary with age and, sometimes, behaviour such as whether the buyer is a smoker. Whereas a pre-paid plan promises a funeral of a specific value (at their most basic they cover the undertaker's bill), insurance policies generally promise a fixed cash amount. This can typically be spent on something else, should the pre-appointed beneficiary decide.

Such products can be useful, especially if payouts are indexed to inflation or, ideally, to increases in funeral prices. Unlike other life-insurance policies, they typically do not require a medical examination (though do often have an upper age limit of 85). This makes them especially attractive to people who are not eligible for other life-insurance products. Buyers of funeral plans, too, like the fact that they can visit a funeral director, write down their wishes and pay immediately. The main reasons people buy them, says Gordon Swan of Golden Charter, a British firm owned by independent funeral directors, are "emotional and security-related, not financial". They like to "know that it's all sorted".

Except that often, it isn't. A funeral plan rarely covers the full cost of a funeral. Burial plots (which can cost thousands of dollars) are almost never included. Nor are extras such as headstones, flowers or fees for death certificates. Many plans restrict when and where cremation or burial can take place, and may charge steeply for any changes. In Britain funeral plans are not regulated, though customers often think they are. Last year Fairer Finance, a British advocacy group, highlighted concerns about mis-selling and the solvency of some providers. The Financial Services Compensation Scheme responded by clarifying that it would not refund buyers if funeral plans went bust.

The lump-sum payout from funeral insurance also comes with caveats. For starters, policies rarely pay out in full if the customer dies within two years of the start date. In some countries the money can only be spent with an insurer-approved provider. They can be terrible value.

For some particularly poor policies, premiums are paid indefinitely but the payout is capped. Since most people live longer than they expect, it is not uncommon to pay far over the odds. Salesmen often take advantage of people who are not very numerate, says James Daley of Fairer Finance. He cites a recent case of a woman who paid £10,000 over the years into a policy with a maximum £2,500 payout.

"At-need" funeral lending, a growing business in America, is another subject of concern. Lenders provide emergency loans via undertakers, typically charging 15-35% interest and sometimes lending to people who will struggle to repay. The good news for undertakers, one such lender brags, is that people who have been given loans are more likely to spend more on a funeral, "meaning more sales for the funeral director".

### Last rights

Like engaged couples and first-time parents, recently bereaved people must take big decisions at a time of heightened emotion. Insurance salesmen and funeral directors hint that a "proper send-off"—a swanky coffin, a grand headstone and fancy catering—is a statement of love and respect. That idea is widely shared: haggling about a funeral can feel like a display of hard-heartedness. The best fix for the industry would be a move away from the idea that a funeral has to be expensive, says

Josh Slocum of the funeral-consumers' alliance in America. "The big missing piece in the market has been a critical, informed consumer."

*This article appeared in the Finance and economics section of the print edition under the headline "Death and the salesmen"*

Free exchange

# Wakandanomics

*"Black Panther" resists one economic myth but perpetuates another*

**Print edition | Finance and economics** Mar 31st 2018

"THIS will require a quick lesson in global economics...bear with me," says Erik Killmonger, the muscular villain in "Black Panther", a long-running Marvel Comics series. In that saga and the recent film it inspired, Killmonger and the Black Panther vie for the throne of Wakanda, a fictional African kingdom little known to the outside world. A land of great wealth and technological sophistication, it lends itself to several quick lessons in economics. Bear with us.

The source of Wakanda's riches is its "great mound" of vibranium, a versatile ore left behind by a meteor strike, which can absorb sound and motion. Like other deposits of natural treasure, Wakanda's vibranium attracts some vicious intruders. But unlike some other resource-rich countries, Wakanda has never succumbed to outside foes.



That has helped it escape the "resource curse", in which natural riches keep a country poor by crowding out manufacturing or ushering in predatory government. The curse is greatly feared. But Wakanda's success in eluding it is not as fantastical as widely believed. Many resource-rich economies, including Botswana and Norway, have prospered without superheroic help. According to an article in 2015 by Brock Smith of Montana State University, the 17 countries that discovered big oil, gas or diamond deposits after 1950 achieved GDP per person 40% higher on average than if they had continued to evolve in line with their peers.

Belief in the resource curse may partly rest on a statistical illusion. Countries that use natural riches well tend to enjoy vibrant economies of which resources are a diminishing share. As their GDP grows, the size of their mining, drilling or logging sector relative to their GDP falls. They may then appear less "resource-rich" than stagnant economies that depend heavily on natural bounty. Though vibranium is woven into Wakanda's flourishing economy, mining it is probably now a small part of GDP, especially as its near-inexhaustible supply has presumably driven down its price, giving it a smaller weight in the national accounts.

Wakanda's stewardship of its natural resources is, however, unusual in another respect. The country not only mines vibranium but designs and builds a dazzling variety of downstream applications. They include a nano-tech panthersuit that absorbs blows and bullets, then echoes the energy back against its source. The suit is matched by sneakers that silence the king's footsteps, replacing sandals that his sister mocks ("What are those?"). The applications extend to weaponry and transport, such as the royal talon fighter that zips from Wakanda to Oakland, California, and the vibranium rail above which high-tech chariots levitate.

"Wakanda's upstream, midstream and downstream mineral sector are entirely controlled by Wakanda itself," points out Nicola Woodroffe of the Natural Resource Governance Institute, a think-tank in London. It is as if Botswana not only mined, cut and polished diamonds, but also designed and produced the world's diamond necklaces, drills and bearings. It is as if Norway had a monopoly on oil, petrochemicals and plastics.

Comics deal in fantasy and wish fulfilment. And it is the economic wish of many resource-dependent countries to master the more refined products that lie further along the value chain. In the minds of many policymakers, this is "a logical, natural progression", said Ricardo Hausmann, Bailey Klinger and Robert Lawrence of Harvard University in a paper in 2008. In pursuit of "beneficiation", as it is called, policymakers often impose heavy taxes or even bans on the export of raw, unprocessed minerals.

In the film Wakanda goes further still, barring the export even of finished, manufactured items. Its economy prospers in seclusion and autarky. The sole supplier of vibranium and its applications, it is practically the sole buyer as well. It is as if Norwegians were the only consumers of petrochemicals, or the people of Botswana the only wearers of diamond necklaces.

In reality, rather than Marvel, forced beneficiation is rarely beneficial. Countries blessed with natural resources are not always blessed with the combination of labour, capital, skill and infrastructure required to succeed further down the same production chain. The best place to cut and polish diamonds is not Botswana, with its population of 2.3m, but coastal India, which can bring many more hands to bear.

Countries often find it easier to move diagonally, rather than vertically, graduating into products that belong to different value chains but require similar mixes of labour, capital and knowhow. According to Mr Hausmann and his co-authors, only a third of raw-sugar exporters also export confectionery. But two-thirds export clothing. Only a third of raw gold and silver exporters also export jewellery and silverware. But over half export fish.

### Erikonomics

Not every Wakandan supports the country's economic isolation. Indeed, the comic-book version of Killmonger (unlike his on-screen counterpart) reveals a rival economic creed of his own. Boasting an MBA, he has turned his Wakandan birthplace into a corporate playground, including what look like a Burger King and a McDonald's. After he lays his hands on Wakanda's sacred heart-shaped herb, which enhances strength, speed and the senses, his first thought is to find a way to market it. When the Black Panther tries to thwart his economic schemes by expropriating all foreign companies, Killmonger foresees the result: financial panic, retaliatory sanctions and economic chaos.

Fortunately for Wakanda's economy, the Black Panther soon reverses course. After battling zombies, aliens, rogue bodyguards and the Hulk, he turns his might to restoring market confidence. What superpower or mystical rite allows him to pull off this heroic feat? A peg to the American dollar.

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**Beekeeping**
What's the buzz?

What's the buzz?

# A new app listens to the problems of bees

*Matching honeybee noises to their ailments*

**Print edition | Science and technology** Mar 28th 2018

YOU might expect to hear an angry buzzing when honeybees have been disturbed. But some apiarists reckon they can also deduce the condition of their bees from the sounds they make. A steady hum could be the sign of a contented hive; a change in tone might indicate that the bees are about to swarm. That intuition is about to be put to the test. Soon, beekeepers will be able to try to find out what is troubling a colony by listening to the buzz using a smartphone app.

The app, which is in the final stages of testing, has been developed by Jerry Bromenshenk and a group of fellow bee experts at the University of Montana. It uses a form of artificial intelligence to analyse the sound that bees are making in order to deduce whether they are suffering from a number of maladies.



Those afflictions might provide an indication of an impending Colony Collapse Disorder (CCD), a mysterious syndrome that has plagued beekeepers in North America and Europe. Unlike a natural swarm, in which a large group of worker bees leave with their queen to form a new colony, CCD involves bees suddenly disappearing for no obvious reason, leaving their queen behind. Although recent reports suggest there has been a reduction in bee die-offs, according to some estimates 10m hives in America alone were wiped out by CCD from 2006 to 2013. Besides hitting honey production, this can also hinder the pollination of certain crops.

The development of the app has an unusual back story. The idea came from one of the many bee projects which Dr Bromenshenk and his colleagues are involved in. This work involves training bees to hunt for landmines. Landmines leak traces of explosive chemicals into the ground and the air. These tiny emissions can be detected by well-trained sniffer dogs. Since dogs can be heavy enough to detonate mines, some instead use rats that have been trained to do the same thing.

### Explosive reaction

Training dogs and rats to find mines is slow and expensive. However, the Montana researchers reckon they can train bees to find mines in only a few hours. They do this by spiking a syrup feed with a small sample of explosive chemicals. The bees then associate the scent of the chemicals with food. This influences them to fly towards and around any source of the chemicals when foraging for nectar. As there could be some 20,000 bees flying, some means of tracking them is required. To do that, the researchers use lidar, a form of radar, which they tune to the frequency of the bees' wing beats. This way an electronic map can be built up showing where the bees fly to, and thus where any landmines might be. In tests with the American army, the researchers found bees were more than 97% accurate in locating landmines.

This work is ongoing, but it has also led to other research. The academics came to realise that if minehunting bees are to be deployed successfully by soldiers or civilian contractors, then the operators would need to have good beekeeping skills. Such skills, of course, can be taught but it would take a long time for novices to acquire the knowledge of an experienced beekeeper, let alone be in tune with the many ailments that bees are susceptible to. This led in turn to the idea of developing a machine that could, like a seasoned beekeeper, listen to the buzz of bees to help determine their health.

For such an idea to work, it is necessary to attribute specific bee ailments to particular sounds. To do that, the university tapped into its worldwide network of beekeepers to find colonies that were known to suffer from only one problem, and to obtain sound recordings of bees in those colonies. The sounds that bees make come from their beating wings (although movements by other parts of their bodies may also be involved). Having built up a database of sounds, an artificial neural network, a form of machine learning used for pattern recognition, was employed to help build algorithms that can match bee sounds to those associated with certain hive problems.

Rather than produce a stand-alone device, the group developed a system which could be used on a smartphone. The resulting app, which is called Bee Health Guru, is being produced by Bee Alert Technology, a company spun out from the university.

To check on the health of a colony of bees it is usually necessary to open the hive, a procedure which involves using smoke to pacify the bees. That is a time-consuming process for commercial beekeeping operations, some of which may have several thousand colonies to take care of. With the app, all a beekeeper need do is to hold their smartphone near to the hive's entrance for 30 seconds while it analyses the sound of the bees. The app then lists any health problems which it detects.

Seven different disorders will at first be checked, says David Firth, a team member who is helping to bring the app to market. These include the presence of hive beetle, a serious honeybee pest, parasitic mites and "foulbrood", a bacterial infection which can destroy bee colonies.

The results might also point to early signs of CCD, which is now regarded as being caused by a combination of problems rather than one particular disease. In a 2010 paper in *PLoS One*, Dr Bromenshenk and his colleagues found that a bee virus and a fungus from a species known as *Nosema* were often prevalent in collapsed honeybee colonies, and that it was likely the two working together were more lethal to bees than either pathogen alone.

With the permission of users, data from the app can be shared with the researchers, who plan thereby to update the software to detect other diseases and problems, says Dr Firth. This could include exposure to pesticides, in particular a group called neonicotinoids which are suspected of harming honeybees (pesticide producers reject such claims). Finally, if all works to plan, bees will get to have their say about the things that cause them harm.

*This article appeared in the Science and technology section of the print edition under the headline "What's the buzz?"*

Selective evidence

# Genes and backgrounds matter most to exam results

*The type of school is less important*

**Print edition | Science and technology** Mar 26th 2018

PARENTS in England are faced with a choice when their children are old enough to attend secondary school. They can pay to send their offspring to a private school, which usually involves sitting an entrance exam. Alternatively, in some parts of the country, the child can sit an eleven-plus exam and, provided they pass, attend a grammar school. Grammar schools are publicly funded and tend to excel in league tables of academic performance. The overwhelming majority (about 90%) of British pupils, however, attend non-selective state schools.

Debate has raged for years over whether most selective schools do well because they provide a better education than state schools, or merely because they cream off the brightest and most privileged. According to research led by Robert Plomin and Emily Smith-Woolley, both of King's College London, the educational benefits of selective schools largely disappear once the innate ability and socio-economic background of pupils at selective schools are taken into account.



As they report in *npj Science of Learning*, the researchers selected over 4,000 unrelated individuals from the Twins Early Development Study, a large ongoing project gathering information from British twins born in the mid-1990s. That information includes DNA data and the results of intelligence tests and exams.

At first the researchers calculated a genetic score taken for each child by adding up contributions from thousands of minor variations in their DNA that past studies (including data from 300,000 individuals) have linked to educational attainment. Pupils attending grammar and private schools had significantly higher genetic scores than those in comprehensives. But when those scores were adjusted to reflect each child's test results at 11, as well as the education and occupations of their parents, the differences vanished. That makes sense. Previous research has shown that many of the traits that selective schools are screening for are, in part, inherited from their parents. The tests being used by schools appear to be inadvertently picking up some of these genetic differences.

The researchers then scored each child based on the results of science, maths and English GCSE exams, typically taken by all schoolchildren in England and Wales at the age of 16. On average, the results of children at private or grammar schools were a full GCSE grade higher than those at state schools. That suggests attending a selective school gives children a boost. Without correcting for any other factors the researchers calculated the boost to be worth about 7.1% of the difference in GCSE results.

But was this due to better teaching at these schools or an outcome of the selection procedure? To see, the team adjusted the grades based on the results of each child's test scores, family circumstances and genes. Once they did this, the gap between the schools narrowed dramatically, with school type explaining just 0.5% of the difference in average GCSE grades. For any individual, genetics accounted for about 8% of the difference, modest in comparison with the many other factors involved, such as socio-economic backgrounds, test results at 11 and things still to be accounted for.

The research comes with important caveats. First, the thousands of genetic variations so far linked to educational attainment are not well understood. Many of these variations may not be linked to intelligence at all. If, for instance, a weak bladder leads a child to perform poorly in timed exams or protuberant ears means bullying blighted their education, genetic variants for these traits will show up as disadvantageous. Stronger bladders and flatter ears will therefore confer advantages and better genetic scores. Second, had the study also been conducted in a nation, such as Denmark, where wealth is more evenly spread it is possible that genetics would appear to play a bigger role in educational outcomes, because socioeconomic disparities would have a lesser impact.

The research does not appear to support "progressive eugenics", as advanced by Toby Young, a journalist and a co-author of the study. Mr Young has argued that poor people should be able to screen embryos free on the basis of intelligence, if the technology becomes available. Setting aside ethical questions, many of the genetic differences that might appear to contribute to social mobility (think flatter ears, etc) may not be associated with actual intelligence. Overall, such an idea might shift educational attainment by a few percentage points at best. That is tiny compared with the advantages enjoyed by the children of the educated and wealthy.

*This article appeared in the Science and technology section of the print edition under the headline "Selective evidence"*

Patching broken hearts

# A new way to repair damaged heart tissue

*Keeping cardiac patches in place*

**Print edition | Science and technology** Mar 28th 2018

ALTHOUGH the possibility is several years away, people may one day be helped to recover from heart attacks by having specially engineered patches that have been seeded with cardiac cells placed over the damaged tissue in their hearts. The idea is that these cell-impregnated patches will encourage the regeneration of heart muscle. Laboratory studies using animals suggest the advantages could be so great that it is worth the risk of the surgery needed to put such patches in place; they might even provide an alternative to heart transplants. The problem is finding a suitable way to make the patches stay put.

Stitching is one possibility, but sutures bring risks. They might block the blood supply to the vulnerable area, or injure nearby healthy tissue, or cause haemorrhages. They might also introduce harmful bacteria. Nor is gluing—an obvious alternative to stitching—much better in practice. Some glues stiffen with age. Some are mildly toxic. Some are not porous enough to permit cells to grow and move around. To ameliorate these problems one of the researchers working on such patches, Tal Dvir of Tel Aviv University, in Israel, is developing a new type of cardiac scaffold that can secure a patch in place using light instead of stitches or glues.



Dr Dvir's inspiration came from recent work his research group has carried out using tiny particles of gold. These can be warmed and manipulated by light from the red end of the spectrum, which travels well through tissue. He found himself wondering whether he could create a supportive scaffold by mixing albumin, a common protein, with tiny particles of gold and then sculpting the resultant material with a laser into a shape that would fit the damaged tissue so snugly that neither stitches nor glue would be needed.

To this end, as he and his colleagues explained recently in *Nano Letters*, they mixed albumin with a solution of beta-mercaptoethanol and trifluoroethanol, which softened the protein so that they could spin it into ribbonlike fibres. They used these fibres to build cardiac scaffolds, then soaked the scaffolds in suspensions of the golden particles for an hour, during which period most of the particles attached themselves to the scaffolds. After that, they added the cardiac cells.

This done, they tried attaching the scaffolds to hearts taken from pigs. They laid them on the organs and played the laser over them. As they had hoped, this softened the scaffolds, which then moulded themselves to the surrounding tissue and subsequently remained in place.

Dr Dvir worried, however, that heat generated when the laser struck the gold would end up cooking nearby tissue. To assess that risk he ran a second experiment. In this the team applied the scaffolds to the hearts of living rats, fused them into place with the laser and then studied those hearts for cell damage. They found none. More importantly, when they analysed the patched hearts in situ for health and function, they noted that the scaffolds were not impeding them at all.

There is a long way to go, but Dr Dvir does seem to have found a promising way that one day could help people recover from heart failure.

*This article appeared in the Science and technology section of the print edition under the headline "Patching broken hearts"*

Exchange value

# New ways to trade data

*Securing data networks*

**Print edition | Science and technology** Mar 28th 2018

IN 2016, according to Cisco, an American technology group, the volume of data flowing through the internet each month passed a zettabyte, enough to fill some 16bn 64GB iPhones. By 2025 it will be many times greater. Immeasurably more data sit outside the public internet on company servers. Most of these data are valuable information, which means that people are keen to trade it.

Typically, data deals are at present worked out between someone holding the information and those who want to extract insights from it. For instance, Uber has deals allowing many cities to access data generated by its fleet of drivers. This helps city planners understand traffic flows.



Such deals can be clunky to set up, however. They tend to concentrate on datasets that hold obvious value. They may also involve data physically moving between one computer and another, which makes it vulnerable to abuse, as in the recent scandal surrounding Cambridge Analytica's use of Facebook data. New schemes, created as part of the crypto-currency boom, aim to change all that.

One of these, called Fetch, was announced on March 28th. It was founded by Humayun Sheikh and Toby Simpson, respectively an investor in and early employee of DeepMind, a British artificial-intelligence company that is part of Alphabet. Instead of sending blobs of data around the internet, Fetch allows an organisation to ask questions about datasets residing on another organisation's servers. The network will keep track of which datasets are used to answer these questions, allowing future queries to be directed to the right place automatically. A local weather-forecasting group, say, might have its algorithm tap into performance data from a power grid to improve its predictions (the frequency at which electricity moves in cables is related to the air temperature).

Fetch, which plans to launch itself in 2019, is a non-profit organisation and sees itself as a custodian of this question-and-answer network. Payments to ask questions will be made in the form of digital tokens. Unlike some make-a-buck crypto schemes, Fetch says that its tokens will not be available for public purchase until it is up and running, and has demonstrated its value. Fetch's financial backer, Outlier Ventures, has bought future rights to these tokens rather than shares in the company. The idea is that as more organisations make their data searchable, and more people pay to ask questions with tokens, the value of the tokens will go up.

Another project, called IOTA, operates a similar scheme. Bosch, a German engineering giant, thinks that it could use IOTA to earn money from the data its domestic appliances generate. It has bought IOTA tokens through its venture-capital arm.

These new data markets face stiff challenges. Maintaining individual privacy and monitoring questions to prevent corporate leaks will be difficult. The cryptography securing the network needs to be airtight. Perhaps the biggest challenge will be convincing people to use them. The take-up of similar efforts, such as Solid, developed by the Massachusetts Institute of Technology, and Maidsafe, a Scottish data-sharing network, has been lacklustre. Nevertheless, Fetch says several large European firms are lined up to give it a go. And, like other digital currencies, IOTA's token value has soared and fallen.

*This article appeared in the Science and technology section of the print edition under the headline "Exchange value"*

**MLK, 50 years on**
Like a mighty stream

Like a mighty stream

# The making of Martin Luther King's speeches

*They combined folk religion, theology and the hard-earned wisdom of his campaigns*

**Print edition | Books and arts** Mar 28th 2018

MIDWAY through Zora Neale Hurston's novel of 1939, "Moses, Man of the Mountain", Moses tells the Israelites that God has finally forced Pharaoh to release them. The people are quiet; but on every mind are the words, "Free at last! Free at last! Thank God Almighty I'm free at last."

Hurston was the African-American daughter of a poorly educated Alabama Baptist preacher, but she had studied anthropology at Columbia University. Folk religion shaped her childhood; elite education moulded her career. Twenty-four years after her book was published, at the March on Washington of August 28th 1963, Martin Luther King looked out from the Lincoln Memorial over a sea of oppressed people (the date is incised on the memorial's marble steps). His speech, with its dream of a post-racial gathering around "the table of brotherhood", is one of the most celebrated in history. After quoting Isaiah and Amos, Hebrew prophets well acquainted with injustice, he concluded with a crescendo: "Free at last! Free at last! Thank God almighty we are free at last!"



King attributed the words to "the old Negro spiritual". But this was not his only borrowing. In 1988 an archivist discovered a troubling pattern in his scholarship; eventually it emerged that 40 of his graduate papers contained plagiarised material. He was posthumously subjected to racist rants, some demanding that Boston University rescind his doctorate. An alternative explanation of the controversy might focus on the dual heritage he shared with Hurston. Like her, King straddled two worlds, one learned and formal, the other spontaneous and communitarian. Combined with the wisdom hard-earned in his campaigns, this fertile combination shaped the oratory for which he is remembered 50 years after his death.

### The iron feet of oppression

Hurston may have picked up "Free at last!" from one of the flourishes for which her father was known, or from a sermon by another African-American preacher. Likewise King might himself have heard the words at Ebenezer Baptist Church in Atlanta, where his own father was pastor, or from his preacher-grandfather, or at a chapel service at Morehouse College, the beacon for aspiring black students where he was an undergraduate in the mid-1940s.

In the tradition of both black and white southern folk preaching, ministers usually spoke extemporaneously to unlettered congregants, who expected the Spirit of God to impart messages of encouragement and hope. Manuscripts represented the preacher's preparation, which was subordinate to God's inspiration. Repetition of a memorable phrase was a sign of respect, not duplicity. There was no place in sermons for sources or footnotes.

Elite academic culture imposed different standards, refining both King's beliefs and his rhetoric. His faith was grounded in personal Pietism, a doctrine that ignored the political origins of injustice. In a student paper he wrote that although "the sinfulness of man is often over-emphasised...we must admit that many of the ills in the world are due to plain sin." At Morehouse he began to question that stance; Crozer Theological Seminary in Upland, Pennsylvania, where in 1951 he would be valedictorian of his graduating class, furthered his education and his thinking. He encountered the writings of Walter Rauschenbusch, a Baptist pastor and central figure in America's social-gospel movement. At Crozer and during his subsequent doctoral studies in Boston he delved into the Christian Realism of Reinhold Niebuhr, a theologian who believed that Christians committed to justice must sometimes wield political power to achieve it.

If his childhood instilled King's belief in a loving God, Niebuhr's work tempered his idealism and contributed to his strategy of mass mobilisation. In time his confidence in the capacity of love to overcome white resistance to black freedom succumbed to the hardened hearts and cruelty he witnessed in Montgomery, Birmingham and Selma. He saw that the benevolence of good people could not, by itself, secure social change. Even the non-violent tactics of Mohandas Gandhi temporarily struck him as simplistic when white terrorists threatened his life. His insistence, in "I Have a Dream", on the "fierce urgency of now", his approbation of "the whirlwinds of revolt" and disdain for "the tranquillising drug of gradualism" stem from this understanding.

When he began his pastorate at Dexter Avenue Baptist Church in Montgomery, a block from Alabama's capitol, a sophisticated note crept in. His small congregation, mostly drawn from Alabama State University, was among the city's elite. In 1955, two months after receiving his doctorate, he carefully wrote a sermon on "Worship" intended to impress his well-educated parishioners. Proper biblical worship, he told them, combined "the rich and the poor, the white-collar worker and the common labourer...in a vast unity". After all, "we are all the children of a common father":

Worship is as natural to the human family as the rising of the sun is to the cosmic order...Buddhism, a religion theoretically without a God, would impress us as a religion that excludes worship; yet in every country where Buddhism is dominant, worship is present. Confucius urged his followers not to have much to do with the gods; yet immediately after his death his followers deified him and today millions worship him.

These elements—academic, political and spiritual—fused after black religious leaders drafted a reluctant King to head the Montgomery Improvement Association. In December 1955, four days after the arrest of Rosa Parks on a Montgomery bus (and with only 20 minutes to prepare), he offered an audience of 5,000 at Holt Street Baptist Church a sermon forged by Niebuhr's Christian Realism, but embedded in the cadence of the black church. That sermon triggered the first civil-rights movement in the Deep South in half a century.

Intended to find a mean between militancy and non-violence, the sermon could have chilled the movement or spun it into anarchy. "There comes a time when people get tired of being trampled over by the iron feet of oppression...We are here," King proclaimed, "because we're tired now." He firmly eschewed bloodshed. "The only weapon that we have in our hands," he insisted, "is the weapon of protest." Indubitably, however, protest was itself an arsenal:

> My friends, I want it to be known that we're going to work with grim and bold determination to gain justice on the buses of this city...If we are wrong, the Supreme Court of this nation is wrong. If we are wrong, the constitution of the United States is wrong. If we are wrong, God Almighty is wrong. If we are wrong, Jesus of Nazareth was merely a utopian dreamer that never came down to earth. If we are wrong, justice is a lie. Love has no meaning. And we are determined here in Montgomery to work and fight until justice runs down like water, and righteousness like a mighty stream.

Between the Montgomery bus boycott in 1955 and the Birmingham campaign of 1963, King perfected the marriage of Gandhian non-violence and public activism. Bull Conner, Birmingham's public-safety commissioner, and George Wallace, Alabama's governor, became his foils, inadvertently helping to shame cautious politicians, such as John and Bobby Kennedy and Lyndon Johnson, into intervening to stop the carnage. In a city where white terrorists had bombed dozens of synagogues, churches and homes, King showed that abstract Christian charity was no match for dynamite. The coercive forces of evil had to be met with the coercive power of federal courts, Congress, the White House, even the federalised National Guard.

**Up to the mountain**

His sermons still evoked the Exodus narrative. But Conner, Wallace and Jim Clark, the sheriff who brutalised the marchers at Selma, did not let the people go. By the time he wrote "A Realistic Look at Race Relations"—an essay based on a speech he gave in 1956—King was no longer relying on individual conversion. Instead, in terms that reflected the street as much as the seminary, the "walls of injustice" must be "crushed by the battering-rams of historical necessity...And the guardians of the status quo are always on hand with their oxygen tents to preserve the dying order."

By 1963 his vision of the "beloved community", or ideal society, had fully evolved. He knew that direct action—motivated by love and committed to non-violence—must employ confrontation in the name of reconciliation and redemption. That year his "Letter from Birmingham Jail" stressed the failure of even the most enlightened white ministers and rabbis to abandon tokenism on behalf of actual justice. From his cell he wrote: "History is the long and tragic story of the fact that privileged groups seldom give up their privileges voluntarily."

Realising that mass mobilisation would be difficult in Birmingham because company bosses could penalise the protesters, King launched the Children's Crusade. Speaking without notes at a church filled with parents anxious about their children's safety, he told the story of 12-year-old Jesus, separated from Mary and Joseph in the vicinity of the Temple in Jerusalem. After being reunited with his parents, Jesus explained, "I must be about my father's business." King added his own commentary, at once liturgical and demotic:

> Don't worry about your children; they're going to be all right. Don't hold them back if they want to go to jail. These young people must be about their father's business. And they are carving a tunnel of hope through the great mountain of despair...And they will bring to this nation a quality of idealism it so deeply needs...Keep this movement going. Keep this movement rolling...If you can't fly, run. If you can't run, walk. If you can't walk, crawl. But by all means keep moving.

If Winston Churchill "mobilised the English language and sent it into battle", as JFK put it, King appropriated the language of Zion to dispatch armies of peaceful protesters in pursuit of their freedom.

In 1967, exactly a year before his assassination, King spoke to Clergy and Laity Concerned, an activist group, at Riverside Church in New York. There he broadened his indictment of American injustice, looking beyond southern racism to domestic poverty and foreign conflicts. In one of his best prepared and professionally publicised speeches, he referred to President Johnson's "War on Poverty" as a "shining moment" in American history:

> Then came the build-up in Vietnam, and I watched this programme broken and eviscerated as if it were some idle political plaything of a society gone mad on war...I knew that America would never invest the necessary funds or energies in rehabilitation of its poor so long as adventures like Vietnam continued to draw men and skills and money like some demonic, destructive suction tube.

Despite King's increasing militancy, he ended this homily with a sweeping condemnation of war, arguing that "a true revolution of values" would "say of war: 'This way of settling differences is not just'."

A year later, on the night before his death, his rhetoric came full circle. Speaking to a mass rally in the familiar confines of an African-American church in Memphis, he did not quote Niebuhr. Instead, in the language and biblical rhythm of black folk-Christianity, he again turned to Exodus to explain the failures and dreams of American democracy:

> Like anybody, I would like to live a long life...But I am not concerned with that now. I just want to do God's will. And he's allowed me to go up to the mountain. And I've looked over. And I've seen the promised land. I may not get there with you. But I want you to know tonight, that we, as a people, will get to the promised land.

He was 39 years old. The next day, April 4th 1968, as he stood on the balcony of the Lorraine Motel, King was shot and killed.

*This article appeared in the Books and arts section of the print edition under the headline "Like a mighty stream"*

Rays of hope

# The future of solar energy

*Is bright with some clouds, says Varun Sivaram in "Taming the Sun"*

**Print edition | Books and arts** Mar 31st 2018

**Taming the Sun: Innovations to Harness Solar Energy and Power the Planet.** By Varun Sivaram. *MIT Press; 392 pages; $29.95 and £24.95*

IN 1954 the *New York Times* reported on a breakthrough in solar photovoltaic (PV) technology that could lead to "the harnessing of the almost limitless energy of the sun". American researchers had discovered that silicon transistors, the building blocks of computers, could also generate electricity when hit by sunlight.



The same year, however, Lewis Strauss, chairman of America's Atomic Energy Commission, made a balderdash prediction that nuclear power would soon become "too cheap to meter". In the atomic frenzy of the 1950s America unleashed vast R&D support for nuclear energy. Almost at birth, the silicon solar cell was gazumped by a rival non-fossil technology. For decades it lay in nuclear's shadow.

No longer. Several recent books have celebrated a solar renaissance, as the cost of electricity generated by silicon PV has become competitive with that from fossil fuels and cheaper than nuclear power. "Taming the Sun" is not one of them.

Instead Varun Sivaram of the Council on Foreign Relations, a think-tank, issues a timely warning that solar power could stagnate as abruptly as nuclear did as a share of global energy in the 1990s, with dire consequences for the planet. Unless, that is, there is a triple focus on improving technology, new financial structures to back it and more resilient energy systems.

The book is not gloomy. It lays out the history, promise and pitfalls of solar technology with an easy-going lack of wonkishness. But it offers a sobering message that may be as prescient—and as readable—as Robert Shiller's "Irrational Exuberance" was before the dotcom and housing crises of the 2000s.

Mr Sivaram is a good guide to a sector that, for all the attention it gets, generates just 2% of the world's electricity. He has worked on the front-line as a grunt in a silicon-wafer factory and a scientist at Oxford University, with a startup in Silicon Valley, and as an energy adviser to the mayor of Los Angeles. His father lost a fortune in the industry. He has studied with (and affectionately describes) some of the boffins devising the future of solar technology.

None of these anecdotes distracts from his central argument—that the silicon cell, a worthy workhorse of the solar revolution, can carry the burden only so far. He contends that improvements in a cell's efficiency, ie, the extent to which it converts sunlight into energy, stopped driving costs down as far back as 2001.

More recently the ongoing decline in the cost of solar panels has been caused by mass production in China; but this is incremental, rather than revolutionary, change. Microchip costs have fallen a million times faster than those of solar panels. And China has an incentive to impede the development of breakthrough technologies, exacerbating the underlying problem.

Critics might argue that there is nothing wrong with incremental progress; the more silicon solar is deployed, the more its performance will improve. Mr Sivaram argues the reverse. He uses the term "value deflation" to explain how the more solar is installed, the less of the electricity that it produces in the middle of the day is needed. Unless it can be stored, the more costs it imposes on the rest of the system—in other words, the lower the value of solar becomes. As solar penetration rises, the costs of silicon solar cells will not fall fast enough to outpace this drop in value.

Hence the solution: new technologies and business models, from America to India and Africa. Some, such as solar farms in outer space, may sound outlandish. But the more meticulously Mr Sivaram examines them, the more convincingly they point to a solar-powered future.

*This article appeared in the Books and arts section of the print edition under the headline "Rays of hope"*

Out of many, some

# Ghosts of the road, spectres at the feast

*A new collection of essays by refugees illuminates their shared experiences*

**Print edition | Books and arts** Mar 28th 2018

**The Displaced: Refugee Writers on Refugee Lives.** Edited by Viet Thanh Nguyen.*Abrams Press; 192 pages; $25 and £18.99.*

IF THE world's 65.6m forcibly displaced people formed their own country, it would be the 21st-largest—smaller than Thailand, but bigger than France. One of the many things that this imaginary nation lacks, in comparison with others, is a literary canon. In this collection of 17 essays (one consisting of cartoons) by writers who were forced to leave their homes, Viet Thanh Nguyen, a Pulitzer-winning novelist and himself a Vietnamese refugee to America, begins to assemble one. In so doing he gives ordinary Westerners a heart-wrenching insight into the uprooted lives led in their midst.



To judge by the roster of contributors, this disparate nation consists mostly of distinguished literati. But though their stories often end in coastal, cosmopolitan America, they begin amid distant violence, persecution and despair. This original trauma is the thread that binds their testimonies, which stretch from 1940s Germany to present-day Zimbabwe.

Some are grimmer than others. Fatima Bhutto, niece of a former Pakistani prime minister, admits her displacement was "comfortable", if born of peril. This could not be said of the "Candide-like" succession of horrors that befell one Bosnian fugitive from the Balkan wars, recounted by the novelist Aleksandar Hemon. Mr Hemon details how his compatriot was beaten almost to death in prison, used as a human shield by Serb fighters and blown up by a Bosnian rocket-launcher. He then walked through barren countryside for six days to besieged Sarajevo; eventually he found his way to America, where he suffered near-suicidal post-traumatic stress.

The best contributions approach such calamities from unexpected angles. Ms Bhutto's report of her experience in a virtual-reality art installation, which simulates an illegal crossing of the Mexican border, is compellingly weird. The outstanding piece is by Maaza Mengiste, an Ethiopian-American who gives a lyrical, erudite and unsettling reflection on refugees as Lazarus figures whose existence is forever defined by a single miracle.

Out of these diverse histories, shared motifs emerge, like recurring dreams in a collective unconscious. The most striking is the ensemble of ghosts that haunt the book: ghosts of those who perished on the journeys it describes, ghosts of irrepressible memories, plus the sense that the refugees themselves are unwelcome spectres. In his essay Vu Tran observes that refugees are often seen as invaders from obscure worlds, bearing traces of past lives. Like phantoms they are either invisible and forgotten, or conspicuous and threatening. As in many ghost stories, the menacing presence often turns out to be a projection of the beholder's own neuroses.

The headline politics that feed on such fears remain largely in the writing's background. In an encomium to a pan-Latin-American supermarket in North Carolina, Ariel Dorfman rejoices in the colour and variety of the "undocumented food", a benevolent invading army of burritos and taco bowls. For most of the contributors, however, politics is personal, never more starkly than for Porochista Khakpour, who was born in Iran. Her indictment of American racism is withering, spitting out what she sees as the indignity of coerced gratefulness to an often intolerant society.

The vast majority of refugees end up in poor countries; they are not represented in this volume. Still, the collection succeeds in demonstrating that this dispersed community in some ways resembles other nations. It has its founding myths, but its citizens all have their own tragedies, victories and pain—and each has a story to tell.

*This article appeared in the Books and arts section of the print edition under the headline "Out of many, some"*

Johnson

# Right and wrong ways to spread languages around the globe

*Emmanuel Macron's plan to boost French-speaking puts means before motive*

**Print edition | Books and arts** Mar 31st 2018

REMARKABLY, a French president had never addressed the Académie Française before. The French have a soft spot for authority, and the mighty presidency (atypical for Europe) and the academy (founded to guarantee the purity of the French language) are both symbols of that. So when Emmanuel Macron told the academicians—modestly known as *les immortels*—of his ambitions to revitalise French around the world, it was a very French affair indeed.

In some ways Mr Macron constitutes a break with Gallic tradition. He speaks English not only well but gladly, in contrast to his predecessors, François Hollande (whose ropy English was the butt of jokes) and Jacques Chirac (who often pointedly refused to talk in English, though he could). But in the best French tradition, Mr Macron spoke with passion about French and confidence in its future. He announced more money for the Alliance Française, for example, to teach the language, and more support for teaching French to refugees who have arrived in France. His aim is to see French go from being the world's fifth-most-spoken language to its third.



It is very French to think that this can be accomplished by determined state action. Yet people don't learn a language because somebody has built a fancy new school nearby. These days there are plenty of language-learning options, especially online. The cost of learning a language is mainly measured not in money but in time. You have to give someone a reason to do the work, before even bothering with the means and opportunity.

Think about the rivals to French. One is English. Americans and Britons might think foreigners learn English because their culture is appealing. But if that was ever true, it no longer is. Foreigners learn English simply because there are already a lot of people to speak it with—a majority of them, today, outside the chief Anglophone countries. A Swede learns English to do business in Brazil. This is why, despite the irony, English will probably still dominate the European Union after Brexit.

Or consider Chinese, a language of booming interest to foreign learners. It is in a way the opposite of English: the vast majority of its speakers live in just one country. But what a country. China's economy will soon be the world's largest, and its people still do not speak very good English. Learning Chinese is an obvious way to exploit an unrivalled economic opportunity.

Finally, take German. In the 19th century it was a posh language of science and scholarship, expected of all educated Europeans. Early Zionists pondered making it the national language of the Jewish state. But two wars, horrific atrocities and four decades of division wrecked its image. However, it has recovered. As Germany's economy roared back from a long post-reunification slump, German-learning increased by 4% between 2010 and 2015 (a lot, in historical terms). Perhaps more surprisingly, a country once considered stolid and conservative has developed a reputation for cool. Berlin is seen as the hippest capital in Europe. German is both useful and attractive.

French could combine all these attributes. Like English, it is found around the world. Like Chinese, it is economically important: French-speaking countries account for 8.4% of global GDP. And like Germany recently, France has long had cultural cachet. How, then, to revive the optimism for the language itself?

Much of the work will be done outside France, and by growth in Africa in particular. Mr Macron knows this; after an initial announcement, in Burkina Faso, that he wanted to give new vigour to the French-speaking world, he was seen as neocolonialist. His speech at the Academy was better, conceding that French had "emancipated itself from France". He told the Academy that it was high time French schools began teaching literature written in French outside France.

By one projection, in 2050 there will be 700m French-speakers—80% of them in Africa. To keep that forecast on track and keep Africans speaking French—not switching to English, as Rwanda did—France would be wise to continue this approach of *fraternité* rather than *autorité* with its African friends, by helping those countries develop economically. And the best thing Mr Macron could do at home is release the talents of the French people. Reforms that get the French economy growing as Germany's has done would do more than all the shiny new French-teaching schools in the world.

*This article appeared in the Books and arts section of the print edition under the headline "Build it and they will come"*

# Output, prices and jobs

Print edition | Economic and financial indicators Mar 28th 2018

# Markets

**Print edition | Economic and financial indicators** Mar 28th 2018

# Trade, exchange rates, budget balances and interest rates

**Print edition | Economic and financial indicators** Mar 28th 2018

# Global mergers and acquisitions

**Print edition | Economic and financial indicators** Mar 28th 2018

Mergers and acquisitions announced so far this year have been worth $1.1trn, according to Dealogic, a data provider. This is 42% more than the value of deals made in the first three months of 2017 and is set to be the strongest first-quarter result on record. Improving global growth and rising business confidence provide an explanation, as does the reduction in the American corporate-tax rate. The biggest deal so far this year is the acquisition by Cigna, an American insurer, of Express Scripts, a pharmacy-benefit manager, for $70bn. Regulatory hurdles remain, though. AT&T's $108bn bid for Time Warner, announced back in 2016, still awaits completion pending the outcome of a court case.

# The Economist commodity-price index

**Print edition | Economic and financial indicators** Mar 28th 2018

**José Abreu**
Music as salvation

Music as salvation

# José Abreu died on March 24th

*The founder of Venezuela's El Sistema was 78*

**Print edition | Obituary** Mar 31st 2018

THAT underground car park in Caracas was like any other: dim, low-pitched, musty with damp. The acoustics were going to be dreadful, like an echo chamber. But as he waited there one afternoon in 1975, José Abreu was excited. He had been given 50 music stands, one for every two of the hundred children he expected, and already these resembled a skeleton orchestra, set out in rows. So he waited. And, eventually, 11 boys straggled in.

Another man might have given up then and there. But he had a vision that possessed him, and it was not just to teach music. He intended to transform society, first in Venezuela and perhaps, with God's grace, worldwide. So he did not send the boys home, but told them he was going to turn them into one of the best orchestras in the world. His first lesson was *tocar y luchar*, play and struggle. He would multiply these boys until, at the last count, at least 700,000 children were enrolled in 440 *núcleos*, centres for choirs or orchestras, in Venezuela; the Simón Bolívar Orchestra of his best players was acclaimed all over Europe and America; and his method had spread there too, far beyond his country.



It acquired the name El Sistema although it was not, he emphasised, a system. It was a social project, almost a religious one, whereby through hard work and collaboration he would raise up Venezuela's young, especially the deprived young, to their full potential of body, mind and spirit. Out in *los ranchos*, the sprawling shanty-towns of tin-roofed shacks and stinking drains, a boy would lift his bow across violin strings while his father hammered at his workbench, or a little girl would practise her clarinet as her mother folded clothes. A child who did this was no longer poor, but noble, and would instil pride too in his parents. Inspired adolescents would no longer smoke cannabis on street corners, or fall into prostitution. Rescued themselves, they would gradually save their communities from crime and their country from its chronic disorder.

He stressed the word "social" in his plans, as a trained economist whose studies, rather than his life, had introduced him to desperate poverty. (His childhood in an Andean town had been hard, but not like that; there was a piano in the house, and a family history of music-making in Italy.) "Social" also expressed the first purpose of El Sistema, playing together, rather than having music theory drilled into young heads. Its funding, in fact, came through social services, not the cultural department.

"Socialist" he did not say, though his language often strayed that way. Music was not a monopoly of elites. It was an inalienable right of the masses, as was beauty. Surely Beethoven, that profoundly democratic humanist, would be outraged to see it now, an exclusive and privileged thing, while the weak cried out for it.

### The Chávez problem

It would have pleased Maestro Abreu to keep El Sistema out of politics, but that proved impossible. His founding motivation was part-patriotic anyway: he wanted Venezuela to have a classical-music culture as good as Mexico's or Argentina's. His principal orchestra was named after the great regional liberator and its child-players shone in the national colours, red, yellow and blue. For a few years, in the social-democratic period later mocked by Hugo Chávez, he was a congressman and culture minister; he knew the ropes. Nine successive governments funded him, none more generously than that of Chávez, so to keep the orchestra afloat he dared not cross him. But *chavismo* was not his creed. He believed in the emancipation, even perfectibility, of human beings through music.

That required exhausting discipline. The children rehearsed for four hours after school, 22 hours a week, playing until they were tired out, for this ideal. He drove them as he drove himself, convinced from that first session in the car park by the spark he had seen in their eyes. As more and more *núcleos* sprang up, he made sure his will was vehemently channelled through them. *Tocar y luchar*. When El Sistema produced a star in Gustavo Dudamel, now director of the Los Angeles Philharmonic, he took him firmly under his wing, even standing beside him, small, gaunt and ghostlike in coat and scarf, vestigially conducting while Mr Dudamel did. Some thought him more or less a tyrant, and questioned whether El Sistema had done any good, since weak players did not advance and Venezuela was falling even faster to pieces. But there was no doubt, in his mind or most others, that he had raised the aspirations and, with them, the prospects of thousands of young Venezuelans.

He was certain it would work, because it had worked on him. Once he knew, at nine, the joy of a piano, a musician was all he wanted to be. He had studied economics only because it fitted round his course in composition. For that he won prizes, producing a cantata on the Samaritan woman, an oratorio on the Apocalypse, and a wind quintet. His conducting was rigorous and reverent, searching the depths, always challenging his players. For what he wanted them to find was not only self-esteem and solidarity, but the sacred life within music which was Being, Truth and Goodness, God himself. This, the final transformation, was also why he had set up the music stands in that underground car park that day, and waited.

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