

# The Economist

JULY 22ND-28TH 2017

Why Trump hurts Kushner

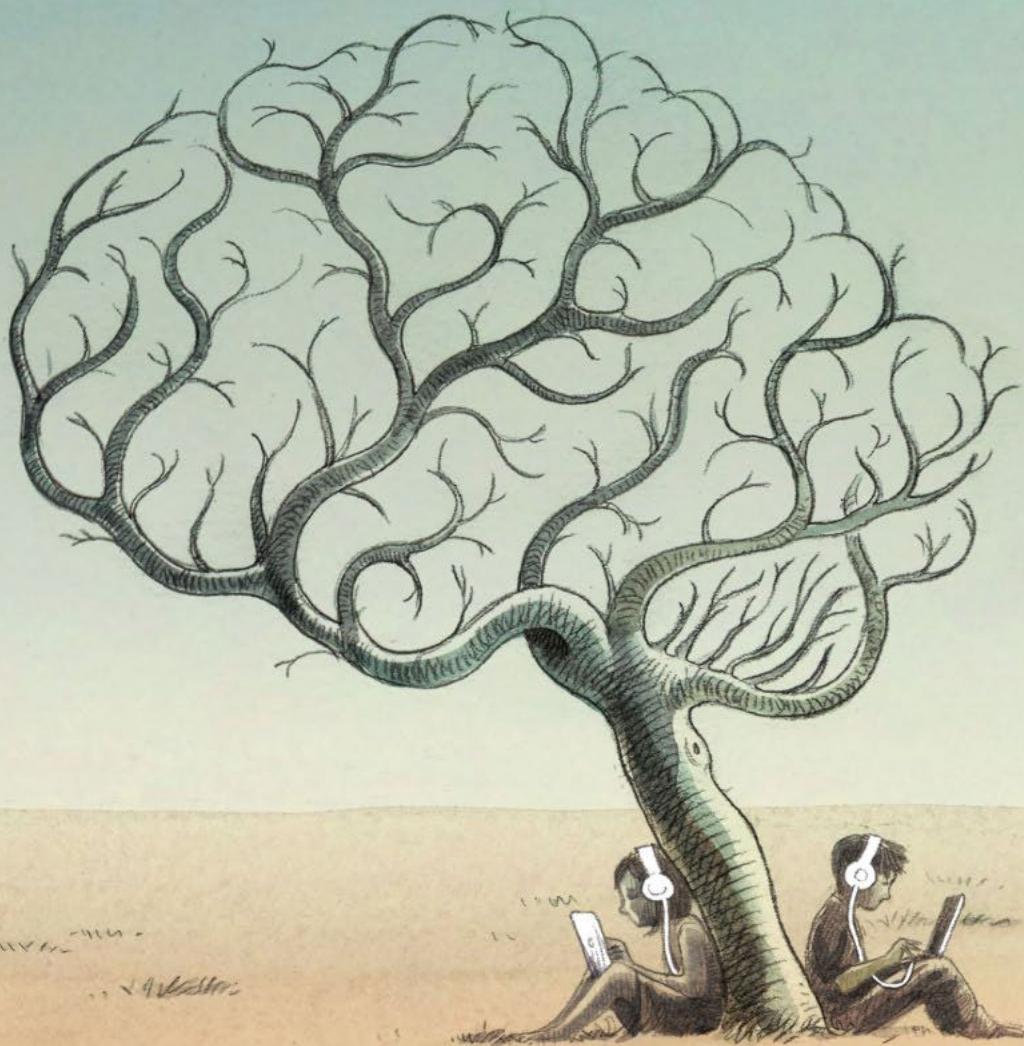
Britain's Brexit fiasco

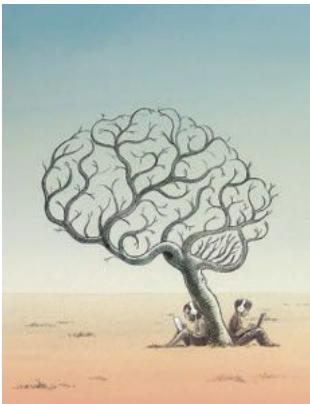
Corporate China: the state strikes back

A special report on India and Pakistan

# The future of learning

## How technology is transforming education





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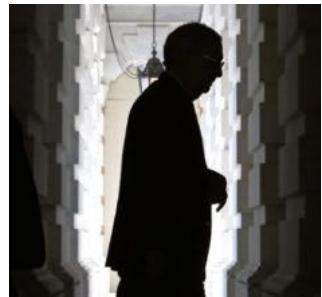
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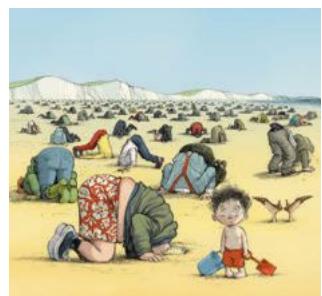
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## Politics



In one of the most stunning failures of an American governing party to get its signature legislation passed in Congress, the Republican **health-care bill** in the Senate stalled, after more Republican senators said they would not support it. The party has spent seven years vowing to overturn and replace Obamacare with its own health-care plan. Donald Trump's call for his party to go ahead and repeal Obamacare anyway was met with little enthusiasm. The Democrats urged the Republicans to co-operate with them on fixing Obamacare's flaws.

**John McCain** has been diagnosed with brain cancer. Mr McCain is a widely respected senator on both sides of the aisle. The 80-year-old Republican, who ran as the party's presidential candidate against Barack Obama in 2008, is consulting with doctors about when he can return to work.

The Trump administration announced that it would allow more visas for **foreign workers** in seasonal jobs in order to help businesses that can't fill vacancies. The announcement was seen by some as being at odds with Mr Trump's campaign pledge to put American workers first.

Mr Trump said he intended to nominate Jon Huntsman as America's **ambassador to Russia**. Mr Huntsman is a moderate Republican, a one-time governor of Utah and a former ambassador to China. He ran unsuccessfully for the party's nomination for president in 2012.

### The year of living dangerously

Makhosi Khoza, an MP from South Africa's ruling African National Congress, called her party's leader President Jacob Zuma, "a disgrace". She immediately received death threats and has been given round-the-clock security.

The Trump administration cancelled a programme that armed and trained moderate **Syrian rebels** fighting the Assad regime. The programme was introduced in 2013 and was never very effective, but the Russians had always opposed it.

**Palestinian** youths rioted in East Jerusalem over tighter security measures at Temple Mount. The new measures are a response to the fatal shooting of two **Israeli** policemen, which closed the Temple Mount compound for the first time in decades.

**Saudi Arabia** and the **United Arab Emirates** watered down a list of demands they are making of **Qatar**, its fellow Gulf state on which it has imposed a partial blockade since last month. The step was apparently aimed at getting out of the crisis they have created.

The Saudi government took in for questioning a woman who had allowed herself to be filmed dressed in a **miniskirt** and crop-top, and with uncovered hair.

### The popular vote



More than 7.5m **Venezuelans**, about a third of the electorate, voted in a referendum organised by the opposition to the authoritarian regime. Nearly 100% of voters rejected a plan

by the president, Nicolás Maduro, to convene a constituent assembly to rewrite the constitution. The government said the referendum was illegal.

The American trade representative, Robert Lighthizer, outlined the Trump administration's goals for renegotiating the **North American Free-Trade Agreement** with Canada and Mexico. He called for a reduction in the American trade deficit with its partners, stronger rules of origin for goods that can be traded duty-free within North America and changes to NAFTA's dispute-resolution process.

A judge in **Peru** ordered the pre-trial detention of Ollanta Humala, a former president, and his wife. A prosecutor has accused the couple of taking a \$3m illegal donation during a presidential election campaign in 2011. The couple, who turned themselves in, deny wrongdoing.

### We don't swear allegiance

A court in **Hong Kong** ruled that four pro-democracy lawmakers should be expelled from the legislature for failing to take their oaths in a "sincere and solemn" manner. The court had similarly disbarred two other opposition legislators in November. Their supporters accuse the government in Beijing of orchestrating the cases against them.

The Chinese government arranged a funeral ceremony for **Liu Xiaobo**, a Nobel peace-prize winner who died of liver cancer while serving an 11-year sentence for subversion. Only family members and security agents were allowed to attend. Mr Liu's ashes were deposited at sea. Censors deleted condolences from social media.

The Communist Party boss of the **Chinese** region of Chongqing, Sun Zhengcai, was dismissed and placed under investigation for violating party rules. Mr Sun had been considered as a possible successor to Xi Jinping, who, if he follows convention, will step down as the party's leader in

2022. An ally of Mr Xi, Chen Min'er, took over as Chongqing's party chief.

The government of **Indonesia** used new powers to ban **Hizbut Tahrir**, a group which advocates the creation of an Islamic caliphate, for undermining the constitution.

A private jet bringing Abdul Rashid Dostum, the vice-president of **Afghanistan**, home from Turkey, was turned away by the authorities when it tried to land in the Afghan city of Mazar-i-Sharif. Mr Dostum, who has fallen out with the president, Ashraf Ghani, is organising a new opposition coalition.

Moon Jae-in, the president of **South Korea**, proposed talks with **North Korea** in order to reduce tensions at the border and reunite families separated by the Korean war.

### Legal wrangling



The European Commission hinted it may take action against **Poland** if planned changes to the judiciary go ahead. The ruling Law and Justice party has already put the constitutional tribunal under control of the executive and now plans to overhaul the supreme court. Thousands of Poles took to the streets to protest against the power grab.

General Pierre de Villiers resigned as the head of **France's** armed forces in a very public spat with Emmanuel Macron, the new president, over the defence budget. Mr Macron reminded a gathering of army chiefs that "I am your leader". He described the new army chief, General François Lecointre, as a "hero".

## Business

**KKR** promoted two executives, Joseph Bae and Scott Nuttall, to senior leadership positions in a succession plan that paves the way for the eventual retirement of its two remaining founders, Henry Kravis and George Roberts. It is the biggest overhaul to the private-equity firm's management since Jerome Kohlberg, the other founder, left in 1987.

The chief executive of **AkzoNobel** stood down with immediate effect because of health issues. Ton Büchner had recently defended the Dutch paint and chemicals company from a combative takeover bid launched by **PPG**, an American rival. The three-month tussle had prompted a campaign by one of Akzo's biggest shareholders to sack the chairman for not considering PPG's offer.

**America's big banks** reported their earnings for the second quarter. Low market volatility hit revenues from trading, though this was somewhat offset by income from rising interest rates. Net income at JPMorgan Chase came in at \$7bn, its best-ever quarterly profit. Bank of America, Morgan Stanley and Wells Fargo also saw profits climb, to \$5.3bn, \$1.8bn and \$5.8bn respectively; Citigroup's income dipped a bit, to \$3.9bn. Goldman Sachs suffered a 40% slump in revenues from trading; its profit slid to \$1.8bn.

### Storing is not boring

In Asia's biggest buy-out to date, a Chinese consortium offered S\$16bn (\$11.6bn) for **Global Logistic Properties**, which is based in Singapore and is one of the world's biggest warehousing companies. The growth of e-commerce in Asia has increased the demand for warehouse space.

**China's economy** grew by 6.9% in the second quarter compared with the same three months last year. That was better than had been expected and above the annual target of "around 6.5%" set by the gov-

ernment earlier this year. Separate data showed steel production at a record in June. That gave American and Chinese officials something to chew on as they met in Washington for inconclusive bilateral talks.

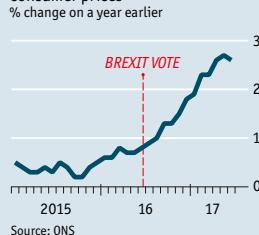
**Dalian Wanda**, a Chinese conglomerate, rejigged an agreement to sell its hotels and tourism projects to **Sunac China**, a property developer, after credit-ratings agencies raised concerns about the financing. Dalian will instead sell the hotels to a property developer in Guangzhou, and Sunac will buy the tourism assets. The share prices of Wanda-controlled companies and of Sunac sank amid reports that the Chinese government was scrutinising both firms' heavy debt load.

### Keen as mustard

**McCormick & Company**, an American producer of spices and herbs that counts Thai Kitchen and Schwartz among its labels, offered to pay \$4.2bn for the food business of **Reckitt Benckiser**, a British consumer-goods group that is refocusing its business on its other products. McCormick gains control of brands such as French's mustard and Frank's RedHot sauce in the deal.

### British inflation

Consumer prices % change on a year earlier



### Britain's annual inflation rate

dropped slightly in June to 2.6%, reversing the trend of accelerating prices since the vote last June to leave the EU. The figure was a surprise: analysts had expected an increase of nearly 3%. The fourth successive monthly fall in transport costs, especially motor fuels, was the biggest factor behind the drop. Lower inflation eases the pressure on the Bank of England to raise interest rates for the first time since 2007.

The British government proposed that the **state pension age** should increase from 67 to 68 between 2037 and 2039, seven years earlier than planned. The change will affect workers born between 1970 and 1978, who will have to wait an extra year to claim their state pension. The adjustment is designed to keep costs under control.

The **Vision Fund**, a \$93bn fund set up by SoftBank, announced its first investments in tech startups. The beneficiaries included a firm that is developing technology to grow crops indoors and a robotics company. The disbursements came in the week that America's **technology industry** rose above the stockmarket peak it had reached during the dot-com bubble in 2000, as measured by the S&P 500 IT index.

The number of worldwide subscribers to **Netflix** crossed the 100m mark for the first time, to 104m. In another first, just over half of the video-streaming service's subscribers live outside the United States.

### The great firewall of China

China's internet censors partially blocked **WhatsApp**, the latest move in a broad crackdown on foreign media.

WhatsApp's users woke to find they were unable to send images, including those of Winnie the Pooh, who was also banned in China this week in response to an internet meme that has gone viral comparing the winsome bear to the country's president, Xi Jinping.

Other economic data and news can be found on pages 70-71



# Brain gains

Together, technology and teachers can revamp schools



**I**N 1953 B.F. Skinner visited his daughter's maths class. The Harvard psychologist found every pupil learning the same topic in the same way at the same speed. A few days later he built his first "teaching machine", which let children tackle questions at their own pace. By the mid-1960s similar gizmos were being flogged by door-to-door salesmen. Within a few years, though, enthusiasm for them had fizzled out.

Since then education technology (edtech) has repeated the cycle of hype and flop, even as computers have reshaped almost every other part of life. One reason is the conservatism of teachers and their unions. But another is that the brain-stretching potential of edtech has remained unproven.

Today, however, Skinner's heirs are forcing the sceptics to think again (see page 16). Backed by billionaire techies such as Mark Zuckerberg and Bill Gates, schools around the world are using new software to "personalise" learning. This could help hundreds of millions of children stuck in dismal classes—but only if edtech boosters can resist the temptation to revive harmful ideas about how children learn. To succeed, edtech must be at the service of teaching, not the other way around.

## Pencils down

The conventional model of schooling emerged in Prussia in the 18th century. Alternatives have so far failed to teach as many children as efficiently. Classrooms, hierarchical year-groups, standardised curriculums and fixed timetables are still the norm for most of the world's nearly 1.5bn schoolchildren.

Too many do not reach their potential. In poor countries only a quarter of secondary schoolchildren acquire at least a basic knowledge of maths, reading and science. Even in the mostly rich countries of the OECD about 30% of teenagers fail to reach proficiency in at least one of these subjects.

That share has remained almost unchanged over the past 15 years, during which billions have been spent on IT in schools. By 2012 there was one computer for every two pupils in several rich countries. Australia had more computers than pupils. Handled poorly, devices can distract. A Portuguese study from 2010 found that schools with slow broadband and a ban on sites such as YouTube had better results than high-tech ones.

What matters is how edtech is used. One way it can help is through bespoke instruction. Ever since Philip II of Macedon hired Aristotle to prepare his son Alexander for Greatness, rich parents have paid for tutors. Reformers from São Paulo to Stockholm think that edtech can put individual attention within reach of all pupils. American schools are embracing the model most readily. A third of pupils are in a school district that has pledged to introduce "personalised, digital learning". The methods of groups like Summit Public Schools, whose software was written for nothing by Facebook engineers, are being copied by hundreds of schools.

In India, where about half of children leave primary school unable to read a simple text, the curriculum goes over many

pupils' heads. "Adaptive" software such as Mindspark can work out what a child knows and pose questions accordingly. A recent paper found that Indian children using Mindspark after school made some of the largest gains in maths and reading of any education study in poor countries.

The other way edtech can aid learning is by making schools more productive. In California schools are using software to overhaul the conventional model. Instead of textbooks, pupils have "playlists", which they use to access online lessons and take tests. The software assesses children's progress, lightening teachers' marking load and giving them insight on their pupils. Saved teachers' time is allocated to other tasks, such as fostering pupils' social skills or one-on-one tuition. A study in 2015 suggested that children in early adopters of this model score better in tests than their peers at other schools.

## Pay attention at the back

Such innovation is welcome. But making the best of edtech means getting several things right. First, "personalised learning" must follow the evidence on how children learn. It must not be an excuse to revive pseudoscientific ideas such as "learning styles": the theory that each child has a particular way of taking in information. Such nonsense leads to schemes like Brain Gym, an "educational kinesiology" programme once backed by the British government, which claimed that some pupils should stretch, bend and emit an "energy yawn" while doing their sums.

A less consequential falsehood is that technology means children do not need to learn facts or learn from a teacher—instead they can just use Google. Some educationalists go further, arguing that facts get in the way of skills such as creativity and critical thinking. The opposite is true. A memory crammed with knowledge enables these talents. William Shakespeare was drilled in Latin phrases and grammatical rules and yet he penned a few decent plays. In 2015 a vast study of 1,200 education meta-analyses found that, of the 20 most effective ways of boosting learning, nearly all relied on the craft of a teacher.

The second imperative is to make sure that edtech narrows, rather than widens, inequalities in education. Here there are grounds for optimism. Some of the pioneering schools are private ones in Silicon Valley. But many more are run by charter-school groups teaching mostly poor pupils, such as Rocketship and Achievement First—or Summit, where 99% of graduating pupils go on to university and laggards make the most progress relative to their peers in normal classes. A similar pattern can be observed outside America. In studies of edtech in India by J-PAL, a research group, the biggest beneficiaries are children using software to receive remedial education.

Third, the potential for edtech will be realised only if teachers embrace it. They are right to ask for evidence that products work. But scepticism should not turn into Luddism. A good model is São Paulo, where teachers have welcomed Geekie, an adaptive-software company, into public schools.

In 1984 Skinner called opposition to technology the "shame" of education. Given what edtech promises today, closed-mindedness has no place in the classroom. ■

## Britain and the EU

# Facing up to Brexit

**As long as the government stays in denial about Brexit's drawbacks, Britain is on course for disaster**



nority prime minister. Her cabinet is engaged in open warfare as rivals position themselves to replace her. The Labour Party, which has been taken over by a hard-left admirer of Hugo Chávez, is ahead in the polls. Meanwhile a neurotic pro-Brexit press shrieks that anyone who voices doubts about the country's direction is an unpatriotic traitor. Britain is having a very public nervous breakdown.

The chaos at the heart of government hardly bodes well for the exit negotiations with the EU, which turned to detailed matters this week and need to conclude in autumn 2018. But the day-to-day disorder masks a bigger problem. Despite the frantic political activity in Westminster—the briefing, backstabbing and plotting—the country has made remarkably little progress since the referendum in deciding what form Brexit should take. All versions, however “hard” or “soft”, have drawbacks (see page 43). Yet Britain’s leaders have scarcely acknowledged that exit will involve compromises, let alone how damaging they are likely to be. The longer they fail to face up to Brexit’s painful trade-offs, the more brutal will be the eventual reckoning with reality.

## Winging it

In the 13 months since the referendum, the awesome complexity of ending a 44-year political and economic union has become clear. Britain’s position on everything from mackerel stocks to nuclear waste is being worked out by a civil service whose headcount has fallen by nearly a quarter in the past decade and which has not negotiated a trade deal of its own in a generation. Responsibility for Brexit is shared—or, rather, fought over and sometimes dropped—by several different departments. Initially Britain’s decision not to publish a detailed negotiating position, as the EU had, was put down to its desire to avoid giving away its hand. It now seems that Britain triggered exit talks before working out where it stood. The head of its public-spending watchdog said recently that when he asked ministers for their plan he was given only “vague” assurances; he fears the whole thing could fall apart “at the first tap”.

As the scale of the task has become apparent, so has the difficulty of Britain’s position. Before the referendum Michael Gove, a leading Brexiteer in the cabinet, predicted that, “The day after we vote to leave, we hold all the cards.” It is not turning out like that. So far, where there has been disagreement Britain has given way. The talks will be sequenced along the lines suggested by the EU. Britain has conceded that it will pay an exit bill, contrary to its foreign secretary’s suggestion only a week ago that Eurocrats could “go whistle” for their money.

The hobbled Mrs May has appealed to other parties to come forward with ideas on how to make Brexit work. Labour,

**C**RISIS? What crisis? So many have been triggered in Britain by the vote a year ago to leave the European Union that it is hard to keep track. Just last month Theresa May was reduced from unassailable iron lady to just-about-managing mi-

which can hardly believe that it is within sight of installing a radical socialist prime minister in 10 Downing Street, is unsurprisingly more interested in provoking an election. But cross-party gangs of Remainer MPs are planning to add amendments to legislation, forcing the government to try to maintain membership of Euratom, for instance, which governs the transit of radioactive material in Europe. Even within the government, the prime minister’s lack of grip means that cabinet ministers have started openly disagreeing about what shape Brexit should take. Philip Hammond, the chancellor, has been sniped at because he supports a long transition period to make Brexit go smoothly—a sensible idea which is viewed with suspicion by some Brexiteers, who fear the transition stage could become permanent.

The reopening of the debate is welcome, since the hard exit proposed in Mrs May’s rejected manifesto would have been needlessly damaging. But there is a lack of realism on all sides about what Britain’s limited options involve. There are many ways to leave the EU, and none is free of problems. The more Britain aims to preserve its economic relationship with the continent, the more it will have to follow rules set by foreign politicians and enforced by foreign judges (including on the sensitive issue of freedom of movement). The more control it demands over its borders and laws, the harder it will find it to do business with its biggest market. It is not unpatriotic to be frank about these trade-offs. Indeed, it is more unpatriotic to kid voters into thinking that Brexit has no drawbacks at all.

The government has not published any estimates of the impact of the various types of Brexit since the referendum, but academic studies suggest that even the “softest” option—Norwegian-style membership of the European Economic Area—would cut trade by at least 20% over ten years, whereas the “hardest” exit, reverting to trade on the World Trade Organisation’s terms, would reduce trade by 40% and cut annual income per person by 2.6%. As the economy weakens, these concerns will weigh more heavily. Britain’s economy is growing more slowly than that of any other member of the EU. The election showed that its voters are sick of austerity. Our own polling finds that, when forced to choose, a majority now favours a soft Brexit, inside the single market (see page 44).

## Back in play

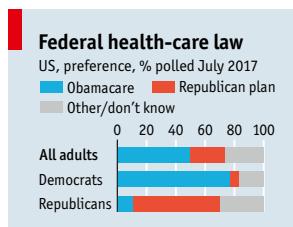
A febrile mood in the country, and the power vacuum in Downing Street, mean that all options are back on the table. This is panicking people on both sides of the debate. Some hardline Brexiteers are agitating again for Britain to walk away from the negotiations with no deal, before voters have a change of heart. Some Remainers are stepping up calls for a second referendum, to give the country a route out of the deepening mess. As the negotiations blunder on and the deadline draws nearer, such talk will become only more fevered.

So it is all the more crucial that all sides face up to the real and painful trade-offs that Brexit entails. The longer Britain keeps its head in the sand, the more likely it is to end up with no deal, and no preparations for the consequences. That would bring a crisis of a new order of magnitude. ■

## American health care

# Revive, don't repeal

With health-care reform stalled, Republicans must now make the Affordable Care Act work



Care Act, Barack Obama's health-care law, is part of the mess. Yet those who passed it knew it was a grubby compromise. In America's divided government, they reasoned, politicians must build on what already exists.

Following the travails this week of their latest attempts to "repeal and replace" Obamacare, Republicans must come to a similar realisation (see page 25). They are too divided to sweep away the status quo. Rand Paul, one of four senators who threatened to bring down the Senate bill, compared its continuation of parts of Obamacare to "German national socialism". He wants to get government out of health markets. Susan Collins, another rebel, thinks the bill cuts Medicaid, government-provided health insurance for the poor, too deeply. These factions are unlikely to agree, however long the Republican leadership tries to find a compromise. One conservative gambit—to repeal Obamacare and worry about replacing it later—is a reckless gamble that would inflict crippling uncertainty on the health industry and those who rely on it.

### Get over the name

Republicans have long spoken as if Obamacare is a burning house; those inside must be rescued, even if it means taking an axe to the walls. But it is a fallacious argument designed to provide political cover to a Senate bill that is more about reducing redistribution than rescuing Obamacare's customers from disaster (see page 26). The law's problems are real, but fixable—

more like a leaky roof and botched plumbing than a fire. The holes can still be patched up, in three steps.

First, more states should emulate Alaska, Minnesota and Oregon, and start reinsurance programmes to pay the highest medical costs incurred on Obamacare's insurance exchanges. Because the law forbids discrimination against those with pre-existing health conditions, the exchanges contain many sickly patients. As a result, premiums and deductibles have soared for the 9m buyers who earn too much to receive government subsidies. They foot much of the bill for Obamacare's generosity. Meanwhile, 155m other Americans enjoy a tax break on the plans they get from their employers, which are often cheaper anyway. Reinsurance programmes would bring premiums down and begin to redress the imbalance. If it can get its act together, Congress could stump up some cash to help.

Second, states should open government contracts for programmes like Medicaid only to insurers that take part in the exchanges. Those insurers are likely to apply because Medicaid is much larger than the market for individuals. Such rules, already in place in New York and Nevada, will help stem the flow of firms abandoning the exchanges, which has left a third of counties with only one insurer.

Finally, the Trump administration must fulfil the federal government's responsibilities under Obamacare. That means enforcing its rules, such as a fine for those who choose not to buy health insurance. It also means paying the subsidies that underpin the system, something the president has been unwilling to do, thus deepening the problems on the exchanges. And it means seeking congressional approval for them to allay concerns that such payments are unconstitutional.

Without a plausible replacement, killing off Obamacare, by repeal or by neglect, would be grossly irresponsible. Muddling as the system is, Republicans now have a responsibility to make it work. ■

## Economic reform in China

# Unnatural selection

Government-owned businesses are becoming more, not less important. That is bad for China and the world



THE 40-year process of reforming China's economy has seen occasional retreats. But the general trajectory has seemed plain enough: towards a greater role for market forces. Since the early 1980s, private business has grown far faster and been much more profitable than the state sector. Back then state companies were responsible for roughly four-fifths of output; now they account for less than a fifth.

President Xi Jinping's commitment in 2013 to give market forces "a decisive role" in allocating resources seemed to pre-

sage more of the same. Yet the retreat of state-owned enterprises (SOEs) has stalled, and in some respects gone into reverse. China still has more than 150,000 SOEs. Their share of industrial assets hovers stubbornly near 40%. They account for about half of bank credit, and when the economy slows the state presses them to spend more. Since 2015 investment by SOEs has outpaced that by private firms (see page 55).

Mr Xi remains well aware of the need for reform; on July 15th he repeated warnings about indebtedness at SOEs. But only some of the initiatives rolled out on his watch are aimed at slimming the state sector. Two of them point in another direction entirely. One is the merging of competing SOEs. The arm of the government responsible for looking after these firms has ➤

► engineered mergers of ports, railway-equipment makers and shipping companies; a vast chemicals combination is planned. Such deals often seem intended to spawn national champions, not to pare overcapacity.

The other disturbing trend is the proliferation of “state capital investment and operation” companies (scios). The state has thus far tended to dominate in heavy industries, transport and energy, leaving private firms to forge ahead in technology. scios will, in part, function like state-run private-equity funds whose remit is to extend the reach of government. Provincial governments have published plans to push funds into areas such as biotechnology and cloud computing.

The entrenchment of state firms brings dangers both for China and for the wider world. Domestically, evidence shows that soes underperform private businesses. A bigger role for them will mean more inefficiency and slower growth over the long term. State enterprises are also a principal culprit in the alarming build-up of corporate debt in China (nearly 170% of GDP at the end of last year). The IMF estimates that reform of soes could bring a \$1trn economic dividend over the course of a decade. Their persistence will impose concomitant costs.

soes also risk provoking a backlash as they target increased

foreign sales. With their opaque finances and domestic privileges, Chinese state enterprises are easily accused of having unfair advantages when they venture abroad. That could nourish protectionist sentiment, or prompt other countries to increase state support for their own firms.

### Beat the retreat

Optimists hope for a repeat of a familiar pattern, where a period of retrenchment is followed by a spurt of reform. In this narrative, progress will be made again after the party's five-yearly congress this autumn, when Mr Xi will have a freer hand to pursue reforms. Sadly, that is wishful thinking. Strengthening the soes is consistent with Mr Xi's belief in tighter state control of just about every aspect of society. A regulatory clampdown on bank lending to big companies, for example, is a way not just to clean up shadowy financial practices but to influence how private firms spend their cash.

Previous leaders have managed the tension between a liberalising economy and an obsession with stability through a mix of rapid growth and political repression. Mr Xi does not want to change that recipe. But he is doing something more radical: reversing the state's retreat from the economy. ■

### Helping fragile democracies

## Why monitors matter

**Foreign observers and local citizen-watchers can make the difference between a fair election and a disaster**



**N**O ONE batted an eyelid earlier this year when Turkmenistan's strongman, Gurbanguly Berdimuhamedov, was “re-elected” with nearly 98% of the vote. Why, one wonders, did he bother with an election at all? Yet in a growing number of fragile new democracies, especially in Africa, where similarly absurd results were once common, elections have become genuine. Since 1991 incumbent governments or leaders have been ousted at the ballot box at least 45 times, most recently in Nigeria, Ghana, the Gambia and Lesotho.

Nerves still jangle at election time, especially when the outcome is likely to be close, patronage and corruption are pervasive, and rigging and violence have blighted previous ballots. A fraudulent election can tarnish a country's reputation, threaten its stability, and deter investment and aid.

Kenya, whose voters go to the polls on August 8th, is just such a case. Violence after an election in 2007 left at least 1,300 dead and 700,000 displaced. The country is the economic and strategic hub of east Africa, so a credible election this time matters not only to Kenyans but to many beyond their borders. Foreign and local observers will be vital to ensuring a clean contest in such a “transitional democracy” (see page 47).

### Beat the cheat

In the bad old days no one (except the hapless citizens of the countries concerned) seemed to care much if elections were rigged, provided they were more or less peaceful. International monitors would swan in a few days before the poll and—more negligently—fly out again a day or two after it, often de-

claring the election to have been “free and fair” because they had seen voters cast their ballots without violence. No matter that fraud and bad blood often increase after polling day.

The likes of Robert Mugabe in Zimbabwe prefer monitors from the African Union, who in the past have endorsed suspect results (they have recently become a bit more rigorous). More ambitious places, such as Kenya and Ghana, crave the imprimatur of the European Union and respected American outfits, notably the National Democratic Institute, the International Republican Institute and the Carter Centre.

Nowadays foreign monitoring teams start to arrive a good month before the big day and stay for at least a month after it. The outsiders help in several ways. They provide expertise on technology, especially concerning the registration of voters and the method of vote-counting. Monitors also help co-ordinate “parallel vote tabulation”, whereby samples of the results from randomly selected polling stations are collected and presented quickly to prevent fraud in the later counting process. Crucially, foreign monitors support local watchdogs who do most of the work and face the greatest risks.

Foreigners alone cannot ensure fair elections. They rely on the co-operation of local governments, to gain access to the entire process, including the voters' register. But they can raise the bar against rigging. Beyond constraining the incumbents' power, their scrutiny can build popular trust in the elections—and make it easier for losers to accept defeat.

It is an expensive business, but worthwhile. Worryingly, the Trump administration is trying to slash the State Department's budget which helps support democracy, including election monitors. Congress is right to resist such cuts. Fair elections make Africa more stable. Giving up on them spreads anger and poison around the world. ■

# KUMQUAT SAYS WHAT?



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**Student numbers**

Contrary to received wisdom, the overall number of university students has fallen, not risen, in England since the rise in tuition fees ("Fees high, foes fume", July 8th). The number in full-time study has grown, but there has been a 43% decline in part-time students, typically older learners who tend to be more price sensitive and debt averse than their full-time counterparts. Data from the Higher Education Statistics Agency suggest there were 172,000 fewer undergraduate students in total at English higher-education institutions in 2015-16 than in 2011-12, the year before tuition fees rose. There were also 13,500 fewer students from poor areas, not more, as is generally claimed.

The disastrous collapse of part-time study matters because it can affect social mobility and improvements to economic productivity. All the political parties went into the election promising to champion lifelong learning. All those in power have a responsibility to make good on that promise.

**GUY MALLISON**  
Director of strategy  
Open University  
Milton Keynes, Buckinghamshire

**Censorship in China**

It was strange to read about the death of Liu Xiaobo, China's foremost political dissident, only in foreign newspapers ("China's conscience", July 15th). But this is a country where strange things happen all the time. This summer, foreign television shows and films have mysteriously disappeared from almost all the popular video-streaming sites. Western talk shows have

been banned. Since June social platforms have been prodding their users to register their real names.

Before it was deleted, I watched a biopic of Aung San Suu Kyi (using a pseudonym to avoid the censor). When she was in confinement for being Myanmar's conscience, Ms Suu Kyi wrote "Freedom from Fear". I wonder if Liu Xiaobo got a chance to do the same. We are often told by the government that the West's influence will corrupt us and damage the younger generation. The truth is we fear the government more than any outside influence.

**LU YANHAN**  
*Suzhou, China*

**Correcting a correction**

You were too eager to correct yourself regarding Willy Brandt's wartime exile (Correction in the July 8th edition concerning Helmut Kohl's Obituary in the June 24th issue). There were two parts to his exile from Nazi Germany. Before the war he was in Norway, but when Norway was occupied Brandt managed to escape to Sweden, where he remained until the fighting finished. So you got it right the first time by stating that his wartime exile was in Sweden.

**JEAN GUILL**  
*Luxembourg City*

**Why Trump succeeds**

Regarding your special report on Donald Trump's America (July 1st), in "Strangers in Their Own Land", Arlie Russell Hochschild provides a metaphorical story as an insight into the roots of American populism. The American Dream is just over the hill and everyone is in line, but the line is moving slower than it used to. At the very point that the line begins to slow, women, blacks and other minorities begin to cut in line. Not only that, but the federal government helps them cut in line. When those already in line complain, they are called rednecks, white trash and Bible-thumpers. They become angry.

Affirmative action is hugely unpopular with white voters. Cutting in line violates a fundamental sense of justice. Republicans have run against affirmative action for decades and yet done very little to change the policies. Then Mr Trump arrives and berates mainstream Republicans, humiliating them in the debates, which become something akin to a professional wrestling match. The backlash against affirmative action is gathering strength and clarity. This is the result of telling white Americans that identity politics is an issue of justice, just not for them.

**MARK WOLFRAM**  
Visiting fellow  
Carleton University  
*Ottawa*

**The battle for Baltimore**

Your article about the rising tide of homicides in Baltimore called for better policing and schools, and fewer drugs ("On murderous streets", July 1st). Yet the one biggest change that could help the city, and the rest of America, would be to end the insane war on drugs itself. The policy's vast economic and human costs might be justified if it reduced the harm of drugs. But it does the opposite, wreaking devastation, as in Baltimore.

The violence is a consequence of giving criminals control of the drug trade, so they battle over turf. The illicit high prices force many addicts into crime to finance their habit. Around 50,000 Americans die annually from overdoses. All this could be eliminated if a fraction of the billions wasted on the failed drug war were instead spent on treating addicts compassionately rather than punitively, and making drugs legal, regulated and safe.

**FRANK ROBINSON**  
*Albany, New York*

**Taiwan's diplomacy**

I read Ma Ying-jeou's comments on Panama's regrettable decision to break diplomatic ties with Taiwan (Letters, July 1st). I must reiterate that the

Taiwanese government respects the historical fact of the 1992 meeting with Beijing and remains dedicated to maintaining the status quo of peace, stability and predictable cross-Strait relations.

However, it is also crucial that these relations proceed on the basis of equality and parity, and that both sides take measures to promote constructive exchanges and dialogue when developing a stable partnership for the region.

As President Tsai Ing-wen stressed, although Taiwan has lost a diplomatic ally, our refusal to engage in diplomatic bidding wars will not change. Taiwan will not revert to the old path of confrontation. The Republic of China (Taiwan) exists and will not go away, and neither will its values and standing in the international community.

**DAVID LIN**  
Representative  
Taipei Representative Office in  
the UK  
*London*

**Dream titles**

The Books and arts section in the July 1st edition drew my attention to a puzzling trend in book publishing: the lengthening of book titles. Richard Reeves's 26-word monster—"Dream Hoarders: How the American Upper Middle Class Is Leaving Everyone Else in the Dust, Why That Is a Problem, and What to Do about It"—is illustrative rather than record-breaking.

Presumably this trend has something to do with selection algorithms, that electronic version of Darwinian theory. I offer to any commissioning editor my modest proposal: "Book Titles: The Long and the Short of It, why Subtitles Matter, and What Should be Done to Reverse the Trend".

**TUDOR RICKARDS**  
*Manchester* ■

# Executive Focus



## Calls for Expressions of Interest:

### European External Investment Plan Contract Agents

The European Commission has nine openings for contract agents to work for its new European External Investment Plan. The selection procedure is organised by DG DEVCO at its headquarters in Brussels.

As programme officers, you will participate in the implementation of the new tool for the EU's development and cooperation activities. Ideal candidates have a grounding in finance, development and economics with a global vision, international attitude and at least 5 years of relevant working experience. You will play a key role in the delivering of the team's projects, collaborating with international development partners in the implementation of the plan.

Candidates should be flexible, emotionally intelligent and be driven by the desire to work for the development of Africa and the EU Neighbourhood within the logic of the European Union and its institutions.

If this role matches your skills, experience and motivations then please submit your CV to [EuropeAid-VACANCIES-EIP@ec.europa.eu](mailto:EuropeAid-VACANCIES-EIP@ec.europa.eu) reference: EIP Task Force, before July 31<sup>st</sup>, 2017

For more information: [http://ec.europa.eu/europeaid/job-opportunities-international-cooperation-and-development\\_en](http://ec.europa.eu/europeaid/job-opportunities-international-cooperation-and-development_en)



The European Agency for Safety and Health at Work (EU-OSHA) is a decentralized Agency of the European Union, established in 1994 and based in Bilbao (Spain). Further information on EU-OSHA activities can be found on our website: <http://osha.europa.eu>.

EU-OSHA is inviting applications for the following position:

### HEAD OF UNIT RESOURCE AND SERVICE CENTRE (AD 10)

The Agency is looking for a candidate with a solid background in administration and resource management to fulfil a strategic role within the Agency. As a member of the Agency's management group, directly reporting to the Director, the jobholder will lead the Resource and Service Centre Unit, which provides essential support services for the operations of the Agency. These include: human resources, finance, budget, accounting, documentation and general services.

As a 'knowledge' organisation, it is essential that EU-OSHA is able to recruit highly qualified staff and offer them a supportive, learning environment that allows them to realise their potential and make a visible contribution to the Agency's mission.

EU-OSHA offers a long-term contract (three-year renewable) with an attractive salary package based on the EU staff regulations system at AD 10 level.

EU-OSHA is an equal opportunity employer and strongly encourages applications from all candidates who fulfil the eligibility criteria and interested in the position.

*Full details can be found at*

<https://osha.europa.eu/en/about-eu-osha/careers>

Applications must be sent to [recruitment@osha.europa.eu](mailto:recruitment@osha.europa.eu) by no later than 04/09/2017 at 13h00 noon, Central European Time (CET).



**Indian School of Business**

### Faculty Positions in Family Business

#### The Indian School of Business

The Indian School of Business (ISB), is a not for profit, independent, research-driven, global business school with two campuses located in Hyderabad and Mohali, India. ISB is one of the youngest schools to have consistently been ranked among the top business schools globally by the Financial Times Global MBA rankings since 2008.

#### The Thomas Schmidheiny Centre for Family Enterprise

The Centre aims at providing thought leadership and developing best practices in family businesses in India and other parts of Asia. The Centre is generously funded by Dr Thomas Schmidheiny, Founder of Spectrum Value Management, Zurich and former Chairman of Holcim Group.

The Centre contributes to the body of knowledge in the growing field of family business through individual research and academic collaborations in the major themes of Governance, Professionalization and Strategy.

#### Faculty Positions

ISB invites applications for full time practice and tenure-track faculty positions at all levels with major interest in family business, but with strong background in any functional area.

For more information, visit:

<http://www.isb.edu/faculty-research/faculty/faculty-recruitment>

ISB has a tenure system similar to the top schools in the United States and is an equal opportunity employer.

Interested candidates are requested to send their CV, sample publications and working papers as well as arrange for three reference letters to:

**Familybusiness\_recruiting@isb.edu with a copy to  
k\_ramachandran@isb.edu**

### Head, Office of Public-Private Partnership

The position reports to the President and has the following responsibilities:

- lead the planning, operation, and administration of the Office of Public-Private Partnership (OPPP) to expedite ADB's operations related to public-private partnership (PPP);
- oversee the quality of work and ensures the achievement of OPPP's objectives;
- supervise and lead external and internal relations, stakeholders' coordination, and knowledge management activities;
- manage PPP-related issues and challenges with innovative solutions;
- anticipate OPPP's resource requirements and efficiently allocates budget, human and other resources; and
- lead OPPP in the development, structuring, and delivery of PPP projects in various sectors and countries.

#### We seek candidates who have:

- master's degree, or equivalent in relevant fields;
- at least 15 years of relevant experience in developing and/or financing infrastructure projects including PPP transactions;
- experience in structuring project finance transactions and/or providing transaction advisory services in various sectors and countries with actual negotiation and coordination among stakeholders;
- in-depth knowledge of PPP and financial market products;
- substantial due diligence capability for PPP projects;
- network with financial communities and PPP stakeholders; and
- superior management and leadership qualities.

To apply, visit [www.adb.org/careers/170567](http://www.adb.org/careers/170567).  
Deadline for applications is on 28 July 2017.

We encourage diversity in our workplace and support an inclusive and respectful work environment. Women are especially encouraged to apply.

**ASIAN DEVELOPMENT BANK**





## Machine learning

BANGALORE AND THE SAN FRANCISCO BAY AREA

### Education technology is changing what happens when a child goes to school

**F**OR a ten-year-old, Amartya is a thoughtful chap. One Monday morning at the Khan Lab School (kls) in Mountain View, California, he explains that his maths is “pretty strong” but he needs to work on his writing. Not to worry, though; Amartya has a plan. He will practise grammar online, book a slot with an English teacher and consult his mentor. Later he will email your correspondent to ask for help, too.

This is the sort of pluck kls produces. Its pupils do not have homework or report cards or spend all day in classrooms. They are not stratified by age; they share common spaces as they pursue individual goals and schedules, using software built by in-house developers to take tests and watch video lessons from the school’s sister organisation, Khan Academy, which makes online tutorials. Half the teachers act like tutors, helping with academic work. The rest mentor pupils in character traits such as curiosity and self-awareness.

The idea of using technology to revamp education is not new. In 1928, Sidney Pressey, a psychologist, invented a “teaching machine” which he imagined “freeing ...teacher and pupil from educational drudgery”. The automaton had a paper drum displaying multiple-choice questions. Pressing the right key moved the drum on,

yielding sweets for smarty-pants.

Despite its sugar-coated bait, Pressey’s teaching machine went the way of most such technology. It did not live up to the hype. Since then a succession of inventions promising to overhaul schools has done no such thing. Information technology has reshaped other sectors; it has had little impact on education.

This has not been for want of hardware. In 1984, the year the first Macintosh was launched, American schools averaged one computer for every 125 pupils. By 2012 there were five for every nine. But this big bang in access to IT had “little or no positive effect” on outcomes such as test scores, according to an analysis of trials from around the world published last year by George Bulman and Robert Fairlie of the University of California. In 2015 the OECD found no link between what countries spend on IT in schools and their 15-year-olds’ abilities in maths, science and reading.

Now, though, the stasis is finally starting to shift, for two reasons. The first is that “edtech” is increasingly able to interact with students in sophisticated ways. Recent studies show that software which imitates the responsive role of a tutor rather than just cranking out questions and answers can indeed accelerate children’s learning. The second reason is the experi-

ence of a growing number of schools, like kls, which are not just bolting edtech onto the existing way of doing things but using the new software to change how pupils and teachers spend their time. Both, it seems, get more productive. For many decades educational innovators have happily anticipated the end of “factory model”, whereby children of the same age learn from the same teacher in broadly the same way, yet the model endures. Now, at least in some places, its days seem numbered.

Investors, both philanthropic and otherwise, are excited. Edtech is one of the priorities of the investment fund set up by Mark Zuckerberg and his wife, the Chan Zuckerberg Initiative (czi). He wants most American schools to adopt the new sorts of education it promises within a decade—and then help spread it worldwide. The combined value of the North American and European edtech markets (including further and higher education as well as schools) is set to grow from \$75bn in 2014 to \$120bn in 2019, according to Technavio, a research firm.

Research in two fields is shaping the new technology. Artificial intelligence (AI) is letting machines learn about the pupils using them by studying the data produced in the process. And research drawing on psychology, cognitive science and other disciplines is providing practical insight into the “science of learning”.

The late American psychologist Benjamin Bloom convinced many educationalists that overcoming the failings of the factory model required making group instruction more like personal tuition—which his studies showed to be the most effective form of teaching. “Adaptive learn- ►

▶ing" software, first developed by computer scientists in the 1970s, aspires to mimic tuition's one-on-one strengths. Such programs use pupils' answers to inform their choice of subsequent questions, adjusting the difficulty as they go along.

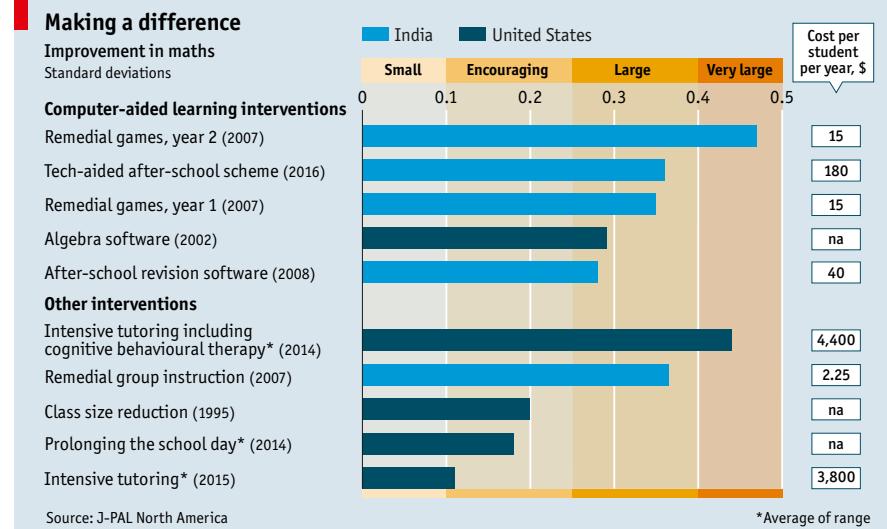
Machine learning, a branch of AI that allows computers to pick up on patterns they were not explicitly programmed to perceive, lends itself well to this approach. But it is not essential. Mindspark, developed by Educational Initiatives, an Indian company, simply draws on a bank of 45,000 questions and the 2m answers generated every day. Its developers have anticipated common mistakes, using more than a decade's worth of pupil data and written code to diagnose the errors. For example, children often say that 3.27 is greater than 3.3, or 4.56 is greater than 4.9; the reason is that they are seeing the "27" and the "56" after the decimal points as being larger than the "3" and the "9", an error known as "whole number thinking". Mindspark will pick up on this pattern of error and recommend specific remedial exercises.

Newer programmes being developed around the world use machine learning to find pupil-specific patterns of error and strength. Leading American brands include ALEKS, Knewton and DreamBox Learning. Siyavula Practice, a South African product, is used by more than 32,000 pupils in 388 schools to teach maths and science. Geekie has been used by 415,000 pupils in São Paulo's public schools, and by many more at home. Byju's, another Indian education company, received \$50m in an investment round led by CZI in 2016. In China 17zuoye ("homework together") uses voice-recognition software to help students learn English. If a child says "seven potato", or "nine apple", 17zuoye will offer help with plural nouns.

Rapid progress in speech recognition and generation may take such ideas further. Researchers at the Articulab at Carnegie Mellon University have used voice-recognition technology to develop Alex, a "virtual peer", who talks to children in a vernacular that makes them feel more comfortable in class. Their findings suggest that some black children learn science quicker when they interact with a virtual peer using African-American vernacular than one speaking with a standard dialect.

Some of these companies pay close attention to the science of learning. Siyavula's algorithms adjust its questioning so that users get the right answer about 70% of the time. That is roughly the success rate, it says, that neither bores nor deflates learners. ALEKS, meanwhile, eschews multiple-choice questions. Instead it requires users to type responses—a more taxing method. Both products periodically return to topics; studies suggest "interleaved" practice helps facts stick.

A forthcoming paper by Philip Oreopoulos and Andre Nickow for J-PAL, a group at MIT which looks for evidence about what actually works when it comes to alleviating poverty, reviews dozens of randomised controlled trials involving edtech. In nearly all the 41 studies which compared pupils using adaptive software with peers who were taught by conventional means the software-assisted branch got higher scores. In most studies, language scores were higher, too. "There are not many other interventions with credible evidence showing these kinds of effects," says Mr Oreopoulos (see chart).



poulos and Andre Nickow for J-PAL, a group at MIT which looks for evidence about what actually works when it comes to alleviating poverty, reviews dozens of randomised controlled trials involving edtech. In nearly all the 41 studies which compared pupils using adaptive software with peers who were taught by conventional means the software-assisted branch got higher scores. In most studies, language scores were higher, too. "There are not many other interventions with credible evidence showing these kinds of effects," says Mr Oreopoulos (see chart).

One study in the J-PAL review is a paper by Karthik Muralidharan, Alejandro Ganimian and Abhijeet Singh, which looks at an Indian after-school scheme where children used Mindspark for 4.5 months. They found that the progress made in language and maths by those pupils was greater than in almost any study of education in poor countries—and for a fraction of the cost of attending a government-run school.

In part this is a function of a low baseline. Indian curriculums are far too ambitious, artefacts of an era when schools were the preserve of the elite, and at any given time a quarter of the teachers will be absent. About half of India's ten-year-olds cannot read a paragraph meant for seven-year-olds. One particularly encouraging aspect of the study was that it seemed to show those least-well-served by the current dispensation benefiting most—the poorest performers saw larger improvements than those who had previously been getting by.

Analysing published studies may not give a full picture of the field's progress: as in many areas of research, studies with ambiguous or negative results may never make it to publication. It is also much harder to judge the technology in softer subjects—fields where mimicing a tutor is undoubtedly harder. How to improve the argument of a history essay is not some-

thing edtech easily grasps, anymore than it could advise on the use of humour in a drama class. But it can still help teachers' assessments in these fields. No More Marking, a British company, shows teachers paired excerpts from pupils' essays and asks them to decide which is better; with enough such comparisons its "comparative judgment" algorithms can then rank the pupils. The method saves teachers' time and helps pupils, too. They are less likely to suffer because a teacher is hungry, or tired, by the time of the last essay.

### No dark sarcasm

It is also worth noting that the same system can show different effects in different trials. A study published in 2014 found that pupils using Teach to One: Math learned faster than the national average, according to a standardised test. But research that came out a year later could reach no conclusions as to its impact. A study of another system, DreamBox Learning software, found that its impact differed from school to school. When it was used for 60 to 90 minutes a week, as its producers intended, and their suggestions as to how to get the most out of it were followed, it had much better effects.

Seeing Teach to One: Math in action underlines how much change is needed to make it work—which may explain why it does less well in some studies than others. When pupils at the Ascend School in Oakland arrive for their daily hour and a half of maths, they look up at monitors resembling airport information screens which tell them what and how they will learn today. One child is to work on geometry in a group; another will take algebra questions on his laptop. Three teachers walk around the open space, checking on pupils' progress. At the end of the session pupils take a short test, which is used by developers at New Classrooms, the charity behind Teach to One, to set children's schedules for the next day. Wendy Baty, the school's head of

► maths, is an enthusiast; she says that pupils receive feedback that "even the best teacher could not provide to all of the class". Several pupils say they like that they can learn at their own pace. But others admit to finding the experience confusing.

Rather than working for a few hours in a conventional school, other reformers are opening their own. AltSchool is one of various comprehensive attempts to use edtech to provide a form of "personalised learning"—thus slotting it into a tradition that reaches back to Jean-Jacques Rousseau and Maria Montessori. Founded by Max Ventilla, a former Google engineer, it is backed by, among others, CZI and the Omidyar Network, set up by Pierre Omidyar, the eBay founder. At each of AltSchool's seven "lab schools" in California and New York, pupils consult two pieces of software on their tablets. The first is the "portrait": a record of a child's progress in academic subjects and social skills. (One measure is whether children can "respond with wonderment and awe".) The second is the "playlist", which is where pupils gain access to material and complete work.

Perhaps surprisingly, and reassuringly, for a school so dependent on software, screen time is limited to no more than 20-30% of the day. The emphasis on project work means pupils collaborate with each other. At the Yerba Buena AltSchool, in San Francisco, Hugo, 12, explains that he learns more from his peers here than at his old school. Teachers at AltSchool say they save time by not marking or planning lessons. Instead they analyse data on pupils' portraits and tutor them on individual problems. Hugo says "I feel like the teachers here really know me."

Giving children such attention is not cheap. Hugo's parents pay \$27,000 per year, more than twice the average spending per pupil in OECD countries. That does not mean that the software AltSchool is developing will be particularly expensive. But overall cost is definitely an issue. Many of the public schools trying to combine edtech and personalised learning are supported by philanthropic organisations such as the Gates Foundation. A study last year of early adopters by the Centre on Re-inventing Public Education at the University of Washington, also partly funded by the Gates Foundation, concluded that those schools' "long-term financial stability is still unclear".

Arguably the most influential attempt to find out whether high-tech personalised learning can both work and be afforded at scale is that of Summit Public Schools, a publicly funded network of 11 schools in California and Washington which serve mostly poor, often Latino students; 130 more "partner schools" across 27 states use Summit's software and get training from Summit staff. Its platform was built *pro bono* by Facebook engineers.

Andrew Goldin, Summit's chief of schools, argues that the Summit Learning Platform lets pupils learn more efficiently than they do when led through every lesson by a teacher: "Children don't need to be walked through every step." That gives them more time to spend on projects, which take up half of the school day, and to be mentored by teachers.

### Some information first

This sort of personalised learning has its critics. Putting students in charge of how fast they learn worries some cognitive scientists. "Our minds are not built to think," argues Benjamin Riley of Deans for Impact, a charity championing the science of learning. Thinking hard about things does not come naturally, and if schools make it easy to avoid thinking, some children will do so. Another criticism is that people need a ready store of facts if they are to develop many forms of creativity and critical thinking (an insight championed by one of the early giants of AI, Herbert Simon). As Daniel Willingham of the University of Virginia puts it: "knowledge is cumulative". In the always Googleable world of tablet and phone, it could be tempting for children not to fill that store, and for their teachers not to worry too much.

Giving children more control over their learning, Mr Goldin argues, motivates them; if pupils do not grasp the basics they cannot participate in projects. He also points to Summit's results. About two-thirds of pupils score as well or better in a nationwide maths test than demography would predict. In 2015, 93% of pupils who entered Summit went on to graduate, ten percentage points more than in compara-

ble neighbouring schools. Of those graduates 99% got to university.

Achievement First, a group of 34 schools on America's east coast which is famed for tough discipline, is testing a similar model. So too are schools in cities like Chicago, New York and Boston. More than 3,000 superintendents (the officials who run America's school districts), representing about one-third of pupils at public schools, have signed a pledge to "transition" to "personalised, digital learning".

How well the model will work when it spreads is unclear. In 2015, the RAND Corporation, a think-tank, published the most thorough study yet of schools using high-tech personalised learning. It compared test results of pupils at 62 such schools with those of similar pupils at ordinary schools. The former made greater progress, especially those who started near the bottom of the class.

The report is widely cited by advocates of personalised learning. Mr Zuckerberg uses it to claim that: "We know that personalised learning is way better." That is a stretch of yogic proportions. The results are from early adopters of the model, with highly motivated teachers. And the RAND researchers were not able to work out what it was schools were doing to gain their results. Without that understanding expanding the model will be tricky. A further RAND report, released on July 11th, reiterated these concerns.

Teachers may be more sceptical away from Silicon Valley. And parents may be more concerned about privacy. Machine-learning software has an incentive to accrue data; they make predictions more accurate. New platforms contain accounts of a child's abilities far more detailed than any report card.

Supporters and sceptics of the new model will continue to argue. But both sides are guilty of caricaturing the other. Techies can make it seem as if teachers in ordinary schools talk to every pupil in the exact same way. They do not; studies repeatedly show that teachers use "differentiated instruction" among pupils of different abilities, even if they cannot offer one-on-one attention.

But schools using personalised learning are not anarchic playgrounds. Pupils may have more power but they do not have complete control. "Unadulterated choice is not good," says Aylon Samouha of Transcend Education, a charity. "You need standards and structure."

If schools can combine personalisation and rigour it is hard to imagine pupils failing to benefit. Education software is not making teaching obsolete. If anything it is making the craft of teaching more important. That would be good news for the staffroom and the classroom. For as 12-year-old Hugo observes, "too many teachers are just trying to get to the end of the day." ■





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## South-East Asia

## More money, less freedom

MAE SOT

### The region's future looks prosperous but illiberal

**T**HE young woman with the microphone cajoles, hectors and wheedles customers with the breathless enthusiasm of a livestock auctioneer at a county fair. She is standing behind a table stacked high with blue jeans; most of the milling crowd is dressed in *lungyis*, Myanmar's skirt-like national dress. The fancy mall around them is anchored by a huge department store, dotted with banks and mobile-phone stalls and topped by a cinema and video arcade.

Myanmar has been growing so fast—by an average of 7.5% a year for the past five years—that the boom is reverberating in Mae Sot, just across the border in Thailand. Two years ago, says a longtime resident, the site of the mall was a swamp, and Mae Sot was a poky little border town with two small grocery stores. Today huge supermarkets, car dealers, electronics outlets and farm-equipment showrooms line the wide new road from the border into town, patronised by a steady stream of Burmese shoppers. Skeletons of future apartment blocks loom; the Thai government is building a new international airport. The Asian Development Bank (ADB) forecasts that Myanmar's growth will hit 8% next year.

The region is full of such stories. Cambodia, Laos, the Philippines and Vietnam have been growing only slightly more

slowly. Overall, the ten countries of the Association of South-East Asian Nations (ASEAN) grew at an annual rate of 5% over the past five years: not quite as fast as China or India, but much faster than Europe, Japan or America. The region's 625m-odd people are growing richer and better educated; they will live longer, healthier and more prosperous lives than their parents. Of course, plenty of poverty remains—most people in Myanmar are still subsistence farmers—but the region's economic trends are promising.

### Back from the red

It was not always obvious that the South-East Asian economies would do so well. Only a generation ago Myanmar was cut off from the world by despotic generals; Cambodia's 25-year-old civil war was still sputtering; and Vietnam was only just beginning to experiment with some timid market reforms. The wealthier countries in the region, meanwhile, had seen their economies, and the underlying models of growth, shattered by the Asian financial crisis of 1997.

The crisis proved salutary. Indonesia, the Philippines and Thailand all adopted sounder macroeconomic policies and made some effort to curb the cronyism that had accompanied earlier growth. Nomi-

nally communist Laos and Vietnam and autarkic Myanmar all embraced free markets, up to a point. The days of nationalisation and central planning seem to be over. In much of the region inefficient and coddled state-owned businesses endure, and rent-seeking, corruption and protectionism are all more common than they should be. But across South-East Asia, liberal economics has won the argument.

Politically, however, the region is moving in the opposite direction. The Asian crisis may have brought huge economic hardship, but it did at least unseat Suharto, Indonesia's strongman of 32 years, and instigate political reforms elsewhere. In the years that followed, imperfect democracies in Malaysia, the Philippines and Thailand appeared to be gaining strength. And Myanmar, after years of isolation and repression, embarked on an unexpected transition to democracy.

But hoped-for openings never came in Laos and Vietnam, where the Communist Party has always been nakedly repressive. Singapore remains an illiberal, albeit effective, technocracy. The leaders of Malaysia and Cambodia, Najib Razak and Hun Sen, have proved depressingly adept at locking up critics and persecuting opponents. Cambodia's most prominent opposition politician, Sam Rainsy, lives in exile to avoid imprisonment for a spurious conviction for defamation. Opposition figures in Malaysia find themselves in court on charges as varied as corruption and sodomy.

The junta that seized power in Thailand three years ago promises an election next year. Even in the unlikely event that it is free and fair, the constitution—which the army wrote and the new king signed in May—creates a junta-led Senate, imposes ➤

► the generals' 20-year plan on the country and provides ample grounds to remove any elected leader whom the army finds lacking. All this is designed to prevent voters from electing the "wrong" leaders, in the army's view, as they have done at every opportunity over the past 15 years.

Democratic institutions are not yet quite that weak in the region's two biggest countries, Indonesia and the Philippines, but in both liberals have more cause for fear than hope. Filipino voters, justifiably frustrated by the way that a few prominent families dominate politics, and by how recent economic growth has failed to reduce the high poverty rate, elected Rodrigo Duterte as president last year. Alone among the five candidates, he seemed to care about ordinary people; his brutal anti-drug campaign has appalled foreigners but is popular at home.

Mr Duterte reminisces fondly about the dictatorship of Ferdinand Marcos and seems to crave dictatorial power himself. He has declared martial law on the southern island of Mindanao (see Banyan), and often muses about doing the same nationally. He veers between indifference and hostility to troublesome principles such as due process, the separation of powers and the rule of law—all of which need shoring up, not weakening.

An election for governor of Jakarta in April, meanwhile, has harmed Indonesia's reputation for religious tolerance (see next story). Islamist agitators campaigned against the Christian incumbent, Basuki Tjahaja Purnama, falsely claiming that he had insulted the Koran. Anies Baswedan, one of his rivals, embraced their shameless attempt to stir up sectarian tension, and won. Prabowo Subianto, a tub-thumping nationalist who lost the presidential election in 2014, backed Mr Baswedan. The fear is that Mr Prabowo, inspired by Mr Baswedan's success, will try to foster similar divisions at the national level.

But it is Myanmar that most encapsulates the region's democratic reversal. When the army ceded power last year to Aung San Suu Kyi, its Nobel-prize-winning opponent of 30 years, expectations were astronomically high, even though the constitution the generals had written severely limited her powers. That has made her government's craven and repressive acts all the more bewildering. It has charged more reporters with defamation than did her military-backed predecessor. She has been shamefully silent about the continuing persecution of the Rohingya, a Muslim minority, not even admitting, let alone trying to stop, the army's well-documented campaign of rape, murder and destruction against Rohingya villages. It does not help that since Donald Trump became president, America, long the loudest champion of liberal values in the region, has more or less let the subject drop. ■



### Religion in Indonesia

## Borneo again

NGABANG, WEST KALIMANTAN

### Islamist vigilantes open a new front in their war on tolerance

CORNELIS, the 63-year-old governor of West Kalimantan, a province in Indonesian Borneo, is relaxing in jeans and a stained white vest at a table piled with krupuk crackers and other local snacks. Portraits of the governor and his wife posing with prize-winning vegetables (both are keen gardeners) decorate the walls of the family home in Ngabang, a town in the hills four hours' drive from Pontianak, the provincial capital. But so do crucifixes and Christian figurines—and it is Mr Cornelis's religion, more than anything else, that has made him the latest lightning rod for the Islamic Defenders Front (FPI), an Islamist vigilante group.

Around 90% of Indonesia's 260m people are Muslim, but beyond the island of Java the population is much more mixed. Minorities watched with dismay as FPI and other Islamist groups turned on Basuki Tjahaja Purnama, the Christian and ethnic-Chinese governor of Jakarta, Indonesia's capital, over cooked-up claims that he had insulted the Koran. Mr Basuki, known as Ahok, was defeated by a Muslim candidate in an election in April. Soon after a court sentenced him to prison for two years for blasphemy.

The government saw all this as an assault on Indonesia's national motto—"Unity in diversity"—and on the five principles (known as *pancasila*) underpinning the constitution, which protects five officially recognised religions (Islam, Christianity, Hinduism, Buddhism and Confucianism). Joko Widodo, known as Jokowi, Indonesia's mild-mannered president, has said

that he will "crush" groups that imperil *pancasila*. On July 10th he signed a decree allowing the government to ban organisations with goals at odds with the constitution. On July 19th he duly banned Hizbut Tahrir, an outfit that campaigns for an Islamic caliphate. Rizieq Shihab, FPI's leader, is lingering in Saudi Arabia after prosecutors charged him over sexually explicit messages that he is alleged to have exchanged with a woman on WhatsApp. (The law in question was passed at the insistence of religious parties in 2008.)

In West Kalimantan, however, the Islamists are on the march. They want to make sure that Mr Cornelis, who must step down next year having served the maximum two terms, is succeeded by a Muslim. Sixty percent of West Kalimantan's 4.4m people are Muslim, but Mr Cornelis is one of 1.5m Christians, most of them from the Dayak ethnic group.

Mr Shihab has denounced Mr Cornelis as a *kafir*, or infidel. Mr Cornelis, asked what he thinks of FPI, stubs out a clove cigarette in an overflowing ashtray and says, "They are not welcome here. If they dare to come, we will butcher them." Such talk is especially alarming in Kalimantan, where thousands were killed in fighting (pictured) between Dayaks and Muslim migrants from the island of Madura between 1996 and 2001. Attackers beheaded their enemies and even ate their organs in ghastly rituals. Back then, the Dayaks allied themselves with the Malays, a Muslim ethnic group, suggesting that the conflict was not about religion. But these days the di-

▶ viding line seems to be primarily between Christians and Muslims.

Speaking at a traditional Dayak longhouse in the centre of Pontianak, not far from a shiny new “mega mall” that houses Starbucks, Wagamama and other Western chains, Kristianus Atok says that the campaign against Ahok shocked local people. “If we don’t stand together the Dayaks will be marginalised,” he concludes. As a member of a Dayak cultural organisation, Mr Atok travels regularly to remote corners of Borneo. Before the campaign against Ahok, relations between the communities had been good, he says. But lately there has been less mixing between them and people are frightened once again: “Everything is broken.”

It is not just Dayaks who are anxious. Subro, a Madurese member of Nahdlatul Ulama, a huge and moderate Muslim civic group, fled pogroms elsewhere in West Kalimantan in 1999. He now lives with his family on the edge of Pontianak, in an area where many displaced Madurese were resettled. Defaced posters of Mr Shihab line

the bumpy road that leads to his home. “As Madurese, we are worried because there were bad days before,” he says.

In January an Islamist preacher from Jakarta, Tengku Zulkarnain, attempted to address a rally in Sintang, deep in West Kalimantan’s forests, but angry Dayak tribesmen brandishing swords chased him off. Local Muslim groups took offence. They organised a protest in Pontianak in May on the same day as an annual Dayak festival. Happily, the police managed to keep the rival groups apart.

Agus Setiadji is the 33-year-old leader of the United Malay People, one of the main groups behind the protest in Pontianak. He wears a traditional head-kerchief and a black t-shirt displaying two daggers above the slogan, “We are proud to be Malay”. Mr Setiadji complains that the Malays have been sidelined by Mr Cornelis. Government jobs and funds have gone only to the Dayaks, he says. Mr Setiadji predicts that if conflict comes, it will be worse than anything West Kalimantan has seen before: “We are ready for war.” ■

attests to the perception: people speak of using “back” (backing, or connections) to get jobs; when Ms Jung refused to return to South Korea to face charges related to her university admission, the local press dubbed it a “gold-spoon escape”. And 34% of young people say they feel “isolation due to academic cliques” at work.

The unfairness is all the more galling because of the fierce competition for jobs. This year there were 36 applicants for every job, up from 32 two years ago. Youth unemployment reached a record 12% earlier this year.

Frustrated young people are starting to speak out. The activists of a group called Hidden Bag run a small yearly campaign to “reject university entrance”, trying to persuade people to boycott the whole process. At a recent film festival in Seoul, Hidden Bag provided “healing kits” for young people wishing to challenge “never-ending competition” and “education-based limits”. Colourful sweets, packaged to look like medicine, were handed out to students to encourage them to take a stand. Some were labelled “courage”, others “strength”. By spurning the rat race, they hope to raise “fundamental questions” about prevailing values. Fewer than 70% of school leavers went on to university last year, the lowest level in almost 20 years.

Moon Jae-in, the president since May, has pledged that under his administration “the thickness of a parent’s purse” will not determine their children’s prospects. This week an MP from his party introduced legislation to extend the “blind hiring” process used in the civil service, whereby applicants are judged only on standardised exams, not on their academic record, to state-owned firms as well. The bill’s author is also proposing an amendment based on another oddity of Ms Jung’s admission: she scored badly in her written exam, but was given full marks for the interview. The amendment would require all university interviews to be recorded or minuted for transparency. Blame Ms Jung’s parents. ■

## Inequality in South Korea

# Degrees of disenchantment

SEOUL

**Young people are losing faith in an elitist education system**

“**I** F YOU don’t have the ability then I blame your parents,” wrote Jung Yoo-ra on social media in 2014, after being accepted into a prestigious university. Her mother, it turns out, had gone to great lengths to secure a spot for her, inducing Ehwa Women’s University to alter its admissions policy in a manner tailor-made for Ms Jung. Last month a court ruled that the nine people involved in this subterfuge had fundamentally shaken the “values of fairness that prop up our society”. Above all, the “feelings of emptiness and betrayal they caused in hardworking students” could not be excused.

University was once seen as a source of social mobility in South Korea. But so important is the right degree to a student’s prospects in life that rich families began spending heavily on coaching to improve their children’s chances, leaving poorer families behind. By 2007 over three-quarters of students were receiving some form of private tuition, spawning a maxim about the three necessities to win a place at a good university: “father’s wealth, mother’s information, child’s stamina”. A report by the ministry of education found that in 2016 households with monthly incomes of 7m won (\$6,230) or more were spending 443,000 won a month on private educa-

tion, nine times as much as families bringing in 1m won or less.

Many South Koreans believe that the rich and influential do not just spend more on education, they also manipulate the system, as Ms Jung’s mother, a close friend of the previous president, did so spectacularly. According to the Pew Research Centre, a think-tank, only a fifth of those aged 18-33 believe that working hard brings success. An ever-growing dictionary of slang



Universal values

# Banyan | Mosul in Mindanao

**Defeating Islamist insurgents in battle is not the same as winning the war**



THE Philippine army has been fighting for two full months to take back control of the southern city of Marawi from a violent and determined coalition of jihadist groups. The battle for Marawi, a mainly Muslim city of 200,000 with a lush lakeside setting and a proud sense of its culture, erupted when the government got word that Isnilon Hapilon was hiding there. Mr Hapilon, a leader of a notorious kidnap-for-ransom gang, Abu Sayyaf, pledged allegiance to Islamic State (is) three years ago. In return, is declared him the "emir" of the Philippine province of its caliphate. When the armed forces went to arrest him, up to 700 fighters emerged out of nowhere and, in the name of is, seized the city. Ominously, foreign fighters and even veterans of Mosul are thought to be involved, including militants from Chechnya, Indonesia, Malaysia and Saudi Arabia.

The army has fought back hard, claiming to have killed 411 combatants. Its spokesman, Brigadier-General Restituto Padilla, now talks of "mopping up", with the remaining insurgents penned into an area of a square kilometre, encompassing the commercial district. But the militants do not scruple to use human shields—dozens of civilians have already died, and 300 are thought still to be trapped. That limits the army's room for manoeuvre.

The army, too, has taken losses: nearly 100 soldiers killed and over 850 wounded out of a force of about 3,000. In Marawi this week it was clear the battle was far from over, with new units arriving in the city and helicopter gunships flying in for an afternoon attack, the thump of their rotors briefly drowning out the rattle of machineguns and the snap of sniper fire.

The outcome is not in doubt. But President Rodrigo Duterte's recent predictions of a swift victory were far from the mark. Meanwhile, evacuees languish in their tens of thousands in dirty camps. A growing number realise they have no home to return to—much of the city has been flattened.

The Philippines has had its share of conflict, particularly in Mindanao, a poor and restive southern island that is home to most Filipino Muslims. But this is the heaviest urban fighting since the second world war. Marawi came as a shock. Whenever one or other of a welter of bandit groups declared an is affiliation, the authorities had tended to dismiss it as boastful self-branding.

The Maute group is a case in point. It is based in Lanao del Sur, the province of which Marawi is the capital. Even after it pledged allegiance to is in 2015, many mistook it for a low-grade family mafia, with links to Marawi's former mayor, Solitario Ali, whom Mr Duterte has denounced as a drug lord.

Yet both Omar Maute (said by the army to be dead) and his brother, Abdullah, had studied in the Middle East. They had links with jihadists in Indonesia. At home, they even recruited from among faculty and students at Mindanao State University in Marawi. The Maute group put up over half the fighters who seized Marawi, all the while advertising its role on social media. All this suggests unusual sophistication and strength.

Mr Hapilon is now thought to be injured and sheltering in Marawi's biggest mosque (which the army is reluctant to attack, fearing a propaganda disaster). Abdullah Maute still seems to be in Marawi too, while his parents have been caught trying to escape. Some hope this will prove to be the end of the Maute gang and of Mr Hapilon.

Perhaps. But their propaganda is already painting the city's destruction as the army's fault. The dead jihadists leave behind orphans to be fed a diet of revenge. The pestilent, overcrowded prisons of the Philippines and Indonesia will continue as prime recruiting grounds for extremism. Meanwhile, that the Mautes, Abu Sayyaf and two smaller groups were able together to seize a medium-sized city shows how is ideology can unite disparate groups to devastating effect. That is is nearing its end in the Middle East should not be misconstrued. The wilds of Mindanao offer a destination for retreating jihadists. For young South-East Asian extremists, says Sidney Jones of the Institute for Policy Analysis of Conflict in Jakarta, Marawi "has put the Philippines on the map".

## Mindanao's the time

And so Mr Duterte will not lack reasons to extend the 60-day imposition of martial law in Mindanao that is about to expire. He suggests keeping it till the end of the year, but some allies argue for five years, till the end of his term. More will become clear in his annual state of the nation address on July 24th. The army says martial law makes it easier to conduct house-to-house searches and seize weapons. It insists it has no wish to govern—suspects are handed over to civilian courts. But opposition politicians and civil-society groups say martial law undermines accountability in a region desperately short of it—and raises questions about the long-term intentions of Mr Duterte, an avowed authoritarian.

Martial law will surely complicate the broader "peace process" in Mindanao. In 1996 the government struck a deal with Muslim separatists to create an autonomous region in the Muslim-majority areas of the island; it broke down five years later. In 2014 a similar deal was struck with the Moro Islamic Liberation Front (MILF), the region's main insurgent group. As a measure of its commitment to peace, the MILF has been working to get humanitarian supplies to Marawi's residents and to broker the release of civilians still stuck in the battle zone.

Mr Duterte supports autonomy, but has muddied the process with vague proposals on federalism. Meanwhile, the MILF's inability to head off the fighting in Marawi, even though many of its members have relatives in the Maute group, has undermined its authority. Some of the MILF's younger members are said to be disaffected with its ageing leadership. When the battle for Marawi ends, the war for hearts and minds begins. ■



## The economy

## The debt rollercoaster

HONG KONG

### Reining in credit growth may not be as scary as some people fear

**C**OASTER through the Clouds" in Nanchang, a city in the southern province of Jiangxi, is China's tallest and fastest rollercoaster (see picture). It carries terrified customers up to heights of 78 metres and down again at speeds reaching 130kph. The ride towers above an amusement park built by Dalian Wanda, a Chinese property-and-entertainment conglomerate, which has aspired to outdo Disney's resort in Shanghai.

But this month the group said it was selling 13 such projects and 77 hotels to rival developers. It would use the proceeds, its owner said, to repay loans. Last month China's regulator asked banks to provide more details about their overseas loans to Wanda. Standard & Poor's said it would reassess the group's credit rating, noting that the abrupt sale of assets had raised questions about Wanda's strategy and finances.

Wanda is the most prominent of China's highly geared companies, of which there are many. Corporate liabilities, including those of state-owned enterprises, amounted to 166% of GDP at the end of 2016, according to a measure by the Bank for International Settlements (BIS). Add in rapidly growing household debt and the total was over 210%, unusually high for an emerging economy.

Some of the increase in credit may be a welcome result of better access to it. Economists expect credit to grow as a share of GDP as a country develops, but when loan-making quickens, opening up a gap be-

tween the prior trend and actual levels, they begin to get scared (see chart). A credit gap above 10% of GDP has presaged financial distress in the past, says the BIS. Last year it reported that China's gap had reached about 30% of GDP, the highest in the world. Credit was lost in the clouds.

Since then the authorities have shown greater determination to curb financial risks. The People's Bank of China, the country's central bank, allowed the interest rate at which banks lend to each other to rise. And China's financial regulators have carried out "supervisory tightening", says Tao Wang of UBS, a bank—fleshing out existing rules and enforcing them more tightly. On July 14th and 15th China's regulators, including the central bank, came together for a five-yearly "financial work conference".

### White-knuckle territory

China, private non-financial sector credit  
% of GDP



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They created a new cabinet-level committee to beef up their efforts. Just as importantly, Xi Jinping, China's president, gave a speech at the meeting that was tough enough on the topic of credit-tightening to send stocks tumbling the next day.

On a rollercoaster, riders climb upwards slowly, their suspense building, then plunge downwards quickly, their stomachs lagging a little behind. In its deleveraging efforts, China's government hopes to do the opposite. It has allowed the country's liabilities to mount quickly. Now it wants them to plateau or drop gently (relative to the size of China's economy), leaving stomachs unchurned.

Some think this will be impossible. China's growth is increasingly dependent on credit, they argue. Therefore if credit slows, China's growth must falter. But recent data suggest the relationship between credit and growth is far from mechanical. Although lending growth has slowed, China's nominal GDP growth has quickened: it grew by over 11% in the first half of 2017, compared with the same period a year earlier. In the second half of 2015 nominal growth was just 6.5%.

That combination of slowing credit, quickening growth and rising inflation has already had a notable effect on China's debt ratios. The official measure of broad credit (often called "total social financing") declined slightly, as a percentage of GDP, in the second quarter. And the frightening credit gap has narrowed dramatically. From its peak of around 30% of GDP last year, it has fallen to only 19% at the end of June 2017, by *The Economist's* reckoning.

Churls will point out that these credit totals leave out explicit government debt. China's ministry of finance has propped up growth through fiscal easing and replaced some bank lending with local-government bonds. But local-bond issuance has declined considerably in recent quar-

ters. And the debt burden will be much safer if it is carried by the government, which has the power to tax and print money, rather than by individual companies.

Sceptics will point out correctly that China's tightening is still new. It may be too soon to see its full impact on growth. But although the stock of credit has declined (as a percentage of GDP) only in the most recent quarter, the flow of credit has been shrinking year-on-year for longer, according to

the BIS measure. It is the expansion or contraction of this credit flow, not a rise or fall in the stock, that should affect GDP growth.

At the recent conference, Mr Xi urged lenders to serve the "real" economy rather than make speculative deals. That would help credit to contribute more directly to GDP. Rollercoasters rise and fall but usually end up back where they began. Credit, on the other hand, should be a vehicle of economic progress, not a circular thrill ride. ■

called Mr Sun "a genius among geniuses" (perhaps hastening his fate), has his supporters. Police recently arrested two people in the aviation industry who allegedly provided Mr Guo with information from Hainan Airlines about well-connected passengers. The carrier is owned by HNA, a conglomerate at the centre of Mr Guo's claims about Mr Wang's family. HNA is suing Mr Guo for defamation.

Mr Guo's assertions do not seem to have damaged Mr Wang. On July 17th a long article by Mr Wang in the party's flagship newspaper, *People's Daily*, denounced "insufficient efforts to strictly enforce party discipline." It does not sound as if his authority is weakening, though whether he will stay in office after a five-yearly party congress due this autumn is another matter. According to the party's unwritten rules he should retire (he is 69).

The bigger question is how long Mr Xi will stay on. By convention, he should step down as general secretary in 2022. His likely successor would be expected to emerge at the party congress. Getting rid of Mr Sun doubtless makes it easier for Mr Xi to pick whomever he chooses. But his power is now so great that it is getting harder to imagine anyone else in charge. Odds are growing that he will try to keep his job after 2022, or appoint a placeman and rule China from behind the scenes. He would hardly be the first leader to do that. ■

## Politics

# Sun's out

BEIJING

## A potential successor to Xi Jinping is purged

**I**N 2012 Bo Xilai, the Communist Party leader of Chongqing, a region in the south-west, was stripped of his post, expelled from the party and later jailed. Mr Bo's downfall cleared the way for Xi Jinping, his rival, to become the country's leader. On July 15th lightning struck again. Sun Zhengcai, who had succeeded Mr Bo in Chongqing following a brief interregnum, was sacked.

A cloud appeared over Mr Sun in February, when party investigators accused him of failing to clear Mr Bo's "toxic residue". Now Mr Sun is said to be under investigation for violating party rules. His offences are unclear, but he might become the first serving member of the ruling Politburo to be booted out of that body since Mr Bo. Mr Sun is the Politburo's youngest member and had been considered a possible successor to Mr Xi. Not since the 1980s has someone being groomed in this way been so unceremoniously purged.

Earlier expulsions from the Politburo (this would be the fourth in over two decades) resulted from eruptions of high-level infighting. Mr Sun's downfall appears to reflect something different: Mr Xi's methodical ascendancy. The president did not appoint Mr Sun, nor was Mr Sun close to him. But the new chief of Chongqing, Chen Min'er, is Mr Xi's man. The two worked together between 2002 and 2007 when the president was party boss in Zhejiang, a coastal province. Mr Chen's appointment is the culmination of a sweeping reshuffle that has seen Mr Xi appoint or promote almost all of China's 31 provincial party chiefs in the past 18 months.

There has been no overt opposition to Mr Xi's amassing of ever-greater power. Officials queue up to praise him, while critics are reduced to posting online pictures of Winnie-the-Pooh, whom the president supposedly resembles. Such images were duly banned by China's censors this week.

But disquiet about Mr Xi's grip has turned the unlikely figure of Guo Wengui, a Chinese billionaire who lives in exile in New York, into a person of political significance. In a series of tweets that are eagerly discussed in China (and indignantly dismissed by the state-run media), Mr Guo has thrown explosive and unproven accusations against the family of Mr Xi's closest ally, Wang Qishan, who is leading an anti-corruption campaign. Mr Guo, who also



Their virtues we write in water

**T**he Chinese government got rid of Liu Xiaobo in hugger-mugger. After arranging a short memorial service for the Nobel peace-prize laureate (family members and secret police only), it hastily took the group out to sea to deposit his ashes. Mr Liu's elder brother thanked the Communist Party for carrying out the family's wishes. But nothing was heard from his widow, Liu Xia (pictured on the boat). She remains under house arrest—guilty by association. In a letter to her from his deathbed, Mr Liu praised her "calmness that confronts suffering". Tributes to him could only be oblique. Tens of thousands shared online a Taiwanese pop song. Its first verse runs: "You disappeared from the far end of the sea.... I wanted to say something but didn't know where to start. I just bury you in the bottom of my heart." Despite no-holds-barred censorship of everything connected with Mr Liu, this eulogy slipped through the censors' net.



**Republicans and Obamacare**

## Can't live with or without it

WASHINGTON, DC

**Internal division does not hurt Republicans in elections. Governing is different**

**G**RAPPLING to comprehend Donald Trump's populist seizure of their party, some Republicans predicted it would re-emerge as a champion of working-class whites. Others expected Mr Trump to drop his proletarian shtick and help deliver the tax cuts they had always dreamed of. Republican senators' failure to repeal Obamacare, a long-promised part of that tax-cutting hope, suggests the party is no closer to working out who it represents, or what it is for. Republicans are in control of every lever of government in Washington, but so internally divided as to appear incapable of governing.

The attempt to repeal Barack Obama's health-care regime—which Republican congressmen had for seven years decried as an existential threat to America—reached the Senate after an earlier shambles in the House of Representatives. The House repeal bill was passed in May, at the second attempt, despite having been rejected by 20 Republican congressmen. It would have slashed Medicaid—government-provided medical insurance for the hard-up, which was expanded under Obamacare—and abolished a stipulation that everyone must have medical coverage. Senate Republicans promptly binned it; Conservatives said it left too much of Obamacare intact, while moderates objected

to the fact that it threatened to deprive 23m people of medical insurance over a decade. But Senate Republicans' own proposals, contained in two draft bills hatched, with telling secrecy, by Mitch McConnell, the Republican leader, were little better.

According to the Congressional Budget Office (CBO), the second iteration, which stalled on July 17th, would have resulted in 22m fewer insured within a decade. Both bills were wildly unpopular—only 17% approved of the second. They were opposed by both moderate Republicans, led by Susan Collins of Maine, and conservatives, led by Rand Paul of Kentucky. Given that Mr McConnell could afford to lose no more than two votes to maintain his party's majority, a vote on the bill was postponed after John McCain of Arizona, a two-time presidential candidate, was forced to undergo eye surgery for what later turned out to be brain cancer. The bill's fate was sealed when two more conservatives, Jerry Moran of Kansas and Mike Lee of Utah, came out against it nonetheless.

### Capito said kaput

There followed an effort, ordered by Mr Trump and dolefully launched by Mr McConnell, to repeal Obamacare without having an alternative in place. The CBO estimates that a straight repeal would result

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in 32m more uninsured by 2026, as well as leading to skyrocketing premiums. Average premiums for individuals bought on the exchanges Obamacare sets up would increase by 25% next year and then 50% by 2020, according to the CBO. Three moderate senators, Ms Collins, Shelley Moore Capito of West Virginia and Lisa Murkowski of Alaska, slammed the ruse. "I did not come to Washington to hurt people," Mrs Capito tweeted.

This debacle will have big consequences, not least for health care. Having seemingly failed to repeal Obamacare, moderate Republicans want Mr McConnell to find a bipartisan way to address its shortcomings, including shallow insurance markets and rising premiums for middle-class policy holders. Fury on the left with Mr McConnell's divisive tactics would not make that easy. Even so, a Republican senator claimed to know of ten Democratic senators ready to deal, and the fact that ten Democrats are up for re-election next year in states that voted for Mr Trump, including Indiana and West Virginia, makes that plausible.

Yet Mr McConnell, though not opposed to a bipartisan fix, may have more pressing concerns. He has always seemed less interested in health-care reform than in the filip scrapping Obamacare might provide for the wider conservative agenda—especially its cherished tax cuts, part-funded by the \$772bn Mr McConnell hoped to cut from Medicaid. With a series of unavoidable distractions looming—including budget negotiations and an impending fiscal crunch, which Congress must raise the debt ceiling to resolve—he may now prefer to drop health care and move on to tax. But that effort, in which he faces another intra-►

► party battle, between fiscal conservatives opposed to unfunded tax cuts and more profligate sorts, has also got harder. Mr McConnell's authority, which is largely based on his reputation for skilful deal-making, has been damaged.

Whatever he decides, support from Mr Trump, whose standing with his Republican colleagues is even more diminished, will be fickle. Having promised two years ago to replace Obamacare with "something terrific", Mr Trump appears to have made little progress in working out the details. Depending on who he was speaking to, the president has oscillated between praising his party's health-care plans and deriding them as "mean". After being subject to the president's periodic attempts to rally support for the various repeal bills, some perplexed lawmakers suggested Mr Trump did not seem to understand them. Nor, it appears, has Mr Trump mastered some basic details of how Congress works. In a recent tweet, he called on Mr McConnell to scrap the legislative filibuster in order to pass health-care and tax reform. Yet as the Republican leader was pursuing both through budget rules, which require only a simple majority, the filibuster was no obstacle to him.

Having fulminated against Obamacare for so long, Republicans in Congress should not have needed the president to tell them what to replace it with. At the same time, partisanship has made it so hard to pass bold legislation of any kind, even with an astute, well-briefed president providing impetus, it may be almost impossible without this. Reassuringly for Mr McConnell and his counterpart in the House, Paul Ryan, Mr Trump is said to be taking a greater interest in their tax plans. Yet it is not clear he is capable of the kind of sustained effort and skilful deal-making passing them would require. The likeliest outcome remains a temporary personal income-tax cut and a reduction in corporate rates (though probably not to the 15% level the White House wants).

Naturally, Mr Trump, who recently claimed to have "passed more legislation" than any of his predecessors, though he has in fact signed not a single bill of note, does not acknowledge his failure. "I think we're probably in that position where we'll let Obamacare fail," he said. "We're not going to own it. I'm not going to own it. I can tell you the Republicans are not going to own it." In fact they do own it and, given the alternative plans Mr McConnell had in mind, that is probably a good thing for his party. With an approval rating of over 50%, Obamacare is considerably more popular than the Republicans. As they contemplate this latest trauma—the rejection by voters and collapse of a health-care reform that was for years their most fervent ambition—Republicans, omnipotent but unloved, need to reflect on why that is. ■

## Republican ideas

# Re-redistribute

WASHINGTON, DC

### The ideology behind the Republicans' health-care bill

**R**EPUBLICANS presented their efforts to overhaul the Affordable Care Act, which flopped this week, as a necessary response to a failing law. They frequently say the individual market, in which those who do not get health insurance through their employers can buy it for themselves, is collapsing. Premiums rose by an average of 22% in 2017. So many insurers have given up on the market that about a third of counties have only one left; 38 are at risk of having no insurer for 2018, according to the Kaiser Family Foundation, a think-tank. Yet the Republican bill is not a technocratic fix for these problems. Rather, it is an attempt to enforce conservative thinking on health care. And it is failing partly because of ideological faultlines in the party.

To see this, start with the fact that the bill makes the individual market weaker, not stronger. It abolishes the individual mandate—the requirement that everyone who can afford insurance must buy it—and makes subsidies for low- and middle-income buyers less generous. The Congressional Budget Office (CBO) forecast that the first version of the Senate's bill would have reduced enrolment in the individual market in 2018 by over a third—a more dramatic collapse than anything seen to date.

Next, consider the changes to the bill made by Senator Ted Cruz of Texas. His "Consumer Freedom Option" would allow insurers to sell almost completely de-

regulated plans, so long as they continue to offer some that followed Obamacare's rules. This is an attack on the redistribution inherent in the law. By forcing all plans to cover certain things—such as treatment for mental health—Obamacare ensures that those who fall victim to such conditions, or who already have them, pay the same for insurance as everybody else. Their medical costs are spread around.

Mr Cruz sees this as an unwarranted incursion into consumers' freedom of choice. His amendment would lead many healthy people to buy cheap plans covering little. If they then contracted a condition which their plan did not cover, they would have to wait six months before returning to the Obamacare exchange. Because the exchange would contain mostly sickly people, premiums would rocket. The plan is akin to allowing consumers to buy cheaper cars without seat belts, with the added side-effect of pushing the price of cars that keep them much higher.

Some redistribution would live on. Poor buyers would still have their premiums capped. And the bill stumps up \$182bn over a decade which states could use to subsidise the exchanges. But this vexes purists. Rand Paul, one of the four senators who is standing in the way of the bill's progress, describes it as a "giant insurance bail-out superfund".

The problem is that conservatives are divided over whether the government has any business at all in health-care markets. All agree that Obamacare's high premiums are a problem. They fall on a small number of buyers who earn too much to qualify for their subsidies. Many of them are self-employed and therefore part of a key Republican constituency. The 155m Americans who get insurance from their employers do not have to bear the same costs. But the question is: who should? The right of the party's answer is that the sick people must pay for themselves. Mr Paul says health care is a "market item" that should not be subsidised. But most Republican plans, like the Senate bill, steer some taxpayer cash towards the 20% of Americans who incur 82% of health costs.

Changes to redistribution in the individual market are somewhat hidden. But the bill's cuts to Medicaid, health insurance for the poor, are in plain sight. The CBO thinks they would leave 15m fewer people enrolled in Medicaid than would be under the current law by 2026. Republicans find these cuts hard to defend, often denying they exist. Susan Collins, another Republican rebel in the Senate, thinks they are too deep—the polar opposite of Mr Paul's objection. Most Americans worry about increased government spending but nevertheless think the government should ensure everyone has health insurance. Republicans are divided and confused over the extent to which they agree. ■



Oath keepers in the Senate



### Voting laws

## Kris Kobach's crusade

TOPEKA, KANSAS

**After a vehement backlash, the future of Donald Trump's election-fraud commission is uncertain**

“SPRECHEN Sie Deutsch?” asks Kris Kobach. Sitting at his office desk surrounded by family photos of his wife and five daughters, the Kansas secretary of state explains (in German) that he picked up the language when conducting research on the influence of referendums on Switzerland’s political system for a thesis at Britain’s Oxford University in the late 1980s. Mr Kobach became interested in electoral law during his Swiss research, an interest which subsequently developed into a fixation with voter fraud. He is also, after successfully lobbying Kansas’s governor to change the rules, the only secretary of state in the land with the power to prosecute people for it.

Mr Kobach’s other favourite topic is illegal immigration, which he became interested in at Yale Law School. An avid debater, he joined a panel on California’s Proposition 187, a ballot initiative passed in 1994 denying government services to illegal immigrants. Mr Kobach fervently defended Prop 187, caring little that it was an unpopular stance at the elite Ivy League school. “He came across as a cultural warrior,” says Jed Shugerman at Fordham Law School, who was among the standing-room only audience of around 300. Mr Kobach’s rhetoric, says Mr Shugerman, was much more nativist and anti-immigrant than was the norm among most conservatives at the time.

Today Mr Kobach has a national platform for his two fixations, which come to-

gether in an effort to detect voter fraud by non-citizens (or aliens, as he refers to them). He is vice-chair of the advisory commission on election integrity, chaired by Mike Pence, the vice-president, and established by President Donald Trump through an executive order in May. It met officially for the first time on July 19th.

During the election campaign, Mr Trump became a fervent proponent of the idea that America suffers from widespread voter fraud. He claimed that if he lost it would be because the election was tainted by millions of fraudulent votes, many of them cast by illegal immigrants (Mr Kobach advises the president on immigration policy too). After he won, Mr Trump did not let the idea go, declaring that he would have won the popular vote had 3m-5m votes not been cast illegally. The commission, set up to investigate what seems to be a non-problem, has a budget of \$500,000.

### The usual suspects

Research reports collected for years by the Brennan Centre for Justice at the New York University School of Law show that voter fraud in general and by non-citizens in particular is extraordinarily rare. In his own state, Mr Kobach has prosecuted just nine cases of voter fraud of which only one was a foreigner, a Peruvian who was in the process of becoming an American citizen when he voted. (Mr Kobach says that he knows of another 128 cases in Kansas but he cannot go after them because of the stat-

ute of limitations.) “Why would an undocumented immigrant risk deportation and a fine by voting, especially as immigration officials regularly check electoral rolls?” asks Justin Levitt at Loyola Law School, author of one of the Brennan Centre reports.

To counter the consensus among political scientists that voter fraud is very rare, Mr Kobach and other believers in widespread fraud cite a paper by Jesse Richman and others at Virginia’s Old Dominion University, which shows up to 15% of non-citizens surveyed voted at the presidential election in 2008. The controversial study, published in 2014, relied on just 339 respondents. The authors of that report warned that, “it is impossible to tell for certain whether the non-citizens who responded to the survey were representative of the broader population of non-citizens.” Mr Kobach hired Mr Richman to look at Kansas, where he used a grand total of 37 respondents to come up with the figure of more than 18,000 non-citizen voters.

Mr Trump’s commission on election integrity got off to a rocky start. On June 28th it sent out letters to all 50 states demanding data on their voters that are publicly available under the laws of the respective state, including names, dates of birth, political party, last four digits of their Social Security number, voter history from 2006, felony convictions and more. An outcry ensued, in Republican and Democratic states alike. “They can go jump in the Gulf of Mexico and Mississippi is a great state to launch from,” fumed Delbert Hosemann, the Republican secretary of state in Mississippi. Terry McAuliffe, the Democratic governor of Virginia, said he had no intention of honouring the commission’s request. Fourteen states, including California and Kentucky, flat-out refused to respond to the letter, says Mr Kobach. Another 16 said they are reviewing the letter, whereas 20 said they would comply by sending publicly available data.

The commission was also hit by three lawsuits, filed separately by the American Civil Liberties Union, the Lawyers’ Committee for Civil Rights Under Law and Public Citizen. They claim the purported mission of the commission is a sham, and that its true goal is to introduce stringent qualifications on voting that would mainly disenfranchise minority voters. The Electronic Privacy Information Centre filed a suit on July 3rd, claiming the commission’s request violates the E-Government Act of 2002, which obliges the government to assess the consequences of its actions publicly before seeking personal information stored electronically.

On July 13th the White House released 112 pages with over 30,000 public comments on the Trump-Pence commission, nearly all of them negative or sarcastic. “Hi, I voted in all 50 states. Just wanted you to know. Love, Beau in Oklahoma,” reads ➤

► one. "I am ashamed that my taxpayer dollars are being used for such purposes," says another. A Californian applauds his state's decision to refuse to comply with the commission's request: "your lack of integrity and refusal to acknowledge basic facts undermines our democracy."

The commission has temporarily halted its request for information. Mr Kobach says he now intends to try to persuade the states that refused to comply with his request. He says that he only asked for information that is publicly available, so states can leave blank whatever data is private in their jurisdiction. He admits that he should have made clear that the information will be destroyed once the commission finishes its work. He also insists that the much-maligned commission is in fact bipartisan. It is led by two Republicans and consists of seven Republicans (four of them prominent proponents of the voter-fraud story, such as Hans von Spakovsky, a lawyer) and five hitherto obscure Democrats.

Despite the setbacks, voting-rights activists remain deeply concerned about the commission. "It is still a dangerous vehicle for voter suppression," says Vanita Gupta, a former head of the Department of Justice's civil-rights division. In Colorado more than 3,000 voters worried about the data requests have already withdrawn their registration. Thousands more could drop off the electoral rolls. Mr Kobach hopes to nationalise his Interstate Voter Registration Crosscheck Programme, which brings 27 Republican states together in Kansas to compare voter rolls, says Ms Gupta. Such a matching programme appears to be a reasonable exercise, but a recent study by Stanford University found that Mr Kobach's programme had 200 false positives for every double voting-registration. Most of the false alarms were minorities because, according to census data, those with names such as Hernandez, Garcia or Kim are over-represented in the most common last names.

The fate of the commission will be important for Mr Kobach's political future, too. He is running for governor of Kansas next year, hoping to replace Sam Brownback, the staggeringly unpopular Republican governor who recently made headlines when his experiments with deep tax cuts were ended by lawmakers from his own party. "I am not Brownback's political heir," says Mr Kobach. He agrees with his tax cuts but he would have combined them with more cuts in spending. He is also more pro-gun than the governor, he says, and more hardline on immigration, promising to end sanctuary policies in Kansas. According to *Kansas Speaks*, a recent opinion survey by the Fort Hays State University, Mr Kobach has the highest name recognition of nine of the state's prominent politicians—but he also received the lowest rating. ■

## California

# Paris-on-sea

LOS ANGELES

### The Golden State pushes on with plans to reduce greenhouse-gas emissions

**V**OTING to extend California's cap-and-trade programme an extra decade to 2030 was a tough decision for Devon Mathis, a Republican assemblyman who represents a large swathe of the state's fertile Central Valley. Though once embraced by Ronald Reagan, George HW Bush and George W Bush, cap-and-trade schemes have come to be seen by Republicans as exemplifying government overreach. On the other hand, agricultural business owners in Mr Mathis's district flooded him with letters in support of cap-and-trade, which they thought would be better than the state's alternative plans for reducing CO<sub>2</sub> emissions. Mr Mathis was so torn about the choice he sought out his pastor to pray about it. On July 17th when the vote was held, he opted to support the extension.

Cap-and-trade programmes work by setting a limit (or cap) on how much CO<sub>2</sub> individual companies can emit. Businesses that pollute less than the cap can sell (or trade) their excess allowance to those that pollute more. The roots of California's scheme, which is the world's third largest after the European Union's and South Korea's, go back to 2006, when Assembly Bill 32 (AB 32) was passed. In that measure, legislators committed to cutting California's greenhouse-gas emissions to 1990 levels by 2020—a reduction of roughly 30%, to 431m metric tonnes of emissions. To meet that goal, the state's Air Resources Board (ARB)



LA's trading floor

pushed a number of initiatives that included a cap-and-trade programme, which it implemented in early 2013.

Since it is relatively new, distinguishing the impact of California's cap-and-trade programme from its other initiatives on greenhouse gases is difficult. California also has a Low Carbon Fuel Standard, which requires petroleum producers to reduce the share of CO<sub>2</sub> in their fuels, and an Advanced Clean Cars Programme, a package of regulations to reduce pollution from cars. The Environmental Defence Fund, a charity, estimated in 2011 that cap-and-trade would account for 20% of the pollution cuts required by AB 32.

Altogether, the state is making progress. State-wide emissions peaked in 2004 and have since declined by 10%. The ARB found that greenhouse-gas emissions fell by 1.5m metric tonnes between 2014 and 2015, which is equivalent to removing 300,000 vehicles from California's (often congested) roads for a year.

Last year the Democratic-dominated legislature set a more demanding emissions reduction target: 40% below 1990 levels by 2030. Cap-and-trade is seen as the key to reaching that, but before this week's vote its future was uncertain. Over the past four years the ARB has faced several lawsuits over cap-and-trade. Plaintiffs in the suits argue the system functions as a tax. Since it was not approved by two-thirds of the state legislature—the legal threshold for creating new taxes in California—they claim it is unconstitutional.

California's state government has so far prevailed in court. But to quash such disputes for good Jerry Brown, California's governor, needed to convince a supermajority of legislators (two-thirds) to extend cap-and-trade to 2030. In the run up to the vote, Mr Brown gave a typically Brownian speech to a state Senate committee: "What am I? 79? Do I have five years more?" he shouted. "This isn't for me. I'm gonna be dead. It's for you and it's damn real."

Mr Mathis was one of eight Republican state legislators to support the cap-and-trade extension, giving the measure its two-thirds majority. Such bipartisan collaborations are rare—especially on climate-change, over which the electorate is starkly divided. A survey published by Pew Research Centre in October 2016 suggested that only 18% of conservative Republicans believe climate scientists understand "very well" whether climate change is occurring, compared with 68% of liberal Democrats. While these divisions persist in the Golden State, there is broader support overall for climate policies, says Mark Baldassare, the president of the Public Policy Institute of California, a think-tank. When he polled Californians in July 2016, 81% of adults saw global warming as a "very" or "somewhat" serious threat to the state's economy and quality of life. ■

## Cities

# School for mayors

NEW YORK

## New York's former mayor funds a class for other hizzoners

**I**LITERALLY went home every night for the first three months and said, "Oh, my God, what have I gotten myself into?", Boston's mayor, Marty Walsh, recently told the *Boston Globe*. Jorge Elorza, Providence's mayor, remembers sitting in his office after he was sworn in and wondering "how do we begin?" Many mayors are skilled campaigners, but being in office requires a different set of qualities. Andy Burnham, Greater Manchester's mayor and one of the attendees, was in post just 14 days when his city endured a terrorist attack. American companies spend around \$55bn a year in leadership development, but there is little, if any, training for public-sector chief executives.

Michael Bloomberg, New York's former mayor, hopes to change that. Thanks to a \$32m gift his charity, Bloomberg Philanthropies, along with Harvard's Business and Kennedy Schools, has created a year-long programme designed for serving mayors. The inaugural cohort began studying on July 17th. Forty mayors, 30 of them from American cities, including the mayors of Philadelphia, Baltimore, Phoenix and Mobile, spent three days back at school in New York.

This being Harvard, the mayors looked at case studies, on subjects from a sandwich-shop keeper in Amsterdam who was struggling to navigate his city's bureaucracy, to the use of data in a blight-stricken city in Massachusetts. John Giles, mayor of Mesa, Arizona, took pages and pages of notes. The school for mayors is not about promoting any particular policy, though some of Mr Bloomberg's grander accomplishments, such as the new Cornell Tech's applied sciences campus, and the High Line, an elevated park which helped spark development in a neglected part of the city, were presented as examples. Instead, the programme is more about how to think like a CEO. In Providence, says Mr Elorza, the pervading culture used to be that you had to know a guy to get things done. He streamlined permitting, reducing the number of application forms from 44 to nine. He copied from other cities, installing a 311 system, a municipal customer-service line like the one in New York, and appointed an innovation officer, as Pittsburgh has, to try to change the government's culture.

Government does not need to be run like a business, but the curriculum developers thought that mayors could benefit from expertise supplied by academics and

## Presidential appointments

# The missing government

## Presidential lethargy, not Democratic obstinacy, is to blame

IT IS almost as if Republicans did not control both Congress and the White House. President Donald Trump has struggled to carry out one of his basic duties, which is to fill government posts. The president blames supposedly obstinate Senate Democrats, against whom he regularly rages on Twitter. "Dems are taking forever to approve my people, including Ambassadors. They are nothing but OBSTRUCTIONISTS! Want approvals", he fumed on June 5th. "They can't win so all they do is slow down & obstruct!", he added on July 11th.

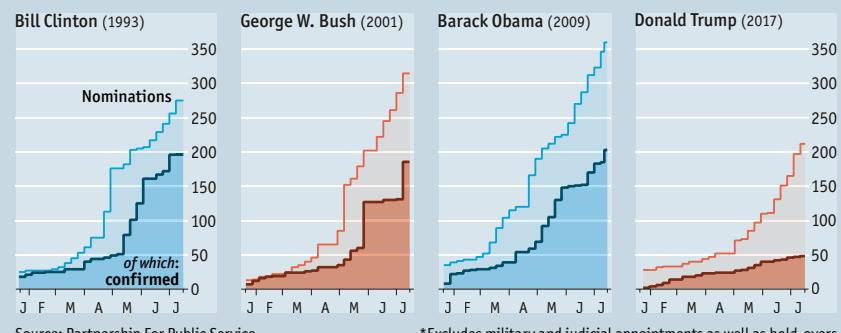
Mr Trump's administration has yet to get around to nominating many of the officials who run the federal government. Up until July 15th, Mr Trump had put 210 names to the Senate for consideration, according to numbers provided by the Partnership for Public Service, a non-partisan group that tracks bureaucratic hiring. The data do not count military or judicial appointments. At the same point in their presidencies, Barack Obama had put forward 369 names, George W. Bush had 315 and Bill Clinton had 275.

It is true that the Senate has taken, on average, 45 days to confirm one of Mr Trump's nominees compared with 37 days to confirm one of Mr Obama's. That difference does not account for the vast discrepancy in confirmations—49 for Mr Trump compared with 203 for Mr Obama by July 2009. Part of the problem is that the majority of Mr Trump's nominees were submitted in the past two months—while the Senate was consumed with a health-care bill to replace Obamacare.

Transitions of power are messy: a new administration must pick 4,000 new political appointees, nearly 1,200 of whom must be confirmed by the Senate. Neglecting to do so leaves hollowed-out agencies without critical staff. At the State Department only two of 26 senior posts have been filled. Twenty-two of the 24 unfilled posts, like under-secretary for arms control, do not yet have a nominee. Important ambassadorial postings, like in Saudi Arabia and South Korea, are unfilled. Things are only a little better at the Department of Defence, where just five of 18 senior posts have been filled.

## Step up

United States, presidential nominations submitted to Senate in first six months of term\*



by actual managers. Running a city is harder than running a company, says Mr Bloomberg: the media spotlight is glaring, pressure from unionised workforces can make it hard to cut even bad programmes and regulation can throttle innovation.

The sessions, staged in a Harvard classroom-like setting, with tiered desks in a u-shape, were closed to the press. But during breaks the mayors asked each other for their takes on issues like drug legalisation. Some Democratic mayors in Republican states admitted the battle to curb guns was lost. Others talked about growing inequality in their cities. Mayors from all over the world complained about the uselessness

of the federal government.

Mr Bloomberg reckons there is a sense of urgency in cities over the lack of leadership coming from the federal and state governments. Meanwhile, mayors are finding that their responsibilities extend beyond policing and filling potholes. One mayor recalled a constituent coming to him for marital advice. Mayors are also having to face national and international problems that go beyond their formal authority, such as immigration and climate change. There are three major political parties in the United States, says Mr Elorza: Republicans, Democrats and mayors. And mayors do not have time for ideological disputes. ■

# Lexington | Gerrymander v Terminator

**Arnold Schwarzenegger lends some muscle to a campaign for more competitive politics**



**S**HORTLY after winning election as governor of California in 2003, Arnold Schwarzenegger watched leaders from the state legislature stage a spittle-flecked, chair-toppling fight in his office. “I don’t know if the drama was meant for me because I was new,” he recalls in an interview, miming open-mouthed astonishment. A bigger shock came hours later. Two of the combatants, one a Republican, the other a Democrat, telephoned him from a bar. Sure, we fight about things in the daytime, the pair told the governor, a Republican who won as an action-man outsider in a Democratic state. But with night falling the party bosses wanted Mr Schwarzenegger to know their shared view of his proposal to have electoral districts drawn by an independent panel, rather than by politicians. A “horrible” idea that would cost incumbent members their seats, they growled. “Just kill this,” he remembers hearing.

It took Mr Schwarzenegger and allies several attempts to outwit California’s political establishment, but in 2008 and 2010 voters passed ballot propositions that handed the power to draw districts for the state legislature and for Congress to an independent body with no partisan majority, and including such folk as farmers and business-owners. In 2010 Californians also approved a “top-two primary” system, under which all voters—rather than party stalwarts—may pick candidates for state and federal districts, with the highest-scoring pair proceeding to the general election, even if they are from the same party. The explicit aim is to give candidates an incentive to woo broad coalitions that cross party lines, rather than merely fire up hard-core partisans.

Six years after leaving the governorship Mr Schwarzenegger could be forgiven for shunning politics. His offices in Santa Monica, a few blocks from the gym where he maintains his hewn-oak physique, would make a cosy retreat: there are film posters and body-building awards, framed photographs of him with Pope Francis and sundry presidents, works of art by Andy Warhol and others, and many movie props, including a life-sized crocodile beneath his pool table. He cut a lonely figure in the 2016 election, as an environmentally conscious, socially liberal, pro-immigration Republican. He backed Governor John Kasich of Ohio, the lone moderate in the Republican presidential primary. He has publicly chided President Donald Trump over climate change.

Instead of hiding, Mr Schwarzenegger is in the thick of a na-

tionwide campaign against gerrymandering—when parties draw electoral districts to give their side an unfair advantage. The cause has momentum behind it. There are campaigns to put redistricting reform on the ballot in Michigan, Missouri and Ohio, and lawsuits are in progress from North Carolina to Maryland (where Democrats are accused of outrageous gerrymandering). Mr Schwarzenegger has committed to match donations to a fund that will help Common Cause, an open-government group, participate in a case at the Supreme Court challenging maps drawn by Wisconsin Republicans. The Wisconsin case will see reformers citing a new tool, the “efficiency gap”, intended to give courts an objective way to spot gerrymandering. To simplify, the measure counts wasted votes cast for each party, in hopelessly hostile or inefficiently super-safe districts, and identifies states where one party receives many more such votes (as in Wisconsin).

Mr Schwarzenegger has recorded a short video explaining what he concedes is the “very dry” subject of gerrymandering. In it, the actor compares the respective popularity of Congress, cockroaches and herpes, while noting that “the former Soviet Politburo had more turnover” than pre-reform California, which between 2002 and 2010 held 265 congressional races, of which just one saw a seat change its party control. His arguments are reinforced by film clips in which he variously looks startled, resolute or blows things up. The video has been viewed 25m times.

Political professionals can be a bit sniffy about gerrymandering’s importance as an explanation for government dysfunction. They note the way that Americans of like mind increasingly flock together, with the result that even when districts are drawn to respect county or community boundaries, Democrats will be packed into cities, while Republicans dominate rural areas. In states which have adopted non-partisan districting, such as California and Arizona, seats still rarely change hands.

The former Terminator can hold his own with wonkish sceptics. The Schwarzenegger Institute at the University of Southern California, founded to promote “post-partisanship”, commissioned studies that found that after the 2012 election California’s state legislators had more moderate voting records, while its candidates are unusually responsive to supporters of a rival party.

## Time for a workout

Mr Schwarzenegger does not deny self-sorting effects: of course Californian districts become more liberal near the ocean, he says. But they are still home to some conservatives, just as some liberals live inland, and previously such voters were not counted. Strikingly, his main concern is not Democrats or Republicans “getting the shaft” in this or that state. His interest is in boosting political performance everywhere. Uncompetitive districts make legislators less effective, he says: to be precise, he compares politicians in gerrymandered seats to “overweight” people who should “go to the fucking gym”. As a governor he saw ultra-safe legislators in thrall to activists who controlled their re-selection as candidates, long before they faced general elections. He became convinced that if districts held just 10-15% more voters from the opposing party, incumbents’ calculations would change.

Gerrymandering is a 200-year-old “screw-up”, notes Mr Schwarzenegger, and must be fixed patiently, state-by-state. He remembers when bodybuilders were thought stupid or narcissistic, or to be “suffering from some complex”. Now hotels on every continent have gyms with weights. Make the right case for competition, fitness and performance, and minds can be changed. ■



## NAFTA

## Redesigning the North American home

WASHINGTON, DC

**Canada and Mexico face a tricky renegotiation of their trade agreement with the United States**

FOR months President Donald Trump has veered between threatening to terminate the North American Free-Trade Agreement (NAFTA) and merely proposing to bring it "up to date". On July 17th, in a letter to Congress, the United States trade representative, Robert Lighthizer, made the administration's intentions clearer. They are closer to revision than destruction, which is a relief for Mexico and Canada, the United States' NAFTA partners. But alongside conventional-sounding negotiating objectives are flashes of Trumpian aggression and hints that the United States will demand painful changes to the deal.

The stakes are high. A quarter of American trade in goods and services is with Mexico and Canada. The three economies tend to grow or shrink together and have integrated supply chains. Fears that the United States would abandon NAFTA have caused volatility in the markets for the Mexican peso and Canadian dollar, and talk of possible recessions.

Mr Lighthizer's letter, published at the start of what Mr Trump billed as "made in America" week, calmed those fears. The administration has been tamed by working through Congress. The smaller NAFTA partners made Herculean lobbying efforts to defend the agreement. Canadian ministers bombarded American governors with visits. On July 14th Canada's prime minister, Justin Trudeau, appealed to governors in a speech to protect "our shared North

American home". A path to a renegotiated agreement is in sight, but it will be rocky.

The new deal Mr Lighthizer has in mind borrows from the Trans-Pacific Partnership (TPP), the Obama administration's deal with 11 Latin American and Asian countries, which in effect updated NAFTA. But one of Mr Trump's first acts in office was to withdraw from it. Like the TPP, the proposed NAFTA 2 would bring protections for workers and the environment "into the core of the agreement".

The letter drops some of the most contentious items from an earlier American wishlist. There is no mention, for example, of addressing the Trump administration's grievance that Mexico charges value-added tax on imports.

Some of Mr Lighthizer's ideas are potentially ambitious but vague. He wants to "strengthen the rules of origin" that set out how much North American content a product needs to cross borders duty-free. That could be a tweak, or it could be a big disruption to trade among members of NAFTA. There is talk of ensuring through an "appropriate mechanism" that NAFTA countries do not manipulate their currencies. But that could impinge on American monetary policy.

Where Mr Lighthizer's goals are the most Trumpian, they will face the fiercest resistance. Reflecting the president's obsession with the United States' trade deficit, the document's first objective is to reduce deficits with other NAFTA countries. This is barmy; trade deals do not determine deficits. The Mexican government's response has been to argue that the standard numbers neither reflect flows in the value each country sends across borders nor the billions of dollars that Mexicans spend when they shop in the United States. Canada, whose trade surplus with the United States in goods is smaller than Mexico's, is waiting to see how the Trump administration proposes to reduce it. If the United States insists, for example, on allowing countries to block trade if their deficits get too large, the talks could take an angry turn.

Another worry is the administration's approach to trade remedies, ie, the duties that governments can apply if an industry is "injured" by imports. Under NAFTA, Mexico and Canada get special treatment. The United States has to cross a higher legal threshold to apply defensive safeguards on their exports than it does on those of other countries. In addition, under chapter 19 of the agreement, disputes between NAFTA partners over other remedies go to a NAFTA court. The Trump administration, which regards the authority of foreign

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judges as an infringement of sovereignty, has both provisions in its sights.

This will provoke a battle. Negotiations on a free-trade agreement between Canada and the United States, which came before NAFTA, nearly broke down in 1987 because the United States refused to relinquish the option to impose retaliatory duties. A clause like chapter 19 was a compromise that saved the deal ("you can have your goddamn dispute-settlement mechanism," grumbled James Baker, then the American treasury secretary).

Canada, and now Mexico, want it more than ever. The United States is threatening

to impose trade barriers against other countries to protect such industries as steel. It is fighting with Canada about softwood lumber, aerospace and paper. Without a panel to rule speedily on disputes, and protection against trade remedies, NAFTA's smaller members will be more vulnerable to the punishment that the United States metes out to other trading partners (see chart on previous page).

While seeking more protection for the United States, Mr Lighthizer is pushing Canada and Mexico to lower their trade barriers. His letter aims at protected Canadian sectors such as telecoms and financial

services (and, less explicitly, dairy and poultry farming). Mexico, the target of Mr Trump's abuse on the campaign trail, seems to get off more lightly.

Negotiations are due to begin on August 16th. The United States' partners are preparing defences and counter-demands. Mexico's businesses are thinking about how to change their supply chains in case the deal blows up. Canada is pushing for access to contracts awarded by American states and cities, which Mr Lighthizer wants to keep out of NAFTA 2. Expect plenty of squabbling in the North American home. ■

## Bello | The long squeeze

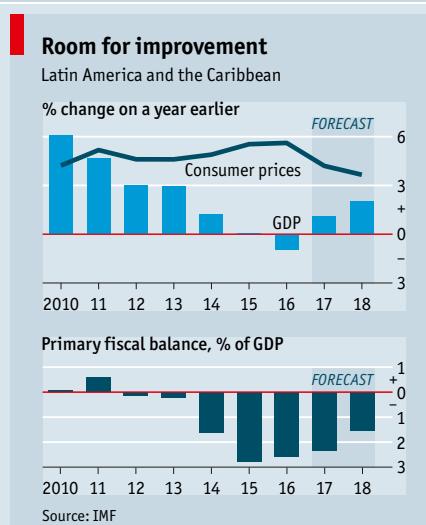
**Latin America's commodity hangover has been compounded by political uncertainty**

**S**CAN the Latin American newspapers and it is hard to find much sign of a convincing economic recovery. True, Brazil's industrial production is perking up after a two-year slump. Mexico's energy reform is starting to pay off, at last, with a big new oil discovery by an international consortium. And Peruvian restaurateurs celebrated "National Char-roasted Chicken" day on July 16th, hoping to dispatch a million birds, up from last year's 720,000.

Otherwise, animal spirits are in short supply. After five years of deceleration and one of recession, Latin America should register modest economic growth of 1.15% this year, according to forecasters. The picture varies from country to country. The return to aggregate growth is largely thanks to Brazil and Argentina, which are coming out of recessions. Venezuela's economy is collapsing. Mexico, Chile, Colombia and Peru are expanding at a sluggish rate of 2.3%. Only in Central America, the Dominican Republic and Bolivia is growth a respectable 4% or so.

What makes this particularly worrying is that external conditions are generally favourable. The world economy is picking up speed. The United States and China, the region's biggest trading partners, are growing nicely. Financiers look favourably on Latin American governments and companies, as Argentina's recent launch of a 100-year bond illustrated.

So why is the region still so off-colour? One answer is that adjusting to the end of the commodity boom, which benefited South America particularly, has taken longer than expected. Between 2003 and 2010 China's industrialisation boosted demand for minerals, oil and foodstuffs. Commodity prices fell steadily between 2010 and 2015. As export revenue shrank, the region's currencies weakened, curbing imports and pushing up inflation.



The good news is that in many countries this external adjustment went smoothly and is largely over. The region's current-account deficit narrowed by 1.4 percentage points of GDP last year (to 2.1%). Inflation is falling swiftly, allowing central banks to cut interest rates (see chart). That offers hope of a pickup in growth in 2018.

But Latin America also faces a fiscal squeeze. The commodity boom temporarily boosted tax revenues. Too many governments spent, rather than invested or saved, this windfall. The primary fiscal deficit (ie, before interest payments) in the region as a whole increased from 0.2% of GDP in 2013 to 2.6% last year. In other words, public debt is rising. Many governments have started to retrench. Few are in a position to prime the pump of recovery.

There is a second factor slowing the rebound: political uncertainty. That starts with Donald Trump. While he has agreed to renegotiate, rather than scrap, the North American Free-Trade Agreement with

Mexico and Canada, he continues to threaten to impose protectionist measures, discourage investment south of the Rio Grande and deport millions of Mexicans and Central Americans. So far Mexico's economy has held up better than feared: the peso is stronger now than it was before Mr Trump's election last November. The annual growth rate was 2.7% in the first quarter of this year. But Mexico is living from month to month.

The second doubt concerns domestic politics. Latin America will not return to faster growth unless it does more to solve the structural problems that hold it back. They include inadequate infrastructure, poor-quality schooling, badly designed taxes and regulations that hobble business. Fixing these requires persuasive leadership. But in the larger countries, the only president who is even moderately popular is Mauricio Macri of Argentina. In Brazil, Michel Temer has an approval rating of 7% and may be evicted from office because of corruption allegations.

Between November of this year and October 2018, Chile, Colombia, Mexico and Brazil all face presidential elections (while Argentina has an important midterm congressional election this October). These contests will take place amid popular disillusion with politicians, caused partly by corruption. In each, there is some risk that a populist could triumph.

No wonder investment remains depressed. Growth this year is coming mainly from a small recovery in exports and from import substitution. The first task facing governments is to provide investors, both local and foreign, with a reasonable degree of policy certainty. More than is usually the case, for insights on their economic prospects, Latin Americans should turn to political scientists rather than to economists.

Che Guevara

## Local anti-hero

ROSARIO

**A liberal think-tank challenges the cult of a left-wing revolutionary**

CHE GUEVARA was born in Rosario, then Argentina's second-largest city, in 1928 but did not stay long. Less than a year later his family moved away. Yet his birthplace has not forgotten the left's warrior-saint. A red banner marks the posh apartment block where he was born. A four-metre-high (13-foot) bronze statue stands in Che Guevara Square. The city council finances CELChe, a centre devoted to the study of his life, and celebrates "Che week" around his birthday in June. CELChe will stage a concert to commemorate the 50th anniversary of his death on October 9th.

Not everyone in Rosario thinks the bearded revolutionary, who was captured by soldiers in Bolivia and killed on the orders of the country's pro-American dictator, deserves such reverence. Fundación Bases, a liberal think-tank based in the city, has launched a petition to persuade the city council to remove the monuments. The martyr was himself a killer, says Franco Martín López, the institute's director. Guevara was second-in-command to Fidel Castro, whose Cuban revolution killed more than 10,000 people. "No one here has any idea about the massacres committed during the revolution," Mr López laments.

Under the motto "a murderer doesn't deserve state tributes", Mr López's foundation has produced videos to educate Argentines, and rosarinos in particular. One shows a clip of Guevara promising to "continue the firing squads for as long as necessary" in a speech to the UN General Assembly in 1964. In another, a narrator reads out the accusatory suicide note of Reinaldo Arenas, a gay novelist who died in 1990 after suffering decades of persecution by Cuba's government. Mr López is looking for a sympathetic councillor to present the petition on the anniversary of Guevara's death. More than 3,000 people have signed it since its launch on May 2nd.

It is unlikely to persuade the council, which has been controlled by the Socialist Party since 1989. Norberto Galiotti, the cigar-smoking secretary of Rosario's Communist Party, regards the foundation's campaign as a part of a pernicious effort to erase Che from history, led by the country's centre-right president, Mauricio Macri. After he took office in 2015 he removed a portrait of Che hung in the presidential palace by his populist predecessor, Cristina Fernández de Kirchner. Mr Galiotti suspects liberals are envious of Che's posthumous charisma. "You don't see many



Hard to erase

kids walking around with Margaret Thatcher T-shirts," he observes.

Mr López does not expect the monuments to come down. "The real objective is to raise awareness of the issue and start a debate," he says. But some of Che's fans are not interested in dialogue. Fundación Bases dropped plans to show the videos on screens in Rosario because the advertising firm that operated them was "worried people would smash them", says Mr López. Che would have been pleased. ■

### Sex workers in Colombia

## From cutting hair to turning tricks

MEDELLÍN

**Venezuelans fleeing poverty get the right to work as prostitutes**

ON SATURDAY night in Parque Poblado in Medellín, young people gather to drink, smoke and chat. Barbara and her cousin Sophia have more serious business: they hope to make enough money from selling sex to live decently after fleeing Venezuela, where survival is a struggle.

Barbara, who is 27, prefers her former occupation as the owner of a nail and hair business in Caracas, Venezuela's capital. But polish and shampoo are as hard to find as food and medicine, and so she has come to Medellín. In an hour a sex worker can make the equivalent of a month's minimum wage in Venezuela. Colombian pesos "are worth something", unlike Venezuela's debauched currency, the bolívar, Barbara says. "At least here one can eat breakfast and lunch."

Some 4,500 Venezuelan prostitutes are thought to be working in Colombia; the trade is legal in both countries. But until recently they were often rounded up by police and deported back to Venezuela by the busload. That changed in April, when Colombia's constitutional court ruled that Venezuelan sex workers are entitled to work visas. Mass deportations violate international human-rights law, it said. "One should weigh up the reasons they decided to come to Colombia...and the specific situation they would face in Venezuela were they to be returned," said the ruling.

The case has its origins in Chinácota, a tiny town an hour's drive from the border city of Cúcuta. Last year the town's mayor closed down the Taberna Barlovento, a bar that also serves as a brothel, saying it violated zoning rules. Along with beverages, the bar offers four bedrooms just big enough to fit a mattress or two. Founded in 1935, the bar is a Chinácota institution, says Nelly Esperanza Delgado, its owner.

When the mayor shut Ms Delgado down, she fought back in court. She and the prostitutes who worked there, including four Venezuelans, had no other income, she said. Closing Taberna Barlovento violated their right to work. The court agreed, and the bar reopened.

The ruling is likely to encourage Venezuelans who ply other trades. Daniel Pagés of the Association of Venezuelans in Colombia estimates that 1.5m of his countrymen are in Colombia, about 40% of them without proper papers. The sex workers are joined by electricians, mechanics, empanada vendors—all of whom are seeking a way to cope with their country's shortages and queues, and an inflation rate expected to exceed 700% this year. Many of them commute daily from Venezuela. They could use the court's ruling on sex workers to argue that they, too, are entitled to work visas, says Andrés Delgado Gil, the lawyer who argued Ms Delgado's case.

Colombians along the border are accustomed to Venezuelans streaming across, but the area's sex workers do not relish the competition. Venezuelans charge the equivalent of \$10-13 for a 20-minute session; the Colombian rate is around \$13-17. Colombians complain that they are being forced to cut their prices. While Colombia is El Dorado compared with Venezuela, economic growth is slow and the unemployment rate is 9.4%. Colombians haven't forgotten that in 2015 Venezuela's president, Nicolás Maduro, blamed them for the shortages and deported 1,100. Many forded rivers on their way back to Colombia.

While the law is becoming more welcoming to desperate Venezuelans, Colombians are growing increasingly nervous about the influx. Barbara thinks other countries offer bigger opportunities. She is planning to move on to Ecuador, where customers pay in American dollars. ■



# PARMIGIANI

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**China in Africa**

## A thousand golden stars

ACCRA

**China is making its presence felt across the continent in ways big and small**

IN CRISP white uniforms and standing to attention beneath a fluttering red flag with five golden stars, the sailors on board the People's Liberation Army ships setting sail for Djibouti on July 11th represent a significant step for China. When they arrive they will open the Middle Kingdom's first military base abroad since the Korean war.

It is a canny first foray. China has prepared the ground with low-key deployments of blue-helmeted troops to UN operations in places such as South Sudan. And it has placed the base in a country that is likely to cause the least offence.

America already has a large airfield and naval station in Djibouti. From there it conducts counter-terrorism operations, and watches the Gulf of Aden and the Red Sea, both much used by smugglers trafficking drugs, weapons and people. And China's main regional rival, India, cannot argue that the installation represents a significant projection of power into an ocean it regards as its own. The base will mostly be a logistics hub for a naval squadron China has long sailed in these waters, escorting commercial vessels. Still, the hoisting of a red flag over African soil will be the most visible sign yet of China's growing assertiveness on a continent that was once the playground of Soviet and Western powers.

The base represents but the tip of a fast-growing bamboo shoot. The next segment down is a vast effort aimed at enhancing

China's soft power in Africa and at promoting the so-called "China model" of authoritarian, state-driven development as a counter to Western efforts to spread liberal democratic capitalism. Much of this is done through political training programmes whereby members of ruling parties, labour unions and ministries are taken to China to meet the members of the Chinese Communist Party. Its best student is Ethiopia, where the ruling EPRDF party has copied much of what it has seen in China, tightly controlling business and investment, and imitating China's Central Party School and party cadre system.

China's attempts at spreading its view of the world go far beyond Ethiopia, albeit

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with varying degrees of success. In South Africa, for instance, more than half of the members of the executive committee of the ruling African National Congress have attended such schools in China, a country the party calls its "guiding lodestar".

China is, like the West, strategic about the ways in which it doles out aid. A study by AidData, a project based at the College of William and Mary in Virginia, found that countries that vote with China in the UN General Assembly get considerably more money than those that do not.

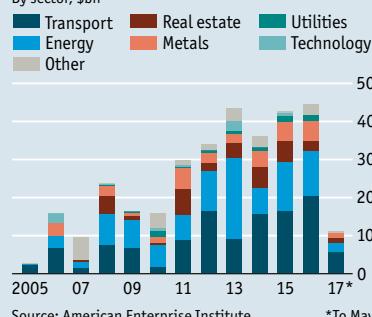
China has also spread its influence in less visible ways. Victoria Breeze and Nathan Moore at Michigan State University reckon that in 2014 the number of African students in China surpassed the number studying in either Britain or America, the traditional destinations for English-speakers (France still beats all three, however). Much of the growth is because China has given tens of thousands of scholarships to African students, the academics say. If efforts such as these are aimed at burnishing China's image, then they are working. Afrobarometer, a polling firm, found that 63% of people in 36 African countries consider China to be a positive influence. Nevertheless, it also found that African people still think China's development model ranks second after America's.

That may change in time, since by far the main part of China's involvement in Africa is in business. In the past decade, Chinese loans and contractors have, quite literally, reshaped much of the continent's infrastructure, paying for and building new ports, roads and railways. In many cases, this has been matched by investments in mines and manufacturing plants, shopping centres and corner stores. The scale and extent of China's business interests are easily visible, whether in a hotel in ➤

### Across the board

Chinese investments and contracts in Africa

By sector, \$bn



► Rwanda, where the writing on all the fittings, from elevators to shampoo dispensers, is Chinese; or at a roundabout in central Accra, where a crew of Chinese labourers are repairing the road.

This flow of Chinese money and workers has prompted some to gush that China is becoming Africa's most important economic partner, and others to fret that it is the new colonial master. In a recent report McKinsey, a consulting firm, looked at five measures of Africa's economic connection with the world: trade, investment stock, investment growth, infrastructure financing and aid. It found that China is among the top four partners in each of these. "No other country matches this depth and breadth of engagement," it enthused.

Yet others are more sceptical, arguing that many overestimate the sums that China is investing in or lending to Africa, because they add up pledges rather than actual flows. A close parsing of the data by David Dollar, an economist, finds that China accounts for only about 5% of all existing investment in Africa, and a similar share of new investments. America's investment stock is twice as much.

"The notion that China has provided an overwhelming amount of finance and is buying up the whole continent is inaccurate," he argues. That matches with work by Deborah Brautigam, who leads the China Africa Research Initiative at Johns Hopkins University. She found that little more than half of announced Chinese loans to Africa actually materialised.

Yet look beyond official loans or the work of big Chinese state-owned companies, and there are signs of a deeper Chinese involvement. McKinsey's work suggests that there are as many as 10,000 Chinese companies operating in Africa, 90% of them privately owned. Many also reported earning juicy returns, in some cases enough to pay back their investments in less than a year. Many said they planned to keep investing because of the plentiful opportunities to make money.

Yet even as those small firms make money, it is far less certain that Chinese investments in big infrastructure such as the railway line linking Mombasa's port and Nairobi in Kenya will ever show a return; there is even less chance of recovering the cash sunk by Chinese state-owned firms into poorly governed places such as Angola and the Democratic Republic of Congo. In this China seems to be repeating many of the mistakes made by Western donors and investors in the 1970s, when money flowed into big African infrastructure projects that never produced the expected economic gains. In a decade or so China may find itself in the position the West once did, of having to write off many of their loans to African governments. Unless of course those sleek navy ships in Djibouti are ever put to use collecting overdue debts. ■

## Nigerian politics

# The lion at bay

ABUJA

### Would-be successors to the ailing president are circling

**P**OLITICS is the survival of the fittest, and Nigeria is no exception. "The Hyenas and the Jackals will soon be sent out of the kingdom," the first lady, Aisha Buhari, wrote on Facebook on July 10th, in response to a senator who had described her husband as "the absent Lion King". Muhammadu Buhari has been in London being treated for a mysterious illness since May 7th, after spending a seven-week stint there earlier this year. His only recent communication has been a few written statements mourning deceased politicians.

Despite many rumours, Mr Buhari is probably not dead himself. The vice-president (and acting president), Yemi Osinbajo, rushed to London for a few hours last week. On his return he said his boss was recovering fast and would be back "very shortly". But the beasts are circling, in the expectation that it will be one of them who gets to contest the next presidential election, due in February 2019.

Mr Osinbajo, who was previously Lagos state's attorney-general, will automatically take over if the president resigns or is declared incapacitated. His "godfather", Bola Tinubu, is probably the most powerful politician in Nigeria's south-west (Mr Tinubu, a Muslim, had to forgo the vice-presidency before the 2015 election as it was deemed politically toxic for both

names on a ticket to be of the same religion). Mr Osinbajo, a Christian pastor who has said he is on loan from his church, has also been cultivating his own brand. When on tour he makes sure to be photographed chatting with market traders, hugging children and flying in for the funerals of departed politicians. "The fact that he is perceived as someone who is very loyal to Buhari definitely helps him," says Chris Ngwodo, an analyst.

However, northern politicians will want one of their own to step in to any vacancy. There is an unwritten rule that the presidency rotates between north and south, and the northerner Mr Buhari has only served two out of his potential eight years (assuming he were to be re-elected).

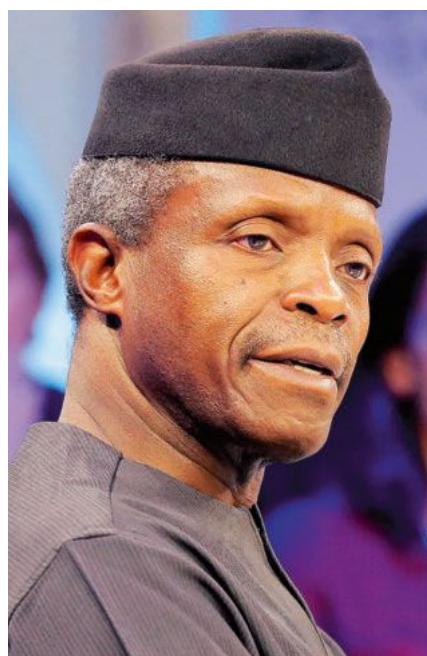
The reform-minded governor of Kaduna state, Nasir El-Rufai, was once seen as Mr Buhari's heir. But his intolerance of dissent, including the banning of a Shia organisation after at least 347 of its members were massacred by the army in December 2015, has seen him fall from favour. Christians, meanwhile, accuse Mr El-Rufai of siding with Muslim herders over lethal clashes with farmers in southern Kaduna.

Atiku Abubakar, a wealthy former vice-president, is likely to contest any primary of the ruling All Progressives Congress (APC) party. However, he is dogged by corruption allegations and has already run unsuccessfully for president four times.

Another possible candidate is the Senate president, Bukola Saraki. The former governor of Kwara, a state in Nigeria's "Middle Belt", was not the APC's choice to lead parliament. He was nonetheless elected with the backing of opposition party senators in June 2015. "He's about as savvy as they come," says a ruling party source.

But the northern elites reportedly do not see Mr Saraki as one of them. And though a tribunal recently threw out a case accusing the politician, who owns a multi-million-pound house in London, of not properly declaring all his assets, the government is appealing.

If Mr Buhari is too ill to rule but refuses (or is unable) to resign, government ministers and a medical panel set up by Mr Saraki would have to agree to remove him. The president of the Senate could strike a deal to become Mr Osinbajo's deputy, says Matthew Page, a former American diplomat. Or he could wait for the presidential primaries in 2019, and run himself. The hyenas are not short of options. ■



Osinbajo the loyal

## Arab media

# Exodus and the airwaves

## London is again becoming the Arab world's media capital

FOR two years Ghanem al Masarir al-Dosari, a Saudi satirist, has fronted an online comic look at the news in a show called "Fadfa'a" (Natter), which pokes fun at his kingdom's royal highnesses. He portrays the young crown prince and de facto ruler, Muhammad bin Salman, in nappies, and calls him "al-dub al-dasher", loosely translated as "fat crumpet". His YouTube channel attracts millions of followers, most of them Saudi. "Back home, I'd have lost my head," he says. But Mr Dosari broadcasts from the safety of a north London suburb, he hopes out of reach of the royal sword.

Ever since the leading pan-Arab newspaper, *Asharq al-Awsat*, launched in Britain in 1978, London has served as an Arab media hub. Fleeing the censors at home, journalists found freedom in exile. Fresh crackdowns, censorship and war are again rejuvenating their ranks.

As part of its campaign against Qatar, Saudi Arabia has demanded the closure of the popular satellite channel it funds, Al Jazeera, and threatened anyone tweeting in sympathy with five years' imprisonment or a huge fine. The United Arab Emirates upped the punishment to 15 years.

Oman has jailed editors. Last month, Bahrain shut down its last independent newspaper, *Al-Wasat*. A satellite channel launched in Bahrain closed on its first day after interviewing a Shia dissident. Jamal Khashoggi, a veteran Saudi journalist and its general manager, is one of hundreds banned by his government from speaking about Qatar, or in his case anything else. He has opted for exile in the West.

A decade ago, Arabic media was returning home from exile, lured by the opening of glitzy "media cities" and promises of Arab *glasnost*. MBC, a popular London-based satellite channel, moved to Dubai. Edgy new channels like Al Jazeera, Al Arabiya and Sky News Arabia launched in the Gulf. But in 2011 the Arab spring erupted, and Arab despots responded by muzzling their critics.

Al Jazeera, which amplified cries for regime change, both peaceful and not, faced the sheikhs' particular ire. When the closure of bureaus and Egypt's jailing of journalists failed to induce its compliance, Gulf governments signed an agreement with Qatar in 2013 to curb its media. Al Jazeera duly suspended its Egyptian arm, and after a temporary blackout, blamed on technical difficulties, briefly broadcast from Lon-



don. Qatar moved new operations offshore. Al-Araby al-Jadeed (the New Arab) was launched in west London, along with websites such as Arabizi and the Arabic version of Huffington Post. London, says an Al Jazeera journalist, remains the channel's backup, should, for instance, the Saudis or Emiratis invade.

London's calling is a tradition. Since Karl Marx, it has been a favoured home to dissidents. British judges have repeatedly ruled against the repatriation of activists. Britain has resisted Emirati pressure to ban the Muslim Brotherhood and hosts many more senior Brotherhood figures than Qatar does. Scores of Shia activists hounded out of Bahrain have settled in Britain, and beam their protests back to the Gulf. Subject to a Jordanian campaign to ban them across the Arab world, Mashrou Leila, a Lebanese indie band whose lyrics flout sexual and political taboos, launched its latest album in London. An Arab arts festival, Shubbak, offers a platform to human rights activists, like the Egyptian author, Basma Abdelaziz, fearful of talking at home. Talk of a new independent paper is afoot.

Even so, the despots have long arms. Gulf governments fund their own media outlets in London, lure journalists to their ranks, and then call the tune. *Asharq al-Awsat*, acquired in 2015 by the Saudi crown prince, has become its master's voice. Another London-based Saudi-owned publication, *Al-Hayat*, was once lauded as the most professional of Arab newspapers, but now tends to toe the line. On July 18th hecklers supporting Egypt's president, Abdel-Fattah al-Sisi, tried to drown out a debate on AlJazeera at a journalists' club in London. And Mr Dosari remains cagey about his address. In 1987 the greatest Palestinian cartoonist, Naji al-Ali, was fatally shot on London's streets. ■

## Syria

# All quiet on the southern front?

## BEIRUT

## The latest ceasefire will test Russia's ability to rein back its allies

WHEN a group of teenage boys scrawled "down with the regime" on their school wall they lit the powder that ignited Syria's civil war. Ever since their torture at the hands of state-security agents in March 2011, the boys' home city of Deraa has become synonymous with the rebellion to overthrow the regime of Bashar al-Assad. But Deraa may yet turn out to be the place where dreams of overthrowing the regime finally die.

The guns fell silent over the battered city at noon on July 9th as a ceasefire brokered by Russia and America came into force. The truce, announced by Presidents Donald Trump and Vladimir Putin after their first meeting, is the latest in a string of failed attempts by the two powers to quell more than six years of violence that has killed perhaps 400,000 people. Its success, if it lasts, may open the door to deeper co-operation between America and Russia. That could lead to a kind of peace, but at the price of what may be a lasting carve-up of Syria into zones controlled by different foreign powers, which will in all probability leave Mr Assad in place on the populous coastal west of the country.

It is unclear whether the ceasefire will work this time. Months of secret meetings between American, Russian and Jordanian officials in Amman have produced a deal that lacks teeth. Russia says it will deploy troops to police the ceasefire zone, which covers three southern regions that abut the borders with Israel and Jordan. American diplomats say the make-up of any ground force is still being discussed. ►



The truce has held so far but, like past deals, may quickly fall apart without a way to enforce it. Rushed out to give the two presidents something to announce at their first meeting, the ceasefire appears premature.

The geography and make-up of the region covered by the ceasefire may, however, help it last. The area—Deraa, the province of Quneitra and parts of Suwaida province—is smaller than regions covered in the past. There are also fewer extremists to spoil the truce, and fewer rebel factions to pressure into abiding by it. The rebels in the south are also less fierce: Jordan keeps a grip on those fighting the Syrian army and Iranian-backed militias seeking to push into areas near its borders.

The ceasefire is a result of Russian plans to wind down the war. Since January Moscow has led talks with Turkey and Iran, which back opposing sides in the conflict, to establish four “de-escalation zones” where rebels and the regime will stop killing each other. The aim is to have each one policed by different foreign powers. Amer-

ica’s rush to cut a deal with Russia in the south, the first of the zones to be demarcated, is partly a test of Moscow’s sincerity.

Mr Assad is sitting pretty in Damascus. If the ceasefire holds, it will partly be because the Syrian president and his Iranian backers see a chance to solidify their gains, drive rebels from other parts of the country and race American-backed forces for control of the oil-rich lands still occupied by Islamic State in the east. America’s secretary of state, Rex Tillerson, says America “sees no long-term role for the Assad family”. But removing the dictator, who has repeatedly vowed to reclaim every inch of territory lost during the war, will be impossible without the consent of Iran and Russia.

If anything has remained constant in America’s approach to the Syrian conflict over the past year, it is its faith in Russia to bring the fighting to a close and keep Iran in check. Mr Tillerson believes the warring parties are “tired” and “weary” of the conflict. The coming weeks will establish how fanciful this reading is. ■

Czech Republic and Turkey. Fake Captagon is known to be produced in south-eastern Europe. War-torn Syria has also become a source. Rival combatants have profited from “taxing” manufacturers and traffickers. But an investigation by the Institute for Middle East Studies at George Washington University concluded in 2015 that the only faction systematically involved in producing the drug was Hezbollah, an Iranian-backed Lebanese militia. Rogue members of the Assad regime and the Free Syrian Army were also manufacturing it, but neither of the most extreme jihadist factions, Islamic State (is) or Jabhat al-Nusra (now Jabhat Fatah al-Sham), was found to be profiting from Captagon. Indeed, is has executed alleged drug traffickers and destroyed narcotics-manufacturing plants.

Still, one of the reputed effects of genuine Captagon is to reduce compassion and there has been recurrent speculation that is feeds it to its militants. A captured teenage is fighter told CNN in 2014 he had been given pills “that would make you go to battle not caring if you live or die”. Captagon came under particular suspicion after the Paris attacks of 2015. Several eyewitnesses commented on the emotionless stares and zombie-like movements of the killers. But toxicological examinations reportedly found no evidence they had taken drugs beforehand. A study last year concluded that the only drug that could be firmly linked to is was Tramadol, an opioid.

The Koran deplores “intoxicants”. So why are so many inhabitants of some of the Middle East’s most God-fearing states getting high on Captagon? Users include party-goers, slimmers who take the drug as an appetite suppressant, and others such as students and lorry drivers who want to stay awake for long periods. Justin Thomas, a Briton who lectures on psychology at Zayed University in Abu Dhabi, says many users believe (or pretend to themselves) that it is a medication, a myth reinforced by some producers, who market the drug in blister packs. “This pseudo-medical veneer protects the user from feeling they are involved in an activity that is *haram* (forbidden by the Koran),” he says. ■

## Drugs in the Middle East

# Captured by Captagon

ROME

## A new drug of choice, forbidden or not

**T**HE traditional way is not always the most successful. Saudi Arabian border guards this month arrested a Sudanese man accused of smuggling more than half a million drug tablets into the kingdom from Jordan on the back of a camel. Just as tastes in food and drink vary from region to region, so do preferences for drugs. The one Sudanese man was allegedly trafficking, known as Captagon, is the Arabian peninsula’s most popular illegal drug. True Captagon (generic name: fenethylline) was produced as a treatment for attention deficit hyperactivity disorder. America banned it in 1981 after its addictive and other pernicious characteristics became clear. Most other countries have followed suit.

The pills flooding into Saudi Arabia and other Gulf states sometimes have a fenethylline base. But many are simply ‘uppers’, or amphetamine-type stimulants (ats). And some of what is sold under the poetic street name of Abu Hilalain (Father of the Two Crescent Moons: an allusion to the entwining Cs on each pill) contains little but concentrated caffeine.

The market is huge. According to the UN’s latest World Drugs Report, in 2015 the Saudi authorities seized more than 11 tonnes of ATs, excluding Ecstasy. That was lower than the figure for 2014, but still almost a third as much as in America, with a

population ten times greater. Elsewhere in the region, demand appears to be soaring. In March the director-general of the UAE’s Anti-Narcotics Department, Colonel Saeed al-Suwaidi, said seizures of Captagon, real and fake, and crystal meth, had almost quadrupled last year.

Identifying the origin of synthetic drugs is difficult: unlike plant-based ones, they seldom have unique properties. And pseudo-Captagon often travels to the Gulf by tortuous routes: French customs officials who this year seized 750,000 pills smuggled from Lebanon found they were to have been shipped to Saudi Arabia via the



Not the real thing

# Hissing cousins



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# Hissing cousins

**Three score and ten years after their acrimonious split, India and Pakistan remain at daggers drawn. Max Rodenbeck asks if they can ever make up**

EVERY AFTERNOON AT sunset, at a point midway along the arrow-straight road between Amritsar and Lahore, rival squads of splendidly uniformed soldiers strut and stomp a 17th-century British military drill known as Beating Retreat (pictured). Barked commands, fierce glares and preposterously high kicks all signal violent intent. But then, lovingly and in unison, the enemies lower their national flags. Opposing guardsmen curtly shake hands, and the border gates roll shut for the night.

As India and Pakistan celebrate their twin 70th birthday this August, the frontier post of Wagah reflects the profound dysfunction in their relations. On its side Pakistan has built a multi-tiered amphitheatre for the boisterous crowds that come to watch the show. The Indians, no less

rowdy, have gone one better with a half-stadium for 15,000. But the number of travellers who actually cross the border here rarely exceeds a few hundred a week.

Wagah's silly hats and walks serve a serious function. The cuckoo-clock regularity of the show; the choreographed complicity between the two sides; and the fact that the soldiers and crowds look, act and talk very much the same—all this has the reassuring feel of a sporting rivalry between teams. No matter how bad things get between us, the ritual seems to say, we know it is just a game. Alas, the game between India and Pakistan has often turned serious.

After the exhaustion of the second world war Britain was faced with two claimants to its restless Indian empire, a huge masala of ethnic, linguistic and



religious groups (half of which was administered directly and half as "princely states" under 565 hereditary rulers subject to the British crown). Just about everyone wanted independence. But whereas the Congress Party of Mahatma Gandhi envisioned a unified federal state, the Muslim League of Muhammad Ali Jinnah argued that the subcontinent's 30% Muslim minority constituted a separate nation that risked oppression under a Hindu majority. Communal riots prompted Britain's last viceroy, Lord Mountbatten, to make a hasty decision. He split the country in two—or rather three, since the new state of Pakistan came in two parts, divided by the 2,000km (1,240-mile) expanse of the new state of India.

When the two new states were proclaimed in mid-August 1947, it was hoped the partition would be orderly. Lines had been drawn on maps, and detailed lists of personnel and assets, down to the instruments in army bands, had been assigned to each side. But the plans immediately went awry in a vast, messy and violent exchange of populations that left at least 1m dead and 15m uprooted from their homes.

Within months a more formal war had erupted. It ended by tearing the former princely state of Kashmir in two, making its 750km-long portion of the border a perpetual subject of dispute. Twice more, in 1965 and ►►

## ACKNOWLEDGMENTS

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Don't hold your breath

**Missing map?** Sadly, India censors maps that show the current effective border, insisting instead that only its full territorial claims be shown. It is more intolerant on this issue than either China or Pakistan. Indian readers will therefore probably be deprived of the maps on the second and fourth pages of this special report. Unlike their government, we think our Indian readers can face political reality. Those who want to see an accurate depiction of the various territorial claims can do so using our interactive map at [Economist.com/asianborders](http://Economist.com/asianborders)

A list of sources is at  
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► 1971, India and Pakistan fought full-blown if mercifully brief wars. The second of those, with India supporting a guerrilla insurgency in the Bengali-speaking extremity of East Pakistan, gave rise to yet another proud new country, Bangladesh; but not before at least half a million civilians had died as West Pakistan brutally tried to put down the revolt.

Even periods of relative peace have not been especially peaceful. In the 1990s Pakistan backed a guerrilla insurgency in Indian Kashmir in which at least 40,000 people lost their lives. In 1999 Pakistani troops captured some mountain peaks in the Kargil region, which India clawed back in high-altitude battles. A ceasefire in Kashmir that has held since 2003 has not stopped Pakistan-sponsored groups from striking repeatedly inside India. Pakistan claims that India, too, has covertly sponsored subversive groups.

Analysts discern a pattern in this mutual harassment: whenever politicians on both sides inch towards peace, something nasty seems to happen. Typically, these cycles start with an attack on Indian soldiers in Kashmir by infiltrators from Pakistan, triggering Indian artillery strikes, which prod the Pakistanis to respond in kind. After a few weeks things will calm down.

Just such a cycle started in late 2015, prompted, perhaps, by a surprise visit to the home of the Pakistani prime minister, Nawaz Sharif, by his Indian counterpart, Narendra Modi. Hopes raised by this overture dimmed within days when jihadist infiltrators attacked an Indian airbase. Another suicide squad struck an Indian army camp near the border, killing 19 soldiers. Faced with public outrage, Mr Modi ordered a far harder response than usual, sending commando teams into Pakistan. In the past, India had kept quiet even when it hit back, leaving room for Pakistan to climb down. This time Mr Modi's government moved to isolate Pakistan diplomatically, rebuffed behind-the-scenes efforts to calm tensions and sent unprovoked blasts of fire across the Kashmir border.

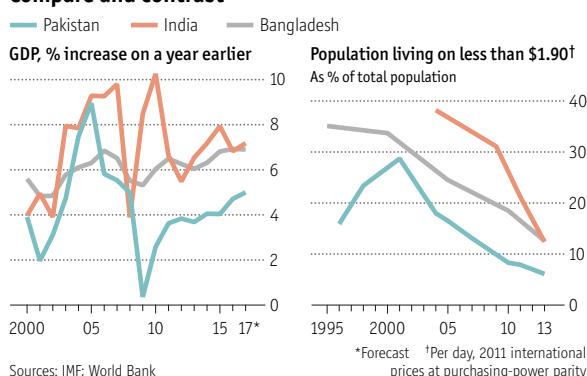
India's loss of patience is understandable. It has a population six times Pakistan's and an economy eight times as big, yet it finds itself being provoked far more often than it does the provoking. When Mr Modi's Hindu-nationalist Bharatiya Janata Party (BJP) came to power in 2014, it promised to put muscle into India's traditionally limp foreign policy. "India for the first time is being proactive, not just responding," says Sushant Singh, a military historian and journalist. "This is a huge shift."

Yet Mr Modi's pugnacity raises the risk of a dangerous escalation. "After a routine operation, the adversary may or may not escalate; after a publicised operation he will have only one option: to escalate," writes Pratap Bhanu Mehta, one of India's more thoughtful intellectuals.

Whether India and Pakistan are reckless enough to come to serious blows would not matter so much if they simply fielded conventional armies. But they are equipped with more than 100 nuclear warheads apiece, along with the missiles to deliver them. Since both countries revealed their nuclear hands in the 1990s, optimists who thought that a "balance of terror" would encourage them to be more moderate have been proved only partially right. Indians complain of being blackmailed: Pakistan knows that the risk of nuclear escalation stops its neighbours from responding more robustly to its provocations. Worryingly, Pakistan also rejects the nuclear doctrine of no first use. Instead, it has moved to deploy less powerful nuclear warheads as battlefield weapons, despite the risk that fallout from their use might harm its own civilians.

India does espouse a no-first-use nuclear doctrine, but its military planning is said to include a scenario of a massive conventional blitzkrieg aimed at seizing chunks of enemy territory and crushing Pakistan's offensive capacity before it can respond. India's arsenal includes the hypersonic Brahmos III, the world's fastest cruise missile, which can precisely deliver a 300kg payload to any target in Pakistan. An air-launched version could reach Islamabad in two minutes, and Lahore in less than one. And in a grim calculation, India, with four times Pakistan's terri-

### Compare and contrast



Sources: IMF, World Bank

► tory sees itself as better able to absorb a nuclear strike.

Alarmists will probably be proved wrong. Both countries are prone to sabre-rattling theatrics, but they are well aware that the price of full-blown war would be appalling. And despite the uncertainties generated by the rise of China, the continuing troubles in Afghanistan and the incalculability of Donald Trump's America, the international community still seems likely to be able to pull Pakistan and India apart if need be.

As this special report will argue, though, both Pakistan and India should more openly acknowledge the costs, to themselves and to the wider region, of their seven decades of bitter separation. These include not only what they have had to spend, in lives and treasure, on waging war and maintaining military readiness over generations, but the immense opportunity cost of forgoing fruitful exchanges between parts of the same subcontinental space that in the past have always been open to each other. Trade between the two rivals adds up to barely \$2.5bn a year.

Perpetual enmity has also distorted internal politics, especially in Pakistan, where overweening generals have repeatedly sabotaged democracy in the name of national security. Pakistan has suffered culturally, too; barred from its natural subcontinental hinterland, it has opened instead to the Arab world, and to the influence of less syncretic and tolerant forms of Islam. For India, enmity with Pakistan has fostered a tilt away from secular values towards a more strident identity politics.

Reflexive fear of India prompts Pakistan's generals to meddle in Afghanistan, which they see as a strategic backyard where no foreign power can be allowed to linger. In turn, India, because of the constant aggravation from Pakistan, has become bad-tempered with its smaller neighbours. Small wonder that intra-regional trade makes up barely 5% of the subcontinent's overall trade, compared with more than a quarter in South-East Asia. And it is no surprise that Pakistan has opened its arms to China, which is offering finance, trade and superpower patronage.

This special report will seek to unravel the causes of this irrational enmity, and to explore the contrasting internal dynamics in both countries that sustain it. It will examine new factors in this complex geopolitical board game, such as the rise of China. And it will consider what might be done to nudge the two rivals away from the vicious circle that binds them. ■

### History of the conflict

## Post-partum depression

### Unhappy together, unhappy apart

YOUNGER INDIANS AND Pakistanis tend to assume their countries were born enemies. Only the old recall that until their teenage years they were quite friendly. Ties of kinship were strong. India and Pakistan had inherited the same laws and institutions, and both were poor, multilingual and multi-ethnic. Their elites shared similar aspirations and spoke the same language, English, in addition to others that spanned the border, such as Urdu and Punjabi.

Pakistan's gaunt, chain-smoking founding father, Muhammad Ali Jinnah, insisted that Muslims constitute a separate nation, but envisioned a secular state. He was no Sunni majoritarian. The Jinnah family were Ismailis, a subsect of Islam's smaller Shia branch. His foreign minister was an Ahmadi, another small



Unquiet Jammu

sect that some Muslims regard as heretical. His law minister was a Hindu, and both his second wife and his personal doctor were Zoroastrians. Jinnah owned a luxurious mansion in Bombay, where he spent most of his youth and career.

In the 1950s India and Pakistan amicably settled the tricky problem of properties abandoned by millions of refugees. In 1960 they signed a complex deal to share the waters of the Indus river, Pakistan's lifeline; it has stuck ever since. Pakistan's national cricket team toured India in 1952 and 1960-61; the Indian one went to Pakistan in 1954-55. Until 1965 citizens of either country who wanted to visit the other could get visas on arrival.

There are many reasons why the ungainly twins drifted apart. In the initial division of spoils, India got more of the money. It also got land that Pakistan laid claim to. The big, rich princely state of Hyderabad and the tiny one of Junagadh had Muslim rulers but mostly Hindu subjects, and they were a long way from the rest of Pakistan, so India annexed them. Jammu and Kashmir presented the opposite problem: a Hindu ruler with mostly Muslim subjects. In late 1947 Pakistan sent guerrilla fighters to stir a Muslim uprising. The Maharaja invited Indian troops who ejected the intruders. The territory has been a bone of contention ever since (see box, next page).

As the two countries matured, their political systems diverged. "They got the generals, we got the bureaucrats," is how Indian wits put it. With a single brief interruption, India has sustained a noisy, wobbly and messy democracy. Its elected leaders, backed up by a powerful civil service and buffered by the sheer size and diversity of the country, have kept the army in check. Not so Pakistan.

The British Raj recruited hardest among the supposedly "martial races" of northern India, and deployed soldiers most heavily on the troubled Afghan frontier. So Pakistan, with a fifth of India's population at partition, inherited 30% of the Indian army, 40% of the navy and 20% of the air force. Military spending ate up three-quarters of Pakistan's first budget in 1948, notes Hussain Haqqani, a Pakistani diplomat and author. The share has dropped, but Pakistan still has an oversized, pampered army.

Split in two, with the bulk of India in the middle, in the 1950s the country felt vulnerable. It was not surprising that Paki-

Pakistan should fall into the cold-war embrace of America, which showered it with surplus weaponry from the Korean war. But the bonanza made the generals overconfident. In 1958 they toppled the civilian government. They began to dream of gaining full strategic parity with their much larger neighbour, but they lacked public backing for bigger spending and indefinite military rule. This they achieved by setting up India as a threat to the nation. In 1965 Pakistan again sent guerrillas into Kashmir. India struck back across the international border farther south. After some weeks of fighting both countries signed a truce. Pakistan gained nothing, but its army had proved that India was indeed an existential danger.

Five years later East Pakistan was growing restless. As a small guerrilla campaign grew in strength, with covert Indian help, Pakistan's army launched a counter-insurgency so brutal and indiscriminate that it provoked a far bigger uprising. India formally entered the conflict in December 1971. In just 13 days its army, with the Bengali rebels, defeated Pakistan and took 90,000 prisoners. Bangladesh had won its independence.

The Bangladesh debacle carried the disgraced Pakistani

army out of power, but only until the next military coup, in 1977. For his first two years in power General Muhammad Zia ul-Haq remained an international outcast. But when Russia invaded Afghanistan at the end of 1979, Pakistan gained an avalanche of aid from America and its allies, particularly Saudi Arabia.

General Zia tilted Pakistan sharply away from Jinnah's dreamy secularism. Yet in many ways his embrace of conservative Sunni orthodoxy reflected tensions inherent in Pakistan's "Islamic" identity. Even before he imposed a panoply of sharia punishments, Pakistan was renamed as an Islamic Republic in 1956, the Ahmadi minority was officially branded as non-Muslims in 1974, and alcohol was banned in 1977.

General Zia died in a mysterious plane crash in 1988, the year the Soviet Union withdrew from Afghanistan. But although Pakistan nominally returned to civilian rule, there was no real oversight over the sprawling military establishment. The army's influence and the tentacles of the intelligence apparatus reached into the press, the courts, universities and private business. Bolstered by continued American support, the Pakistani army has been free to indulge its obsession with India ever since. ■

## Vale of darkness

### Kashmir is trapped in a tragic cycle

LOUIS JOXE, THE French statesman who signed the peace agreement ending Algeria's bloody war of independence, later reflected that it was the magnificence of the country's landscape that intoxicated France. "It went to our heads," he said. Kashmir has a similar effect. Juxtaposed with the torrid flatness of the vast north Indian plain, its cool green highlands exert a magical pull. "We are twisted and coated in this beastly beauty," laments Ajaz Hussain, a grizzled journalist in Srinagar. "In a way it holds us hostage."

History has not been kind to Kashmir. In 1846, after the British had defeated the Sikh empire that then ruled the Indian north, a vast chunk of it was sold to the Dogra family for 7.5m rupees. So was born the princely state of Jammu and Kashmir. One of the many odd satrapies under the British Raj, its rulers were Hindu but their subjects mostly Muslim, particularly in the Vale of Kashmir. This was the jewel in the turban: a rich, well-watered upland plateau the size of a large English county whose people spoke their own language, Koshur.

At partition a century later, both new countries staked a claim to the state. Its maharaja dithered, toying with independence. Pakistan pre-empted him by sending armed "volunteers" to foment an uprising, for surely his Muslim subjects longed to join their new motherland. In lowland Jammu some Muslim-majority areas joined Pakistan, and tens of thousands of Muslims fled there. But the Vale did not rise up, even when the maharaja signed away his inheritance,



inviting India to oust the invaders.

The brief war that followed left Pakistan with a slice of Jammu and a sliver of Kashmir, along with Gilgit-Baltistan, a vast tract of spectacular mountains. India kept the mostly Hindu rest of Jammu, the Vale itself and the desert-like fastness of Ladakh. The UN suggested they both pull back their troops and hold a plebiscite. When Pakistan balked at withdrawing, India used this as an excuse to avoid a vote. And so things have stood, uncomfortably and with intermittent violence, until now.

While India and Pakistan spar, it is the Kashmiris who suffer. Some more than others: Jammu and Ladakh are loyally Indian, and in truth the Kashmiris of Pakistan have few links left with their cousins across the

border. The trouble lies with the 7m inhabitants of the Vale, who have chafed at India's mix of democratic carrot and military stick. "They treat us like a servant in a Brahmin kitchen, who has to be scolded twice a day to be kept in line," says Mr Hussain.

Yet Pakistan is no better. Repeating their folly and expecting a different outcome, the generals have kept sending waves of armed "volunteers". India, forced to maintain a huge garrison on permanent alert, hunts the intruders as terrorists, trampling on ordinary Kashmiris as it does so.

Public opinion on both sides remains in a state of agitation. Pakistanis see the Vale as a stolen inheritance, and pity the poor Kashmiris who, in fact, enjoy greater freedoms than they do. India—particularly now under the Hindu-nationalist BJP—resents its beautiful "crown" being inhabited by traitors and ingrates, as it sees them. Since the mid-1980s political turmoil has killed at least 44,000 in the Vale, and sadly forced the flight of its ancient 150,000-strong Hindu minority. The violence peaked in the early 2000s, and eventually fell to a tenth of that level, but in a renewed bout since last year more than 400 people have died. "Whether by intent or de facto, there has repeatedly been collusion between India and Pakistan over Kashmir, mainly to deny a voice to the Kashmiris themselves," says Siddiq Wahid, a Kashmiri historian. As for the Vale, the few credible polls suggest its people want neither India nor Pakistan but simply freedom, whatever that may mean.

## India

# The elephant in its labyrinth

## India is becoming more nationalist and more authoritarian

"WE USED TO make fun of Indians," recalls Deepak Perwani with a wistful grin. "They had no concept of a deodorant; they wore polyester!" Fashionably stubbled and sporting a crisp white shirt and jeans, the Pakistani designer gestures towards the racks of sumptuous dresses in his Karachi showroom to make his point. Then he frowns. "We had big cars and Coke and Pepsi when they just had Limca and Thums Up; but India was self-reliant, and in the end they were right."

Mr Perwani is proud of his country, even if it has often treated people of his Hindu faith badly. But like many Pakistanis he is keenly aware that the dowdy, ambling giant next door now moves at a far brisker pace. For the first half of their 70-year sibling rivalry it was Pakistan that made the bigger strides. Perhaps because it had less in the way of industry or infrastructure to start with, it was more energetic in building them up. But in all but two of the past 25 years India's GDP has grown faster; a decade ago it surpassed Pakistan's on a per-head basis, and the gap has relentlessly widened.

Indians are justly pleased with their progress, though they tend not to compare themselves with Pakistan but instead, aspirationally, with China. Yet most economists would contest Mr Perwani's judgment. India's post-independence self-reliance model may have brought pride but not prosperity. That began to arrive only when the old model, the "Licence Raj" of state planning and a closed economy, tipped India into financial crisis in the late 1980s. Since then successive governments have chipped

away layers of rules that had "protected", but also stifled, India's economy.

There is no doubting India's dynamism today. For example, in the early 1990s it made fewer than 2m motorbikes a year. Now it is the world's biggest producer, making 20m new two-wheelers a year, 18m for domestic consumption and 2m for export. Domestic air traffic has doubled in the past decade. In 2016 the number of passengers grew by 23%, prompting Indian airlines to order more than 1,000 new aircraft. India's software and services exports have nearly quadrupled over the past ten years, to \$117bn a year. And in February ISRO, the national space agency, lifted a record 104 satellites into orbit in a single launch, using an Indian-made rocket.

In May 2014 the BJP won a landslide election victory with promises of a smaller, cleaner and more effective state. The new government trumpeted programmes to supercharge foreign investment, support industry and deliver better services. Corporate India lapped it up. In a country inured to the convention that India's economy "grows at night while the government sleeps", in the words of the writer Gurcharan Das, a strong, active, right-wing government seemed just what was needed.

## But where's the beef?

Three years later Mr Modi remains electorally invincible. The political opposition has been scattered to India's provinces as the BJP's electoral juggernaut has rumbled from victory to victory in the populous centre. The government remains relentless in its self-promotion. In terms of economic performance, however, it looks as patchy as its predecessors. At the higher levels there is less corruption, critics concede, and some long-awaited laws have finally passed. But there have been few big, bold moves for reform, such as privatising the state-owned institutions that control 70% of banking (and have piled up colossal portfolios of rotten loans). A much-touted goods and services tax (GST) rolled out this month usefully replaces a welter of central and state duties with a unified national tax, and should raise extra revenue. But the government's mandarins went for an over-complicated structure that will tax, for instance, different sweets and snacks at different rates: 5% for rosogolla and gulab jamun, 12% for both plain and stuffed kachori, 18% for sweets containing saffron or having a silver coating, and 28% for anything chocolate-covered. Australia, with a far more orderly economy, imposes a flat 10% GST.

When Mr Modi's government has been bold, it has often charged in the wrong direction. Even government supporters now admit that its snap decision, in November 2016, to attack "black money" by scrapping the 86% of currency held in higher-value notes was a costly flop. A promise to waive farmers' debts helped the BJP to an electoral victory in India's most populous state, Uttar Pradesh, in March. But this generosity has inevitably encouraged farmers everywhere to demand the same, which by some estimates could cost some \$40bn.

In yet another sudden decision, Mr Modi's government in May decreed what amounted to a ban on livestock markets. This was explained as a humane intervention to prevent cruelty to animals, but was widely seen as a sop to the BJP's conservative



Sources: Society of Indian Automobile Manufacturers; Pakistan Automotive Manufacturers Association



Modi in victory mode

► north Indian Hindu base, which abhors the slaughter of cows. This cast a shadow over India's largely Muslim-run and highly successful \$4bn buffalo-meat-export business. And the government did not seem to have considered the impact on the 2.5m people working in related trades, from leather shoes to cricket balls. (However, in mid-July India's supreme court ordered a three-month stay on the market ban.)

All this has accelerated a slide in domestic investment, especially in manufacturing. This does not mean that India's economy is in serious trouble; its scale and diversity, its human capital and its momentum all point to stronger growth in the medium term. What worries India's chattering classes more is Mr Modi's apparent inclination, in advance of the next national election in 2019, to pander to his party's nationalist, conservative Hindu base rather than to India's merchant classes. "He has lost interest in reform," laments a Delhi businessman who voted for the BJP in 2014. "His constituency is too broad, and he's decided that populism is what wins votes."

Sectarian and caste tensions have risen, for which the BJP bears considerable responsibility. In election campaigns, and particularly in its successful pitch to Uttar Pradesh's 220m people, the party has harped on its predecessors' supposed "appeasement" of minority groups. In fact, India's 14% Muslim minority is, by most measures, little better off than the 17% who are dalits (the lowest caste, formerly known as untouchables). But that does not seem to matter. Indian Muslims feel they are being penalised for having dominated India in the past.

After his party's election victory in Uttar Pradesh, Mr Modi appointed as its chief minister a saffron-robed priest, Yogi Adityanath, who sponsors a right-wing Hindu youth movement. State police now harass non-vegetarian restaurants and Muslims who have allegedly seduced Hindu girls, but pay scant heed to incidents such as an attack in May by upper-caste Thakurs on low-caste dalits that left one person dead and dozens of houses torched. Elsewhere in India, cow "protection" vigilantes have repeatedly attacked Muslims suspected of slaughtering cattle, often with fatal consequences. The response from BJP-run state governments has been muted at best.

Mr Modi's government has pursued a Hindu-nationalist agenda in other ways, too. Religious conservatives have quietly displaced India's old, privileged secular elite at the helm of universities and other state institutions. The BJP has so far made less headway with plans to reform the judiciary, which remains wary of executive influence, but it has had some success with the press, much of which is owned by big business conglomerates keen to toe the government's line. Indian television, in particular, has been infected by a style of hyperbolic ranting that makes some debate programmes hard to watch. Media that remain critical of the government have faced problems ranging from withdrawal of government advertising to spurious tax raids, lawsuits on the basis of antiquated rules and harassment on social media by legions of pro-government trolls.

India's press remains diverse, exuberant and healthily inquisitive, but journalists now fear being branded "anti-national" for suggesting such things as less harsh means of calming Kashmir, or a more accommodating policy towards China. The sense that space for public discussion is closing up is so strong that dozens of retired officials from the elite Indian Administrative Service issued a public letter in June warning against "rising authoritarianism and majoritarianism that does not allow for reasoned debate, discussion and dissent".

Other Indians have a simpler way of voicing their worries. "It's ironic," sighs a Delhi dinner hostess. "We've come all this way in the world, and have a strong leader and a strong government, but this country is looking more and more like Pakistan." ■



## Pakistan

# The pushmi-pullyu

**Politicians pull in one direction, the army in the other**

RAJA UMAR KHATTAB speaks softly and carefully: "I would not say Karachi is a safe city, but it is better now than before." Seven years ago, the police compound that houses his wood-panelled office, with its photos of three different Pakistani presidents decorating him for courage in the line of duty, was hit by a truck bomb that left a 12-metre-wide blast crater and 20 dead. The diagonal scar on Mr Khattab's neck is another story; assassins had planted a bomb near his house. Such are the hazards of heading the elite counter-terror force in a steamy metropolis of 20m with a reputation as the most dangerous city in Asia.

Ordinary crime is not so bad in Karachi. The trouble is an explosive ethnic and sectarian mix, spiked with every flavour of radical Islam, primed by repeated waves of rural refugees, and inflamed by law-enforcement tactics such as the "encounter", a disturbingly common event where the official report says the victim died in an exchange of fire, but oddly enough his hands are tied and no police suffered a scratch. In each of two big waves of bloodletting, in the early 1990s and again from 2007 to 2013, perhaps 10,000 people were murdered in the city. The worst episodes involved not terrorists but rival parties vying for control of local government.

Things are improving. Mr Khattab notes that there have been no bombings in Karachi since his team busted a terrorist bomb factory last year. Politically motivated deaths have fallen steeply, from 2,029 in 2014 to 474 in 2016 and a mere 89 in the first quarter of 2017. One reason is the deployment since 2013 of the Rangers, a tough paramilitary force that has used overwhelming firepower, plus encounters, to arouse fear. "They don't have families here like we do," explains Mr Khattab.

Karachi does feel relaxed, if slightly battered. Shops stay ►



*Karachi does feel relaxed, if slightly battered. Shops stay open late, and on its bustling streets women mingle comfortably with men*

► open late, and on its bustling streets women mingle more comfortably with men than in strait-laced Lahore, Pakistan's inland metropolis 1,000km to the north. For those who live in the port city's expansive seaside suburbs, there are further compensations: big houses with poolside bars, bevy of servants and, behind high walls and security guards, night spots as fancy as any in Dubai or Mumbai.

Pakistan has far fewer billionaires than India does, but feudal habits are more ingrained. Miftah Ismail, chairman of the Board of Investment, reckons that the country, with a workforce of 65m, has around 10m domestic servants. "People talk about Islam and forget about class motivation," says Aatish Taseer, a New York-based writer who is half Indian, half Pakistani. "You'd think they would have done away with caste since everyone's Muslim, but it lurks everywhere just below the surface."

One caste that does nicely is the army. Officially, Pakistan's annual defence spending runs to a modest \$8bn, or 2.6% of GDP, but that does not include officers' generous pensions, which according to SIPRI, a Swedish think-tank, push the total closer to 4%. Further spending may be hidden in Pakistan's unusually large budget allocations for contingent liabilities. A range of industries owned by the armed forces, as well as of army-operated trusts such as the Fauji Foundation, a holding group with declared assets of \$3.3bn in 2015, also fall outside the budget.

The army is Pakistan's biggest property developer, too. Its Defence Housing Authorities own large tracts of prime land in every city, including 35 square kilometres along Karachi's waterfront and a chunk of Lahore's exclusive eastern suburbs amounting to a quarter of the city's area, complete with golf clubs, shopping malls and business parks. "They treat us very well here, you see," says a former general, explaining why he retired to Lahore rather than join some of his family in England.

Such privilege also explains the army's interest in sustaining the sense of threat, and in keeping Pakistan's politicians in check. There are many ways of doing this. Political parties—many of which are said to have been incubated by the army for this purpose—tend to pander to the army. The police and courts keep a respectful distance. And the army's media wing exerts a powerful influence on the press. Whereas some private television

channels are seen as eager mouthpieces, others face pressures that range from reprimands on the phone to threats and unfortunate incidents.

Given the opacity and unaccountability of the "deep state," it is not surprising that many Pakistanis see its hand behind the proliferation of extremist religious groups. In response to terrorist attacks such as one on a boys' school in Peshawar in 2014 that left 141 dead, the army has increasingly taken the offensive against groups that challenge the state. But other, equally radical outfits that direct violence at foreign enemies or at perceived domestic troublemakers continue to evade punishment. In private, journalists and politicians worry that harsh laws making blasphemy punishable by death, which have inspired more than one murderous vigilante attack, are being left in place to discourage dissent in general.

#### Crack of Dawn

In the face of such constraints, Pakistan's public life remains remarkably vibrant. Indian journalists expressed grudging admiration last year when *Dawn*, a Pakistani English-language daily, published embarrassing details of a closed meeting between top military and civilian leaders. The politicians were quoted as warning the generals that Pakistan risked diplomatic isolation if the army did not rein in specific extremist groups.

An equally telling exchange came in April this year when Nawaz Sharif, the prime minister, fired a top adviser in an apparent gesture to placate the army over what had become known as the *Dawn* leaks. The general in charge of the army's public relations riposted with a curt tweet saying this was not good enough. Much of Pakistan's press angrily declared that the army should answer to elected leaders, not the other way around. A week later the general withdrew his tweet.

Still, in the test of wills between civilians and the armed forces, it is the generals who retain the upper hand. The army has not taken action against the militants named in the *Dawn* leaks but has come up with a counter-narrative, suggesting the breach proves that civilians cannot be trusted with state secrets. Mr Sharif, for his part, remains vulnerable. He faces ongoing investigations into evidence, leaked in the Panama papers that exposed details of thousands of offshore bank accounts, that his family bought luxury properties in London.

Mr Sharif's centre-right party is still widely expected to hold on to power in elections due next year. It has a virtual stranglehold on the Punjab, home to nearly half the country's population. The rival centre-left Pakistan Peoples Party remains strong in the second-most-populous province, Sindh, but has been tarnished by corruption charges. A relative upstart, the Pakistan Tehreek-e-Insaf or PTI, led by Imran Khan, does well in Khyber-Pakhtunkhwa, a largely Pashto-speaking province. But despite Mr Khan's cricket-star appeal and his anti-corruption platform, his party has made little headway elsewhere. A dozen smaller parties represent particular ethnic or religious groups.

So after 70 years as a nation Pakistan still lacks a truly na ➤

#### Be prepared

Military capabilities, 2016

Armed forces	Pakistan	India
Active, m	0.7	1.4
Reserves, m	na	1.2
Paramilitary, m	0.3	1.4
Nuclear warheads	110-130	100-120
Defence budget, \$ (% of GDP)	7.5 bn (2.6)	51.1 bn (2.3)

Sources: IISS; SIPRI

► tional party. Provincial identities remain strong, and years of interference by the deep state, including three periods of direct military rule, have stunted the country's political evolution. "Democracy is all about conflict, so to make it work you need mediating institutions," says Ayesha Jalal, a historian at Tufts University. "This is where Pakistan is truly lacking." The country remains a collection of provinces speaking different languages, in theory united by Islam but in fact held together by the army.

This means that Pakistan is unlikely to change. Its economy will continue to underperform and its society will remain conservative. The rich will continue to hide behind high walls. "There may be green shoots, but they are not green enough or numerous enough to last," concludes an experienced Pakistani journalist. No wonder that many of his countrymen are placing high hopes on the great dragon peering down from the north. ■

### China

## One Lifebelt, One Road

### A leg-up from Pakistan's all-weather friend

MOVE OVER, DUBAI. Some day soon, cruise ships will disgorge frolicking pensioners not by the palm-fringed Persian Gulf but on the balmy Pakistan Riviera. From the muddy delta of the Indus to the barren Baloch coast, a twinkling constellation of attractions is set to rise: luxury hotels, water parks, golf courses, health spas, yacht harbours, night clubs, the works. To top it all, this "vacation product" will be developed in such a way that "Islamic culture, historical culture, folk culture and marine culture shall all be integrated."

Or so promises a prospectus, drafted for the Chinese government by the China Development Bank, that sets out a detailed vision of the China-Pakistan Economic Corridor (CPEC). Billed as a flagship of China's \$900bn One Belt, One Road initiative to build an Asia-wide infrastructure system tying China more firmly to its markets, CPEC promises to inject some \$60bn of Chinese investment into Pakistan. More than half is earmarked for power generation, but there is plenty left over for roads, seaports, airports, fibre-optic cables, cement factories, agro-industry and tourism.

For a country that has struggled to nudge its capital-investment ratio to 15% of GDP—compared with around 30% for India and 28% for Bangladesh in recent years—this gush of Chinese money comes as a godsend. Not only does it promise to energise the economy and fix such problems as chronic power shortages; it represents a strategic insurance policy against India. China has long been Pakistan's chief arms supplier, and has quietly provided diplomatic cover and technical aid for its nuclear programme. As Chinese officials are fond of saying, China is an "all-weather friend"—unlike America, which has lavished some \$78bn in economic and military aid on Pakistan since independence, but periodically gets stingy when Islamabad fails to curb terrorists.

Yet when *Dawn*, a Karachi daily, published excerpts from the CPEC plan in May, many Pakistanis were perturbed by what they read. Among other things, the plan envisages a big role in Pakistan's agriculture for the Xinjiang Production and Construction Corps (XPCC), an arm of China's defence ministry that since the 1950s has spearheaded the settlement of Han Chinese in the western border region. It is administratively autonomous, run-

ning whole cities as well as giant farms and industries, and is responsible for about 3m people, organised in army-style units. Military training comes in handy when Xinjiang's Muslim Turkic-speaking Uighur natives grow restless. "There is a hue and cry here when some town in Switzerland limits the size of minarets, but not a peep when China bans Muslim names, or limits the length of beards in Xinjiang," notes a Pakistani journalist.

### Mega megawatts

With solar power now cheaper than coal and gas, questions have been raised about China's gung-ho investment in traditional thermal plants. Two 1,100MW nuclear reactors that Chinese engineers are building west of Karachi have raised environmental concerns. The giant seaside complex is just 30km from the centre of one of the world's biggest and most densely populated cities. This particular reactor design has never been built on such a scale, and the power plants happen to sit atop the Makran Trench, a major faultline prone to severe earthquakes. In November 1945 a tsunami struck the coast nearby, washing away 4,000 people.

Factory owners are already complaining that a free-trade deal with China signed in 2007 has made their goods uncompetitive, and now economists fear that Pakistan may be mortgaging its future to Chinese finance. Other recipients of Chinese aid, such as Sri Lanka, have found themselves struggling to service their debts. "Whether those billions come in loans or FDI, the outflow will start within four or five years of the inflow," says Kaiser Bengali, a Karachi-based development economist. "It's a blueprint as clear as can be for colonisation."

Pakistani officials scoff at such qualms. The document leaked by *Dawn* dates from 2015 and has since been revised, says Ahsan Iqbal, the planning minister; and the Karachi nuclear power station is being built to stringent safety standards. "Those clubs and casinos are not happening," says Miftah Ismail, the investment minister. "And we are not just going to hand over land to the Chinese."

India views China's spreading footprints next door with dismay. Officials put on a brave face. The Chinese are naive, say some, and will end up getting stung by Pakistan's generals just as the Americans did. Others hope that once China discovers how far Pakistan's deep state is entwined with Islamist radical groups, it will show less patience than the Americans.

Privately, however, Indian officials worry that Pakistan's new patron may play the same role as America once inadvertently did, or as Pakistan's nuclear deterrent still does: to allow ►



► Pakistan to sustain the awkward status quo. "Indian leaders have always calculated that sooner or later Pakistan would have to seek a normal relationship with us," says Ashok Malik of the Observer Research Foundation, a Delhi think-tank. "CPEC gives them a new narrative: it puts them in China's sphere."

Diplomatically, India has taken a tough line on China's regional initiatives. The CPEC road, it claims, runs through disputed territory in Pakistan-held Kashmir. India has also sharply criticised China's broader, pan-Asian Belt and Road Initiative as a boondoggle that will trap smaller countries in debt.

India and China have had cool but calm relations since their brief border war in 1962. Each country claims territory the other holds. India's continued hosting of the Dalai Lama, who fled into exile in 1959, riles Beijing. For its part, India objects to China's occasional use of its diplomatic clout, bolstered by a permanent seat on the UN Security Council, to block its ambitions. "Our economy is growing faster and our population is about to overtake theirs," says an Indian diplomat. "But they still treat us like some poor, skinny appendage to Asia."

Even so, the virtually impenetrable barrier of the Himalayas has generally allowed the rivals to agree to disagree. Bilateral trade is around \$80bn a year, five times as much as China's trade with Pakistan; China is India's leading trade partner.

India is trying to preserve its own sphere of influence in South Asia through projects such as building roads and bridges in Bangladesh, hydroelectric plants in Nepal and ports and railways in Sri Lanka. But it struggles to match the largesse of China, which not only has a GDP five times India's but also a leadership that does not have to answer to voters. Last October Xi Jinping, on the first visit to Bangladesh by a Chinese president in 30 years, pledged \$24bn in loans, credits and infrastructure projects. India responded with a generous new aid package of its own.

In its effort to remain a strong, independent player, India is trying to perform a fine balancing act. But Dhruba Jaisankar of the Brookings Institution, a think-tank, reckons China may not be taking much notice: "When they talk about how America has declined and this has become a multipolar world, what they actually mean is, China is the new pole." ■

### Prospects for peace

## Don't hold your breath

### To forge a better relationship, both countries need to tackle their problems at home

FOR TWO COUNTRIES so much at odds, India and Pakistan remain remarkably alike. When their national cricket teams clashed in June at the Oval, a hallowed ground in London, passions on both sides ran equally high. The star-studded Indian team was tipped to win, but when Pakistan bowled out India's top players in short order, millions of Pakistani mobile phones gloated with snaps of a spectator at the match wearing a t-shirt inscribed "Winner takes Kashmir". In Kashmir itself, revellers lit the night sky with firecrackers. Outsiders mistake the Kashmiris' tradition of cheering Pakistan as a sign of love; in fact they are teasing the half-million Indian soldiers encamped in the Vale.

Even after 70 years as an independent country, India has still not quite gelled into a unified nation, and Kashmir is not the only chronic hotspot. Insurrections have simmered in India's remote, neglected north-east for decades, and Maoist guerrillas

who started fighting in the 1960s still rattle tribal regions in the eastern states of Jharkhand and Chhattisgarh.

Pakistan is no better. Its officials gleefully condemn India's abuses in Kashmir. But on one day last winter when Pakistani newspapers ran big headlines about a single civilian death in the Indian-administered Vale, a curt army communiqué was relegated to smaller print: "Over 100 terrorists have been killed since last night." The deaths were widely seen as revenge for the murder by suicide-bomb, a day earlier, of some 90 worshippers at a Sufi shrine, one of many attacks by Sunni extremists. In the past decade Pakistan has suffered about 55,000 casualties from terror-related violence, a third of them civilians. Whatever India's troubles in Kashmir, they pale next to such murderous attacks on targets ranging from Pakistani schoolchildren to Shia Muslims.

Whereas India's men in uniform face intense scrutiny in Kashmir, Pakistan enjoys a far freer hand. In trying to stamp out terrorism along its north-west frontier, its army has demolished whole villages. Balochistan, a province of rugged deserts that takes up 43% of Pakistan's area, has been in sporadic revolt since independence; one local NGO estimates the number of suspected separatists kidnapped by security forces there from the high hundreds up to 18,000. In 2016 alone, 728 people across Pakistan suffered "enforced disappearance", as counted by the commission of inquiry that investigates them. Some reappear alive and well, others as roadside corpses. The state flatly denies any unpleasantness. In a meeting at the Pakistani senate in December, a former interior minister insisted that the culprits in Balochistan are Indian agents disguised in Pakistani uniform.

On other shortcomings the countries are more evenly matched. Both have greatly underinvested in education and health, for example, forcing even the poorest to resort to private schools and hospitals. The formal economy generates few jobs; in Pakistan 73% of the non-farm workforce is off the books, in India over 80%. Both countries have made great strides in reducing poverty but remain starkly unequal, and indeed are becoming more so. In 2016 just 1% of Indians owned more than 58% of the country's wealth, up from a 37% share in 2000. Earnings are skewed geographically, too: India's richest states enjoy four times the income per person of its poorest, Bihar. In the smaller towns of Pakistan's Balochistan over 90% of the population lives in poverty, compared with only 10% in Lahore.

On the harder-to-measure index of intolerance, on which Pakistan used to be well ahead, India is beginning to catch up. Since the 1980s Pakistan has seen more than 60 extra-judicial killings of supposed blasphemers. The death in April of Mashal Khan, a Pakistani college student brutally lynched by his fellow students after being spuriously tagged as a blasphemer, made global headlines. Yet when Farook Hameed, a 31-year-old father of two in the Indian city of Coimbatore, was hacked to death by childhood friends for having repudiated Islam and declared himself an atheist, there was little reaction from abroad. Hameed's death was a rare exception; Indian Islam remains relatively diverse and tolerant. Yet the government's failure to curb murderous cow vigilantes or online trolls who brand dissent as treason, even as it uses state institutions to harass critics, means ►

### Calming down

Deaths from terror-related violence\*, '000



► there is less space for free expression.

Communal aggression in India has left Muslims and other minorities feeling increasingly vulnerable, but it seems to help win votes. The shifting electoral tide suggests a gradual transformation of India's underlying sense of national destiny, from being a pluralist country enriched by diversity to becoming a more narrowly defined Hindu *rashtra*, or state, in much the same way that secular Pakistan became an "Islamic" state. This is very much the vision of the Hindu nationalist groups whose zeal underpins the BJP's success; not coincidentally, their intellectual evolution shows striking parallels with Islamist groups such as the Muslim Brotherhood.

In some ways, the two countries seem to be goading each other to become more aggressive. "We used to think partition was a terrible mistake," admits a liberal-minded historian in Lahore. "But with Modi in power it looks more and more like Jinnah had it right all along." In the same way, ever more Indians have begun to conflate their enemies: Pakistanis, Kashmiris and Muslims in general, they feel, do not belong in their country.

India and Pakistan are unlikely to resolve their differences in the foreseeable future. On the contrary, impending elections, in Pakistan next year and in India in 2019, will make things worse: there are votes in taking a tough approach to the enemy. This does not mean that reconciliation is impossible, but that it will need to come through building up trust in a slow, plodding way rather than through some sudden diplomatic breakthrough. And the most obvious way to foster mutual trust is for both sides to start solving their own problems at home.

### Peace begins at home

That means, first of all, creating stronger, more confident democracies. Both countries urgently need to attend to their crumbling institutions, most importantly their underfunded, unreformed systems of justice and education. They also need bold electoral reforms. Political funding in both countries is opaque, and the first-past-the-post system can produce conspicuously unfair results.

In Pakistan, elected leaders need to gain fuller control of the levers of power, and ultimately to put the soldiers back in their barracks. It would help, too, if the generals were to end the impu-

nity enjoyed by extremist groups that terrorise their own fellow citizens. And Pakistan's politicians need a more solid base of popular consent. One way to achieve that would be to divide provinces into more efficient and representative units. Karachi, a huge, polyglot trading city built up from waves of refugees, is an uncomfortable appendage to the rural, backward Sindhi-speaking province of Sindh. Punjab is too dominant.

India, too, could do with splitting giant states such as Uttar Pradesh into more manageable units. That would mean more frequent but less distracting elections, allowing the ruling party at the centre to get on with running the country. Dividing Jammu and Kashmir would end the pretence that lowland Hindus and highland Muslims form a cohesive whole, and give the distinct people of the Vale a clearer voice in their future. In private, many of them say they would be happiest inside a democratic, secular India that acknowledges that they are different and treats them with dignity.

If India and Pakistan were more confident in themselves, they would be less worried by the normal human exchanges between countries that underpin peaceful relations. Instead, when tensions have heightened in recent months Pakistan has banned Indian films, while India has abruptly sent home Pakistani schoolchildren on a goodwill tour and denied visas to Pakistanis seeking medical care. Such pettiness is destructive.

Sadly, reconciliation may become even harder as time goes by. For young Indians in Kolkata or Bangalore, Pakistan is no longer viewed as a lost cousin but simply as a particularly bothersome distant neighbour. Younger Pakistanis follow the news from India more closely, but are increasingly alienated by their neighbour's rightward, Muslim-bashing drift.

The ruling establishments in both countries find that mutual enmity serves their interests better than friendship would. Shifting geopolitics has not helped. India had hoped that its growing economy and stronger ties with America would make a more isolated Pakistan keener for reconciliation, but China has moved nimbly into the breach, and so far looks set to entrench the differences between India and Pakistan further.

Seventy years ago the Pakistani poet Faiz Ahmed Faiz lamented the suffering and unfulfilled promise of partition thus: "This is not the dawn we longed for." Alas, that dawn has yet to arrive. ■



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**When India's and Pakistan's national cricket teams clashed at London's Oval, passions on both sides ran equally high**



### Italy's migrant surge

## Unwelcome choices

ROME

**Most Mediterranean migrants now are economic, and Italy does not know what to do with them**

THE encampment has no name, no water, no electricity and no right to be where it is: an abandoned bus park in a desolate stretch of scrub, east of the Tiburtina railway station in Rome. Most of the Africans dotted across the asphalt in tents or sprawled on mattresses in the enervating heat of a Roman summer have no permission to be there either. Many come straight off the boat, says Andrea Costa, head of Baobab Experience, the NGO running the camp: “For them, this is just the latest stage in a journey that may already have taken two years.”

So far this year, the number of migrants arriving in Italy by sea is up by 17% over the same period in 2016, to 93,335. Unlike the Syrians who poured across the Aegean in 2015, most of them are fleeing not from war or persecution, but for economic reasons. They do not qualify for humanitarian protection, and in most cases do not want to remain in Italy, but to move on to countries with better grey-market jobs.

Under the European Union’s Dublin regulation of 2013, the country where asylum-seekers first land is usually the one that should deal with them. Others are allowed to send them back to that state. Many of those in the camp are among the so-called *dublinati* (“Dublinated ones”), who have tried to leave Italy and been returned—many of them intercepted at the French frontier where stricter controls were imposed last year. “We have some

who have been turned back three, four times,” says Mr Costa.

Carlotta Sami of UNHCR, the UN’s refugee agency, estimates that more than 170,000 migrants are in Italian reception centres or are being housed by local authorities. The French blockade is one reason for the growing build-up. Others include the increase in arrivals and more rigorous identification, such as taking fingerprints, which blocks migrants from applying for asylum in other countries.

As the logjam grows, there have been protests in parts of Italy. And with a general election due by May, Paolo Gentiloni, the prime minister, cannot ignore the discontent. His government wants neighbouring countries to accept migrant rescue boats

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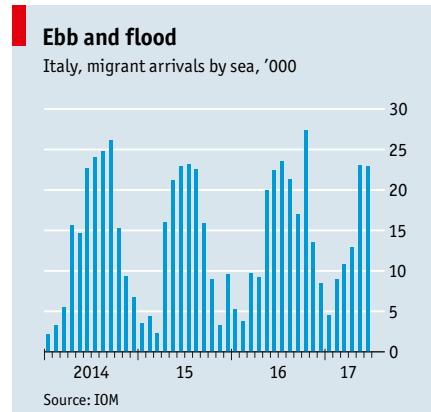
when exceptional numbers are picked up at sea, and for Italy’s EU partners to take more of those it already hosts. He also wants international action to stem the flow through Libya.

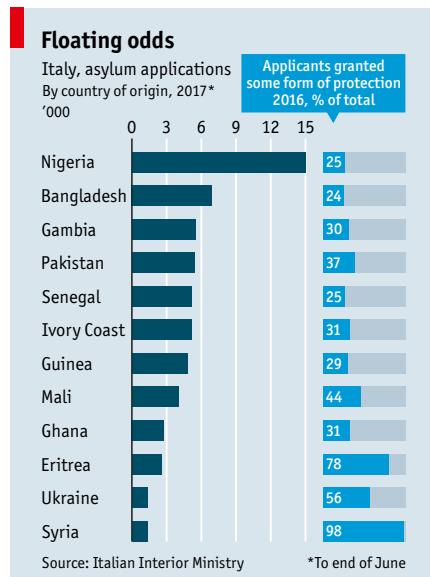
At Italy’s request, the member states of the EU’s border agency, Frontex, met in Warsaw on July 11th to discuss changing the rules that govern Triton, the agency’s search-and-rescue operation in the central Mediterranean. The following day Mr Gentiloni lobbied the leaders of France and Germany at a summit in Trieste. On July 13th the interior minister, Marco Minniti, flew to Libya to meet the mayors of towns on the coast and the southern border. Officials in Rome are working on a code of conduct for NGOs helping with search and rescue, some of which have been accused of entering Libyan waters in their eagerness to save migrant lives—claims they deny. And on July 18th, a junior foreign minister, Mario Giro, reiterated a threat (disowned by some colleagues) to issue emergency visas that would allow migrants to travel anywhere in the EU’s passport-free Schengen zone.

So far, neither bluster nor entreaty has succeeded. A review of the Triton treaty was agreed upon, but with no guarantee it will be altered to Italy’s satisfaction.

One of Italy’s biggest handicaps is a feeling in other capitals that, because of a mix of soft-heartedness and negligence, it has made itself a “soft touch” for economic migrants. An action plan issued by the European Commission this month is strikingly critical. It urges Italy to extend detention on arrival (currently limited to 72 hours), do more to persuade migrants to agree to be sent back to their home countries, speed up asylum procedures and be less generous in offering protection.

For example, this year has brought a curious surge in the number of Bangladeshi





arriving in Italy. They formed the biggest group after Nigerians. That may be related to the fact that in 2016, the last year for which figures are available, Italian tribunals extended some form of protection to 24% of applicants from Bangladesh, a poor country but scarcely Syria.

Italy has one of the world's lowest birth rates, and few countries are in greater need of immigrants. But an influx of undocumented migrants, many of whom end up idling in illegal makeshift camps, is no way to deal with that issue. For Italians, the Mediterranean migration crisis represents a humanitarian burden. Geography has saddled them with the problem, and their governments' disorganisation has exacerbated it. Their fellow EU members are not eager to help out. ■

## France and its army

# Stumbling into a fight

PARIS

**Emmanuel Macron faces an early leadership test as his army chief quits**

FOR a president usually eager to get the drama of politics right, Emmanuel Macron's provocation of an open confrontation with his armed forces this month was a notable stumble. On July 14th he celebrated Bastille Day, riding in an open-top military jeep on the Champs-Elysées alongside Pierre de Villiers, the chief of the armed forces, before reviewing a parade with his guest of honour, Donald Trump. Five days later the furious general quit, saying he could no longer "guarantee" the means to protect France and sustain its ambition.

The affair has become Mr Macron's first serious leadership test. He is likely to extri-

## Russia's pricey stadiums

# Extra time and punishment

ST PETERSBURG

## Corruption in football-stadium projects has Russian fans crying foul

FROM a boat cruising past the south bank of the Neva in St Petersburg, passing the baroque facades of the Winter Palace and the gilded dome of St Isaac's cathedral, it can seem as if the 19th century never ended in Russia. But turn to the river's north side and you will see something much more futuristic: Krestovsky stadium, a Japanese-designed football arena nicknamed "the spaceship". In June and July the newly opened stadium hosted several matches of the Confederations Cup, a second-tier tournament, meant to serve as a dress rehearsal for Russia's hosting of the FIFA World Cup next year (and, unavoidably, won by Germany's B team). Russians are hoping the competition itself works out better than the preparations. Krestovsky stadium was completed eight years behind schedule and 540% over budget.

The scandals that have plagued the project since construction started in 2007 have made it a symbol of the corruption in Vladimir Putin's Russia. A former vice-governor of the region has been charged with taking a \$351,000 kickback to award the stadium's lighting contract. Western newspapers report that the builders made extensive use of forced labour by North Korean workers.

Meanwhile, the building had to be redesigned. Engineers feared that a combination of heavy snow and high winds could cause the roof to fall in. The pitch

was torn up and replaced after failing an inspection by FIFA, international football's governing body. When the ground was finally finished, some players loved it: Michael Boxall, a New Zealand defender, termed it "top-notch". Yet certain opinions in football matter more than other ones. A Portuguese forward called it "a difficult pitch where the grass was somewhat too long"; unfortunately for the Russian groundskeeper, that forward's name was Cristiano Ronaldo.

The problems echo those of the Winter Olympics that Russia hosted in 2014 in Sochi, the cost of which eventually exceeded 1.5tn roubles (\$25bn). In 2015 the regional government of Krasnodar agreed to spend a further 3bn roubles to convert its Winter Olympic stadium into a football venue by removing the roof. The job was finished five months late, and although the stadium will host some World Cup matches, no home team has been found to play there afterwards.

Mr Putin is unlikely to lose sleep over his stadiums' bloated budgets. He is certain to be re-elected president next year. But in protests organised in June by his chief opponent, Aleksei Navalny, tens of thousands of demonstrators across the country chanted "corruption steals our future". Mr Putin hopes the World Cup will distract Russians from corruption. Debacles like Krestovsky stadium may instead focus their attention on it.

cate himself, says François Heisbourg, a French security analyst, but the spat was "avoidable, at least in terms of theatre".

The root of the dispute was money. General de Villiers, in office since 2014, was reappointed for another year on June 30th. He expected the military budget of €33bn (\$38bn) to be maintained, and was reassured by Mr Macron's campaign talk of raising it from 1.8% to 2% of GDP by 2025. Then, this month, the government realised that its promises both to cut taxes and to limit the fiscal deficit to 3% of GDP entailed spending cuts this year. After the general heard his budget would fall by €850m, he told parliamentarians on July 12th that he would not allow himself to "get screwed".

That broke with a military tradition of keeping mum on public affairs, which gives the army its nickname of *la grande muette* ("the big mute"). When the general added, in a social-media post, that no one deserves to be followed blindly, it challenged Mr Macron's assertive image, says Dominique Moïsi of Institut Montaigne, a

think-tank. The president retreated a bit, promising the armed forces an extra €1.5bn for 2018. But at a gathering of military chiefs on July 13th he called the general's behaviour "undignified" and told the men in uniform: "I am your leader." It was perhaps inevitable the general would quit, but 25,000 people have signed a petition demanding that Mr Macron apologise.

Mr Macron won't dream of doing that, but he might ask how the scrap could have been avoided. The government could have been clearer about its spending plans from the start. Now it faces the headache of finding the promised additional funds for the armed forces. This year's cuts, which delay equipment purchases, look wrong-headed: the armed forces lack, for example, fighter planes for training pilots, says Fabrice Pothier, of the International Institute for Strategic Studies, a think-tank. But personnel have already been slashed to the bone, leaving little else to cut.

Mr Macron is betting that faster economic growth will pay for more spending, ►

► eventually. He certainly remains ambitious abroad: his affable talk with Mr Trump of Franco-American military co-operation in the Middle East reflected his goal that France should be Europe's leading military power. He has also made clear that France will preserve its "full spectrum" of armed services, meaning it can deploy submarines, fighter aircraft and nuclear weapons, and can intervene with soldiers at a distance.

Potentially, the army's large domestic role could be trimmed. Operation Sentinelle, in force since the terrorist attacks in Paris in 2015, requires as many as 10,000 soldiers to be deployed to patrol city streets and guard schools. The mission,

part of a state of emergency, was supposed to be temporary. Instead it has dragged on, and become the French army's biggest operation anywhere in the world. Last year General de Villiers said the army was operating "at its limit" because of it.

Mr Macron's government has promised to end the state of emergency, once parliament agrees to a permanent law to strengthen domestic security. In theory, stronger police forces could take over some tasks from the armed forces. The incoming chief of the armed services, General François Lecointre, will have to get to grips with that—after he completes his first job: reaching an understanding with France's prickly young president. ■

University who has analysed similar changes in Hungary.

Polls show that 76% of Poles oppose a politicised judiciary, as the protests in Warsaw and other cities attested. The front page of *Dziennik Gazeta Prawna*, a daily, pictured Mr Kaczynski and two shadows; the title read: "The three branches of government". Outside parliament last weekend, one man brandished a handmade placard quoting Montesquieu. Another carried a copy of the constitution. "It has no meaning now," said his wife. State television, meanwhile, described the protests as a "coup". In a rant in parliament on July 18th, Mr Kaczynski even accused the opposition of murdering his brother, who died in a plane crash in 2010.

The European Commission dutifully expressed concern over the new laws. There is some talk of imposing sanctions on Poland. But Mr Kaczynski has drawn lessons from Hungary, where Viktor Orban, the autocratic prime minister, has rewritten the constitution and tightened the screws on civil society with little trouble from the European Union. "Kaczynski has learned from Orban that if you change facts on the ground, the commission can't get its head around it in time," says Ms Scheppelle. The EU has launched infringement procedures against Hungary, but the most serious sanctions, contained in Article 7 of the EU treaty, require a unanimous vote in the European Council. Poland would probably veto any effort to invoke them against Hungary, and vice versa.

Yet unlike Hungary, where Mr Orban's party enjoys a crushing majority, Poland is politically divided. PiS won just 37.5% of the vote in 2015. Civil society remains strong, and the government responds to public pressure: last year it backed down from a strict abortion law when faced with massive protests. The independence of Poland's judiciary may depend on how strongly Poles want to keep it. ■

## Populism in Poland

# Dependant judiciary

WARSAW

## Defying the EU, the Law and Justice party puts the courts under political control

**C**HOPIN played in the background and, as night fell, the crowd on the square in front of the Supreme Court in Warsaw sang the Polish national anthem. Someone projected "This is our court" onto the building's wall. Two weeks earlier, in the same square, Donald Trump had hailed Poland's role in the defence of Western values. But for the demonstrators who turned out on July 16th to protest against changes to the judicial system by the governing Law and Justice (PiS) party, it was those very values that were under threat.

Since taking power in 2015, PiS has set about dismantling the country's checks and balances. It has reduced the public broadcaster to a propaganda organ, packed the civil service with loyalists and purged much of the army's leadership. It has undermined the independence of the judiciary by stacking the Constitutional Tribunal with its cronies. In response, the European Commission warned Poland's government last year that such changes pose "a systemic risk to the rule of law".

On July 12th PiS stepped up its effort to subjugate the legal system to politicians' control with two new laws. Members of the National Judicial Council, the body that chooses judges, will henceforth be selected by parliament instead of by other judges. The minister of justice can now appoint and dismiss the heads of lower courts. A third bill, if signed into law, would allow the minister to sack every member of the Supreme Court. Among other responsibilities, that court rules on the validity of elections. Unexpectedly, Andrzej Duda, Poland's president, threatened to veto the bill, but with a few

amendments it is now likely to pass.

Jarosław Kaczynski, PiS's boss and the country's de facto leader, accuses Poland's courts of being "subordinated to foreign forces" and beset by a "collapse of moral principles". He also calls them a "stronghold of post-communists", referring to PiS's claim that Polish liberals have secret ties to the former communist regime. The reforms, he said, were needed to speed up proceedings and restore public confidence.

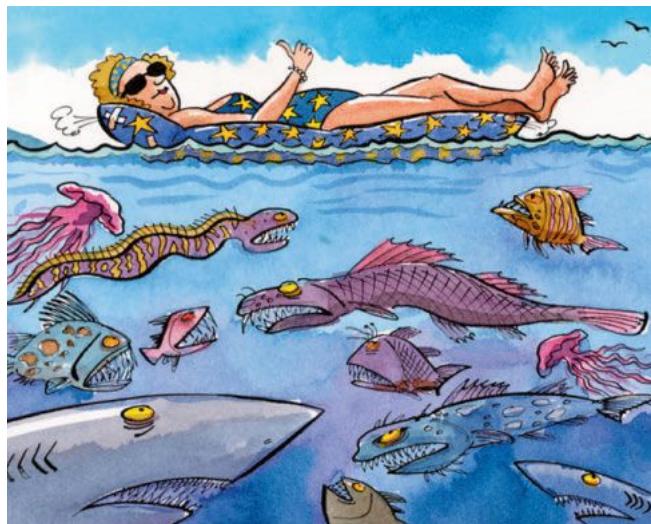
In fact, Polish courts are not especially slow. Critics believe PiS simply wants to stuff them with judges who will rubber-stamp its policies. From now on, judges will owe their careers to the governing party. "It's shockingly brazen," says Kim Lane Scheppelle, a sociologist at Princeton



The opposition tests its candle power

# Charlemagne | Sea change

**Emmanuel Macron is both revitalising the European Union, and dividing it**



LIFE comes at you fast in the European Union. Barely a year ago, with the wounds from the refugee crisis still gaping, Donald Tusk, the president of the European Council, could be heard warning that a British vote to quit the EU threatened to bring about the collapse of western civilisation. In half the countries on the continent, snarling populists eager for European disintegration were terrifying the pro-EU establishment.

Yet over the past few months, gloom has turned to sunshine. In June Mr Tusk declared that he had never felt so optimistic about the EU. Much of the credit goes to Emmanuel Macron. France's newly minted president has lifted pro-Europeans' spirits not only by winning election wrapped in the EU flag but by doing so in revolutionary fashion, emerging from nowhere to humble France's old parties (as well as Marine Le Pen, the nationalist who stalked Eurocrats' nightmares for months). Rarely do members of the European establishment get to feel like insurgents.

Some of the optimism needs tempering. Leave aside the fact that none of Europe's recent emergencies has been properly fixed, from Greece's economy, on an iv drip of endless bail-outs, to the migrants streaming across the Mediterranean. Mr Macron is certainly brimming with ideas to reform the euro zone as the core of the EU—from a common investment budget to the establishment of a parliament and a finance minister. But he has less to say on matters that encompass all EU members, notably the single market. Hailed as the saviour of Europe in some parts of the continent, elsewhere Mr Macron is quickly proving divisive. The new man in the Elysée seems to be pushing old French ideas.

Take EU labour policy. Perhaps to sugar the pill of the reforms he wants French unions to swallow, Mr Macron promises to tighten EU rules on the pay and conditions of Europeans working temporarily in other countries. To eastern European governments that looks like a bid to keep their low-cost workers out of the high-paid west, recalling the old French paranoia over "Polish plumbers". Mr Macron's recent charge that some countries treat the EU like a "supermarket" so unnerved the Visegrad four (the Czech Republic, Hungary, Poland and Slovakia) that they hastily created working groups with France to plead their cases.

That may be just the start. Mr Macron wants a Europe that "protects" citizens, a phrase that implies any number of policies,

from co-ordinated minimum wages to prohibitions on "social dumping" and harmonised tax rules. Fans of such ideas tend to sit inside the euro zone. Until recently Britain would try to prevent the euro zone from pre-cooking such deals and presenting them to the rest of the EU as *faits accomplis*. This helped smooth divisions between the euro-zone "ins" and the "outs". But Brexit leaves those outside the euro without a champion. Officials in Brussels note that after Britain leaves, the 19-member currency area will account for 85% of the EU's economy. This is a none-too-subtle way of locating the EU's "core".

The idea of *Kerneuropa* ("core Europe") has a long pedigree. First pushed years ago by Wolfgang Schäuble, Germany's current finance minister, and later taken up by Nicolas Sarkozy, one of Mr Macron's predecessors, it was advanced as a tool to manage an increasingly unwieldy EU. Today a core Europe built around the euro zone could find itself collaborating on thorny non-economic issues too, such as quotas for redistributing refugees. Should Mr Macron get his wishes for institutional changes to the euro zone, its political heft could leave the gaggle of non-members looking like an afterthought. To western European countries interested in more integration, this "multi-speed" Europe holds appeal. But eastern European governments detest the idea of formal consignment to a second class. "Either we get in the integration express or we'll be stuck in the depot on the second track," said Robert Fico, Slovakia's prime minister, last month.

## Wedged apart

If some eastern countries struggle to make themselves heard, it can be their own fault. Governments like Poland's sabotage their own case when they promulgate lurid horror stories about migrants or, worse, undermine the democratic values to which they signed up as EU members. Moderate governments that may sympathise with their arguments on the single market will recoil from association with countries in the grip of populism.

Several have joined Mr Macron in wondering out loud how countries that defy the EU's principles might be sanctioned, perhaps by cutting the generous subsidies they receive. If such countries continue to drift away from the EU's fundamental values, others will be more likely to plough on with their ideas for integration and leave the stragglers behind.

The divides are not always clear-cut: Slovakia, Slovenia and the Baltic states are euro members, and dislike being lumped in with the more intransigent easterners. Others may soon face hard choices, such as the Czech Republic, which sends over 60% of its exports to the euro zone. Germany will have to play a vital bridging role between a resurgent France, with which it can strike a deal on euro-zone reforms, and the eastern European countries plugged into its supply chains through the single market. Angela Merkel, who grew up on the wrong side of the Berlin Wall, will be reluctant to entrench division within Europe. But the chancellor's demand that all EU countries accept a quota of refugees creates its own European wedge.

Eurocrats will head off to their summer breaks more confident than they have been for years. Two cheers, then, for Mr Macron. But by restoring Europeans' hopes that there is life in their flagging project, the president is bringing to the surface tensions that lay dormant during the crisis years. The result could be a well-organised Europe running at different speeds. Handled badly, it may resemble a cacophonous mess. Of the many tests before the French president, this is among the largest. ■



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## Britain and the European Union

# The six flavours of Brexit

**The EU offers many menus, from Norwegian to Turkish. But Britain cannot expect to choose à la carte**

JUST over a year has passed since Britain voted to leave the European Union and Theresa May subsequently became prime minister. Nearly four months have elapsed since Mrs May invoked Article 50 of the EU treaty, setting a two-year deadline for Brexit that will expire on March 30th 2019. The clock is ticking. And at first blush there has been much activity: a big speech by Mrs May at Lancaster House in January; several government white papers; bills introduced in Parliament; and the start of formal Brexit negotiations in Brussels.

Yet for all this activity, almost no progress has been made towards deciding the form that Brexit should take. That is largely because the government is ambiguous over what it wants. Even issues that seemed settled in the Lancaster House speech have resurfaced since Mrs May lost her slim parliamentary majority in a snap election she called for June 8th.

This is the political backdrop to the Brexit talks in Brussels. The second round started this week between negotiating teams led for the EU by Michel Barnier, the European Commission's point man, and for Britain by David Davis, the Brexit secretary. Mr Barnier, who has a mandate approved by European governments, is focusing on the terms of the Article 50 divorce: specifically, the rights of EU citi-

zens in Britain and vice versa, how to avoid a border between Northern Ireland and the Irish republic, and Britain's exit bill.

Only when he can report "sufficient progress" on these will he be allowed to start discussing the long-term trade relationship between Britain and the EU. And making progress will not be easy. An initial British offer to give EU citizens broadly the same rights as Britons was met with complaints that it was insufficiently generous. The Irish border question, which has been elevated to top-level diplomatic talks, has no obvious answer. And although Britain has conceded that it faces an exit bill, its size is highly contentious. This week's round of talks concluded with little progress on any of the three main topics.

It is the long-term relationship that matters most. Because Mrs May and Mr Davis insist that the only interpretation of the referendum is that Britons voted to take back control of borders, laws and money, they are pursuing what is known as a hard Brexit: Britain must leave both the EU's single market and its customs union, end free movement of people from the EU and escape from the oversight of the EU's supreme court, the European Court of Justice (ECJ). Instead it will forge a "deep and special partnership" with the EU, including a comprehensive free-trade deal.

Yet Mrs May's election setback has raised questions over whether her hard Brexit should be softened. Although Labour's leader, Jeremy Corbyn, backs ending free movement, his manifesto also talked of keeping all the benefits of the single market. A week ago he refused to rule out staying in the single market after all. Meanwhile some ministers think the customs union should be rethought. The latest row is over Euratom, Europe's atomic-energy treaty, which Britain will leave on exiting the EU, but which some Tory MPs think it should rejoin as an associate.

Mrs May's lack of a majority in either house means that the role of Parliament, which had been sidelined, will be crucial. The government has just published its EU withdrawal bill and is promising at least seven other Brexit bills, ranging from immigration and agriculture to trade and customs. Getting all these through unamended will be extremely difficult. Opposition MPs talk of fighting the government all the way, with the help of perhaps a dozen Tory rebels, rather as happened to John Major when he was trying to ratify the Maastricht treaty in the 1990s. There is no clear parliamentary majority for a hard Brexit, so delivering one will be very challenging, to say the least.

### The cake problem

Why is there so much confusion? One answer is simply that extracting Britain from a 44-year marriage is horrendously complex. But the deeper point is that voters were never told the truth about the trade-offs inherent in Mrs May's version of Brexit. Brexiteers promised that, in the words of Boris Johnson, now the foreign secretary, Britain could have its cake and ►

► eat it. It would be possible, they claimed, to escape EU regulation and the ECJ, leave the single market, walk away from the customs union and save £350m (\$450m) a week in budget contributions—while still retaining the benefits of being an integral part of the world's biggest trade block.

This misleading claim explains why the other 27 EU countries were apprehensive about the government's approach to Brexit. Although they preferred Mrs May, who campaigned on the Remain side, to other Tories, they also knew that her main experience of the EU came in 2013, when as home secretary she negotiated Britain's opt-out from a raft of justice and home affairs measures and then chose which ones to opt back into. That cherry-picking approach was quite specific to that particular dossier; it cannot be done by a country turning its back on the club altogether. The EU 27 are determined to stop any attempt at repeating it with Brexit.

Talk by various ministers in London of no deal being better than a bad deal also went down badly in Brussels. A Brexit without a deal would certainly be bad for the EU. But it would be much worse for Britain: goods would back up with no customs agreement, air travel would stop without an aviation deal, tariffs and non-tariff barriers would appear overnight. The EU also frets over Mrs May's belief that her predecessor, David Cameron, failed to win enough concessions in his EU negotiations because of his unwillingness to walk away. In Brussels, the bargaining power is seen as being on the EU's side, not least because of Article 50's two-year deadline.

### Menu by menu

This is reflected in the EU's approach to Brexit, which is to insist that future relations must follow one of a number of fixed-price menus. Each menu has advantages and disadvantages; each has a few side dishes that can be added at the margin. But what is not permitted is to go *à la carte*. Mr Barnier underlined this recently when he declared that it was not possible to leave the single market but retain all its benefits, nor to quit the customs union but keep frictionless trade.

The first menu is full membership, which the Brexit referendum rejected. Second is membership of the European Economic Area (EEA), which links Norway, Iceland and Liechtenstein to the EU. EEA members are fully integrated into the EU's single market for most goods and services, but not for agriculture and fisheries. They are not in a customs union with the EU, which allows them to strike free-trade deals with third countries, although this means their exports are also subject to rules-of-origin inspection. But single-market rules require them to accept the EU's four freedoms of movement of goods, services, capital and, crucially, people. They

### Public opinion

## Softening?

### Most want to stay in the single market

**A** YEAR on from the referendum, few Britons have changed their minds about whether to stay or go. Polls find that, were there another vote, the result would be similar to the 52:48 split last June. They also show that most Remainers concede that Brexit should go ahead.

What sort of Brexit, though? The referendum provides a mandate for neither the hard nor the soft type, since Brexiteers claimed both that free movement would end, which implies a hard exit, and that Britain would stay in the single market, which suggests a soft one.

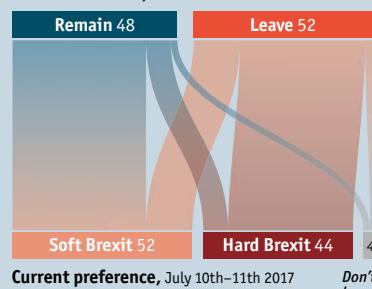
A poll for *The Economist* by YouGov finds that of those who voted Leave, 69% now favour hard Brexit and 24% prefer soft (3% have switched to Remain and 4% don't know). The hard approach taken by Theresa May is therefore in line with the desire of most Leavers.

But what if Remainers' views are considered? Forced to choose between hard and soft Brexit, 81% opt for soft, against 15% for hard. The upshot is that, among voters at large, soft Brexit beats hard Brexit by 52% to 44%. Few have it as their first choice, but it is the one option that commands a reluctant majority.

### Brexit means...

Britain, preferences for type of exit from the EU\*  
By vote in EU referendum, % responding

Referendum vote, June 23rd 2016



Current preference, July 10th–11th 2017

4%

\*Of those surveyed expressing a preference for Remain/Leave

Source: YouGov

also have to observe laws which they have no say in making and which (at least implicitly) are enforced by European judges. And they make contributions to the EU budget almost as large as Britain's, on a per-person basis.

The third menu is a Swiss one. Along with Norway, Iceland and Liechtenstein, Switzerland is a member of the European Free Trade Association (EFTA), but it is not in the EEA. It has two sets of complex bilateral deals with the EU that give it privileged

access to the single market for goods, though not for agriculture. But it is outside the market for most services (including financial services). It is also outside the customs union. It too has to observe the free movement of people, and to accept most single-market laws. And it makes a big contribution to the EU budget.

Mrs May's insistence on taking back control of borders, laws and money means that she has ruled out both these menus. Yet some frills could be attached to make either more appealing. EEA countries have an "emergency brake" to block the free movement of people, though it has never been used. Liechtenstein is allowed to set quotas for EU migrants. The Swiss are not, but they may be allowed to ensure that most jobs are offered first to Swiss citizens. As for budget payments, they are smaller than for full members and are mostly dressed up as research funds or aid to eastern Europe. But Britain would struggle to get a deal like that of Switzerland. The EU dislikes the complexity of the arrangement and would be unlikely to replicate it for the far bigger British economy.

The fourth menu might be called Turkish. Like San Marino and Andorra, Turkey is not in the EEA, EFTA or the single market, but it has formed a customs union with the EU for non-agricultural goods trade. This forces Turkey to apply common external tariffs fixed by the EU, but that brings the advantage that there are no barriers or rules-of-origin checks on exports to the EU. If Britain were to form a customs union with the EU, it could try to add some services as well (Turkey and the EU are negotiating an upgrade of their own customs union to do just that). The advantage of being in a customs union but not the single market is that it dispenses with the EU's four freedoms, budget contributions and the ECJ. It would also prevent the return of customs controls at the Irish border.

The main disadvantage of the customs-union option is that it precludes free-trade deals for goods with third countries. In effect, it would do Liam Fox, the international-trade secretary, out of a job. Yet some argue that barrier-free trade in goods with the EU is worth more than any number of hypothetical future free-trade deals with third countries being touted by Dr Fox. To quote the words of one MP, "We export more to Ireland than we do to China, almost twice as much to Belgium as we do to India and nearly three times as much to Sweden as we do to Brazil. It is not realistic to think we could just replace European trade with these new markets." This was Mrs May speaking in April 2016.

Fifth is the menu that the prime minister herself favours: a deep and comprehensive free-trade deal. Examples include the association agreement with Ukraine and two simpler trade deals with Canada and Japan, the latter not yet concluded. This ►

would preserve tariff-free access for most goods and could even cover some services (though not usually financial services). It would mean no free movement, no automatic adoption of EU regulations and probably no ECJ, though some dispute-resolution mechanism would be needed. The disadvantage is that free trade is not the same as frictionless trade. There would be customs controls and rules-of-origin checks, many services would not be covered and there would be non-tariff barriers thanks to differential regulation.

The final menu, which would also be likely in the end to follow from no deal, is to revert to trading with the EU under World Trade Organisation rules. This is not totally straightforward, because although Britain is a WTO member its tariff and import schedule is set via the EU, and having a schedule of its own would require dividing up the EU's import quotas for things like New Zealand butter. Trading on WTO terms implies small tariffs on goods such as cars and pharmaceuticals and larger ones on farm products. It does not cover services. Non-tariff barriers would remain. And there is the WTO's most-favoured-nation principle, which allows discriminatory trade practices only in an approved free-trade area. This means that, if Britain and the EU agreed to avoid mutual 10% tariffs on cars, they would have to offer the same deal to other countries.

#### It will cost you

The Brexit menus share two characteristics. One is that, except for the EEA option, they would take time, perhaps several years, to negotiate.

The second is that all would impose losses on the economy. Brexiteers rejected the Treasury's projections for the cost of Brexit last year as "project fear". But the Centre for Economic Performance at the London School of Economics has remodelled the trade consequences. It concludes that the hardest form of Brexit, a reversion to WTO terms, would cut trade by 40% over ten years and reduce annual income per person by 2.6%. A softer version like the Norwegian model would cut trade by 20-25% and reduce annual incomes by 1.3%. And these are just static effects. There would also be dynamic negative effects from lower investment and slower productivity growth.

Britons are unprepared for such a hit to their incomes. And the more distant Britain's relationship with the EU, the bigger the income loss. This is a crucial trade-off that Mrs May's government has been reluctant to acknowledge. Britons face a choice: to minimise losses from Brexit, they must cede some sovereignty to the EU, while to maximise freedom from Brussels, they must accept a larger drop in incomes.

What makes this choice harder is the state of the economy. Immediately after

the referendum Brexiteers crowed that the doomsters were wrong: the economy had not suffered and confidence remained high. Yet in the first quarter of 2017 Britain fell from being one of the fastest-growing economies in the EU to the slowest-growing, partly because of uncertainties over Brexit. Higher inflation, caused in part by a fall in the pound, is eating into real incomes. It is no wonder that Philip Hammond, the chancellor, is demanding that the economy should be given higher priority in the Brexit negotiations. Labour is also arguing for a "jobs first" Brexit.

Nor is trade with the EU the only problem. Before even getting into new trade deals, Dr Fox must find a way to replicate the 35 free-trade agreements that Britain currently has via the EU with 53 countries. The raw arithmetic is that some 44% of British exports go to the EU, 16% to countries with which the EU already has a free-trade deal and about 20% to America. Donald Trump may have promised an early deal with Britain, but experience shows it will be neither easy nor quick—and Mr Trump may then be long gone.

Third countries need to know the terms of Britain's trade with the EU before making bilateral deals. Monique Ebell of the National Institute of Economic and Social Research, a think-tank, calculates that downgrading from single-market membership to a free-trade deal with the EU would reduce British trade by about a fifth, whereas free-trade deals with the four BRIC countries plus America, Canada, Australia, New Zealand, Indonesia and South Africa combined would boost it by just 5%.

Next is the question of EU regulators, of which Euratom is but one. Some 35 EU regulatory bodies govern such things as medicines, aviation safety, environmental rules, financial services and phytosanitary stan-

dards. All come under the ECJ, so if that remains a red line for Mrs May Britain must set up a new set of regulators of its own. These would largely have to replicate the EU's rules to maintain regulatory equivalence. Most companies prefer to stick with the system they know, and many fear that setting up British regulators would not only take time and money but also force them to obey two lots of rules, not one.

There is much else to do. Sorting out what powers repatriated from Brussels should go to the devolved administrations will be testing; the Scots say they might hold up the EU withdrawal bill, and Labour supports them. Hundreds of treaties on matters ranging from air transport to data sharing must be renegotiated with third countries. Ways must be found to co-operate in scientific research, foreign policy, defence, security, counter-terrorism and intelligence. All of these raise yet again the issue of the ECJ, which has jurisdiction over data-sharing and various justice and home-affairs measures, including the European arrest warrant.

#### Sic transit gloria

One conclusion is that all this cannot possibly be dealt with by March 2019. To give the European Parliament time to ratify the Article 50 divorce, its terms must be agreed by around October 2018. Businesses that have to plan ahead, such as airlines, need certainty long before that. Without a deal allowing them to fly after Brexit, airlines might have to stop selling advance tickets. Banks and others want to know the rules they will face by next spring. And that points to something else, which has long been assumed in Brussels and is slowly being accepted in London: that there must be a transition period after March 30th 2019.

Yet it will not be simple to arrange one, because negotiators will want to know the ultimate destination, at least in principle, before agreeing the terms for a transition. Business lobbies and, quietly, the Treasury, are pushing to stay in both the single market and the customs union during transition, to minimise disruption. The simplest idea would be to prolong the status quo for three or four years, but that would not satisfy those who are keen to get on with leaving. An alternative might be temporary EEA membership, but Brexiteers might fear that the temporary arrangement would become permanent.

Transition will be key to making Brexit less disruptive. But on its own it will not resolve the dilemmas facing the government. For that, more honesty, less inclination to tar any critics as seeking to subvert democracy and greater readiness to acknowledge Brexit's trade-offs are required. One other thing is certain: those who said the only way to take the EU off Britain's political agenda was to have a referendum have been proved utterly wrong. ■



# Bagehot | Get stuffed

**British politics has become dangerously bad-tempered**



THE end of the current parliamentary session, on July 20th, is a good time to reflect on the mood of British politics. Several things catch the attention: anxiety about the future, exasperation at the childish antics of senior politicians, confusion about Brexit. But the most striking thing is anger. Politicians are angry with each other. The public is angry with politicians. The internet throbs with vitriol. American historians have dubbed the period after the war of 1812 “the era of good feelings”. The current period in British politics could be dubbed the era of bad feelings.

This week the cabinet infighting became so vicious that Theresa May, the prime minister, was forced to tell her ministers to shut up or ship out. Even more disturbing is a surge in violent threats. A year after the murder of Jo Cox, a Labour MP, by a far-right extremist, politicians of all stripes say that they fear for their safety, such is the intensity of the insults they face. The threats extend to journalists. The BBC was reportedly obliged to provide its political editor, Laura Kuenssberg, with personal security.

The worst of it is directed at women and minorities. Diane Abbott, Britain’s first black female MP, told Parliament that she had received tweets saying that she should be hanged “if they could find a tree big enough to take the fat bitch’s weight.” During the election campaign, Labour supporters in Bristol unveiled a banner of Mrs May wearing Star of David earrings. Many of the abusers regard criticism of their loathsome behaviour as an invitation to redouble their efforts. When Yvette Cooper, a Labour MP, gave a speech condemning the culture of abuse, she was accused of being a “bully”, a “saboteur” and, worst of all, a “Tory”.

Britain is not unique in all this. Donald Trump has ushered in an era of bad feelings in America that is even more unpleasant. The runner-up for France’s presidency, Marine Le Pen, leads a xenophobic party. Supporters of Turkey’s ruling party use online bots to harass reporters. Britain has experienced other spasms of political rage in recent decades, particularly over Margaret Thatcher’s breaking of the miners’ strike and Tony Blair’s support for the Iraq war. But none of this diminishes the seriousness of Britain’s current problems. Its mood is darkening as that of Europe is lightening. And it is engaged in history-shaping negotiations with the European Union that can be saved from disaster only with the help of clear heads and reasoned debate.

Why has British politics become so unpleasant? The answer to almost everything these days is Brexit, which has split the country and inflamed opinion. But Brexit is a symptom as well as a cause. Britain is suffering from a malign combination of economic disruption and stagnation. Smart machines are eliminating some jobs, reorganising others and spreading anxiety. Average pay has declined by some 7% since the financial crisis of 2008. People might be willing to accept disruption if it were accompanied by improvements in living standards, or perhaps to tolerate stagnant living standards if they were accompanied by stability. But the combination of the two is uniquely dangerous, unleashing a wave of populism that is gaining momentum.

Populists rage against the centrist establishment for failing to keep its promise of crisis-free growth (remember when Gordon Brown claimed to have abolished the boom-and-bust cycle?). And they demonise anybody who stands in their way as traitors to be crushed rather than as erring colleagues to be persuaded. Two cabinet ministers, Andrea Leadsom and Liam Fox, have questioned the patriotism of people who raise doubts about Brexit. The *Daily Mail* dubbed three High Court judges “enemies of the people” after they ruled against the government in a Brexit-related case. Internet trolls have suggested that Blairites in the Labour Party (some of whom happen to be Jewish) should be subjected to “the final solution”.

Two things are strengthening the poison. The first is the existence of sharp divisions within each of Britain’s main political parties. The Tories’ long civil war over Europe has entered an almost surreal phase. Rival factions brief against each other in the newspapers, talk about releasing scandalous personal tittle-tattle and even threaten to kick each other “in the balls”. Labour is enduring a soft coup. Emboldened by Jeremy Corbyn’s better-than-expected performance in the general election, the hard-left is threatening to deselect moderate MPs such as Luciana Berger, the member for Liverpool Wavertree, who has been subjected to a co-ordinated campaign of anti-Semitic and misogynistic abuse.

The second is the internet. Social media provide platforms for monomaniacs who previously raged in the privacy of their bedsits. People who might hesitate to berate their fellow citizens in person show no such qualms when it comes to sounding off against virtual targets. Bad-tempered tweets, dashed off in seconds, elicit bad-tempered responses, creating a culture of vitriol.

## Days of rage

Nastiness can be found at both ends of Britain’s political spectrum. But there is little doubt that the co-ordinated attacks are worse on the left. The Alt-Left is to Britain what the Alt-Right is to America. “As someone on the centre-left, there’s a huge difference between the abuse I get from right and left,” the *New Statesman’s* Helen Lewis tweets. “The right doesn’t put the hours in.” The left is more likely to use nastiness as a political tool. Mr Corbyn’s faction of Labour seems happy to work with the sort of people who carry banners displaying Mrs May’s severed head. John McDonnell, the shadow chancellor, urged people to take part in a “day of rage” against the result of a general election in which his party won 55 fewer seats than the Tories. He has also repeatedly used the word “murder” to describe the Grenfell Tower disaster.

The great achievement of parliamentary democracy is that it takes potentially violent political conflicts and civilises them. That achievement is now threatened—not just by foam-flecked maniacs in bedsits, but by some of the highest in the land. ■



**Spreading democracy**

## How to unrig an election

NAIROBI

**New methods and technology can make elections fairer. But it is still hard to dislodge an incumbent who is determined to cheat**

TO BE a democracy takes more than free elections. But no democracy can thrive without them. In some places votes are travesties, with incumbents sweeping the board; in others, free elections are entrenched. It is places in between—where multiparty elections are relatively new, the result is uncertain and the incumbents' willingness to accept defeat cannot be presumed—where there is most to play for.

Hope is strongest in various of sub-Saharan Africa's 48 countries. Not until 1991, in Benin and then Zambia, did the region see peaceful ejections of incumbent rulers at the ballot box (the long-democratic island of Mauritius excepted). Africa has now had decent transitions via elections at least 45 times. Plenty have slid back: in Zambia last year Edgar Lungu, the incumbent, passed the winning 50% mark by a suspiciously thin margin of 0.35%. His challenger, Hakainde Hichilema, was later jailed after his car convoy failed to give way to the president's. But note recent big successes. Elections in Nigeria in 2015 and Ghana last year saw incumbents fall. In January a Gambian dictator had to accept the voters' will. In June Lesotho's prime minister more graciously bowed out.

Next up is Kenya, on August 8th. It is the commercial, diplomatic and strategic hub of east Africa, yet its post-colonial multi-party elections, held only since 1992, have been fraught. Post-election violence in

2007 left at least 1,300 dead and 700,000 displaced. That poll and the following one, in 2013, are widely thought to have been flawed. This time both Kenyans and foreigners are trying to ensure a fair contest. Procedures for ensuring cleaner elections, some using improved technology, will be on trial. If they work well, hope for fragile young democracies everywhere will be boosted. Failure, meanwhile, would be felt as a blow in Kenya and beyond.

### This year's nail-biter

According to Ezra Chiloba, CEO of Kenya's Independent Electoral and Boundaries Commission, preparations are far better this time than last. A subsidiary of Safran, a French firm best known for aerospace technology, has delivered 45,000 tablets to check biometric voter identification at the 40,833 polling stations and to prevent multiple voting. Around 360,000 officials have been hired and trained to staff them and oversee the count. The voters' register of 19.6m has been vetted by KPMG, an international auditor. No one claims it is perfect: births and deaths often go unrecorded in Kenya's remote places. "But if the voter ID works it doesn't matter how bad the voters' roll is," says Don Bisson of the Carter Centre, which is monitoring the elections. "Dead people don't have voter biometrics," says an official of the commission.

To prove their identities, voters must

press thumb or finger on a tablet (shown on next page). Up come matching names and photographs. Officials in the polling stations will adjudicate in case of glitches. Votes are cast on printed ballot papers, once an identity is confirmed. The presidential result must be announced within seven days. If no one wins more than 50%, a run-off must be held within a month. (In 2013 suspicions rose when Uhuru Kenyatta squeaked past that mark by a mere few thousand votes, though he probably did genuinely win the first round.)

Last time half of the much clunkier devices in use failed to work on the day. Within a few hours most of their batteries had run out; this time polling stations will have spares. Kenya's mobile-network providers are co-operating; 3G covers only 78% of the country's territory but 98% of the stations are in range, says Mr Chiloba, and satellite phones may serve the few that are not.

By July 2nd about half of the 120m ballot papers for the six sets of elections (including for governors of 47 counties and for women's special representation) had been printed, though a last-minute snag has arisen. On July 7th the high court accepted the main opposition party's bid to nullify the tender for printing the ballots for the presidency amid accusations that the printing contract had been improperly awarded. If the commission's appeal fails, a new printer will be needed in a hurry.

Each party and candidate will be entitled to put agents in polling stations to oversee the count, which will be transmitted electronically and also manually to one of 290 constituency stations. The supreme court has decided that, once the result has been declared there, it cannot be changed at the counting headquarters. In Kenya and elsewhere, much fiddling has happened centrally. So this ruling is hugely ➤

positive, says a leading observer. (By contrast in Zimbabwe in 2008, when Robert Mugabe lost the first round of a presidential election, his election commission in the capital sat on the ballots for weeks before declaring that the challenger had narrowly missed the 50% mark that would have given him outright victory. Such lethal violence followed that he withdrew.)

Another vital safeguard is “parallel vote tabulation” (PVT), whereby party agents and independent observers can witness the count in randomly selected polling stations and announce each result, which will be agreed upon, photographed by smartphone and transmitted. Elsewhere, and in Kenya in 2013, PVT has been very close to the final result (see chart), making it far harder for an incumbent to inflate his tally, at least by a large amount. “PVT is a highly effective check on the electoral commissions,” says an expert from the International Foundation for Electoral Systems (IFES). It is thought to have been vital for ensuring fairness in Ghana and Nigeria. Kenya’s main opposition leader, Raila Odinga, says he will put five agents in each of the polling stations. Even just one in each would be a boon.

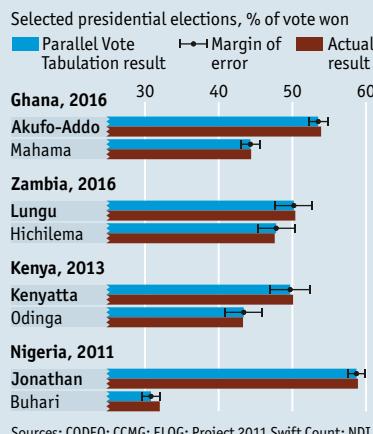
The independence of the electoral commission and the integrity of the supreme court as arbiter of disputes are crucial for a decent election. Monitors have become a powerful force, too. In Kenya the most serious are from the European Union, the Carter Centre and the National Democratic Institute, an American organisation. The Commonwealth and African Union are also sending teams. Among the heavyweights lending extra credibility are Thabo Mbeki, South Africa’s ex-president, for the AU; John Mahama, Ghana’s recently defeated president, for the Commonwealth; and John Kerry, America’s former secretary of state, for the Carter Centre.

Just as vital is that local citizens play a part in oversight. In Kenya the Elections Observation Group, an umbrella of 19 independent outfits, including church and human-rights groups, is set to send 6,000 watchers into the polling stations, compared with a few hundred foreign ones.

### And yet...

If this all sounds too good to be true, it may be. Nic Cheeseman of Birmingham University, an expert on elections in Africa, has warned against what he calls the “fetishisation” of technology. “In some cases the complexity of digital processes may actually render elections more opaque and vulnerable to manipulation—or at least the suspicion of manipulation,” he has written. Election machines in Ghana in 2012 failed more often where no observers were present, suggesting tampering with the intention of forcing a fallback onto the more easily fiddled manual system. Technology can even facilitate fraud. In Azerbaijan in

### Watch them like hawks



2013, the election commission accidentally jumped the gun by releasing an electronically verified result—a day before the vote.

“You can’t digitise integrity,” says John Githongo, a veteran Kenyan anti-corruption campaigner, implying that the corrupt politicians who still dominate the country’s politics will not let technology get in the way of fiddling the result if it goes against them. “The manual count is definitive,” says one foreign observer. “The electronic one is a backup”—and should not be considered a fail-safe. Yet paper ballots are always liable to be lost, stuffed or falsified.

The register, too, can be manipulated, for example by signing up under-age people in areas where the government is popular or by making it harder for officials to register voters where opposition is strongest. KPMG has recently expressed anxiety about loopholes. In countries where trust in authority is low, and fear is high, voters may even think that technology will let the government know how they voted.

Above all, technology cannot prevent some pervasive forms of election-rigging. Incumbents in Africa won 88% of direct presidential elections since multiparty elections became common a generation ago until 2010, says Mr Cheeseman. That was partly by using state resources to out-spend the opposition, often commandeering the civil service and sometimes the army. In Uganda the perennial challenger, Kizza Besigye, has repeatedly been arrested during campaigns. Incumbents often ensure biased media coverage. Technology cannot stop vote-buying or bribery.

“I don’t think technology will ever guarantee credible elections,” says one of the world’s most experienced monitors, who does not wish to be named. “The best it can do is increase the transparency and accountability of the data. By exposing the data to broader scrutiny there is some hope of creating broader acceptance of close outcomes.” PVT, for instance, depends on reliable technology.

Dispatching party agents to every Ken-

yan polling station will be hard. “You won’t find many Luos [who overwhelmingly back Mr Odinga’s coalition] wanting to be sent as agents to polling stations in the heartland of the Kikuyus [where their leader, Mr Kenyatta, will prevail]—or vice versa,” says a white farmer. “They’d be chased out or murdered.” It is unlikely that Mr Odinga will be able to put an agent in all 41,000 polling stations, let alone five in each. Nor are foreigners likely to observe polling stations in parts of the north-east, where Somali terrorism may be a threat.

Mr Odinga’s campaign has made much of accusations of unfairness, sighs a Western ambassador. It is widely believed that Mr Odinga was robbed of victory in 2007, and that in 2013 he genuinely trailed in the first round but probably not by so much that Mr Kenyatta truly won outright. This time at virtually every step he has accused the authorities and commission of bias against him, implying, for instance, that the printers are likely to print extra papers to aid ballot-stuffing, or that the returning officers are likely to be government stooges.

### Good losers required

In the end, an unrigged election requires the protagonists’ goodwill and willingness to accept defeat. Mr Kenyatta may be sincere in saying he will step down if he loses. But it is widely surmised that the Kikuyu old guard would stop at nothing to keep Mr Odinga out of power. “The one thing we all hope for,” says a foreign monitor, “is that the margin of victory, one way or another, will be wide.” Alas, it may be close.

It is in transitional democracies—countries struggling to embed a tradition of fair polls—that trust and transparency are most needed. In countries where the incumbent blatantly fixes the vote, nobody bothers with the effort that is going into Kenya’s poll. If it is fair and peaceful, like Ghana’s last year, it will mark a massive advance for east African democracy. Though a large dose of scepticism is warranted, it is still a hopeful moment. Hold your breath. ■



Thumbs up for a fair vote



### The Trump family's businesses (1)

## Searching for a Kushy landing

NEW YORK

**In the first of two articles on the Trump family's firms, we examine how Jared Kushner's White House job could harm both his firm and trust in policymaking**

**W**HEN the deal was struck just over a decade ago, for \$1.8bn, 666 Fifth Avenue, a 41-storey Manhattan skyscraper, became the most expensive office building ever sold in America. Now it is in limbo, awaiting billions of dollars of investment to rebuild it and raise it almost twice as high. Across the Hudson River, another hunt for money is under way, to build a property called One Journal Square in Jersey City. In June a property-investing start-up called Cadre attracted financial backing from Silicon Valley luminaries including Andreessen Horowitz, a venture-capital company.

The thread linking these ventures is Jared Kushner, Donald Trump's senior adviser and son-in-law, whose family business, like that of the president, is in property. Mr Kushner helped conceive all three projects. He has a "passive ownership interest" in Cadre (meaning he is not actively involved in its management). His family co-owns 666 Fifth Avenue and One Journal Square.

Unlike the president, Mr Kushner is not exempt from federal conflict-of-interest laws. He has taken steps to distance himself from his wide-ranging property business. Kushner Companies, a complex enterprise that is made up of dozens of limited-liability companies, or LLCs, has more than 20,000 flats and 13m square feet (1.2m square metres) of commercial space across six states. Before joining the Trump administration he stepped down as the

head of Kushner Companies and sold his stake in several properties, including 666 Fifth Avenue and One Journal Square.

Yet Mr Kushner kept his stake in many of the LLCs that make up the business. He still has a passive ownership interest in about 90% of his holdings in property, worth up to \$408m, according to his disclosures. His father, Charles Kushner (photographed with his son, above), has a big role at Kushner Companies. Jared Kushner's stakes in 666 Fifth Avenue and One Journal Square went into trusts owned by his family. A long list of lenders and partners to the family business could benefit from White House policies.

### Property fights

Jared Kushner is the chief architect of Kushner Companies in its current form. His grandfather, Joseph Kushner, a Holocaust survivor, developed garden apartments in New Jersey. Charles Kushner founded the business called Kushner Companies in 1985 and led it until being convicted for tax evasion, illegal campaign donations and tampering with a witness. Jared Kushner was 24 in 2005 when his father went to prison; the next year he bought the *New York Observer*, a newspaper, and went to work restoring his family's reputation. But the bigger transformation came later in 2006, when Kushner Companies said it would buy 666 Fifth Avenue.

The financial market quickly plunged

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and office rents fell with it. The company went on to sell 666 Fifth's prime retail space to a Spanish firm, Inditex, owner of Zara, and other investors. It also refinanced its debt in a transaction in 2011 that gave a 49.5% stake to Vornado, a real-estate investment trust founded by Steven Roth, a long-time partner of Mr Trump.

For a while the company's appetite for big acquisitions declined. But in 2011, with 666 Fifth refinanced, Mr Kushner began buying again (see chart on next page), according to Real Capital Analytics, a data firm. His targets included modest residential buildings in lower Manhattan and in Midwestern cities such as Toledo and Akron. He envisaged bigger developments, too, including One Journal Square and another in Brooklyn, now called Panorama, for its views of the Manhattan skyline.

Now that Mr Kushner is in the White House, two questions preoccupy observers. First, is his family business benefiting financially from his role and from his proximity to the president? Second, is he conflicted despite the steps he has taken to adhere to federal law?

Start with the question of financial benefits. This is a pivotal moment for the firm. It is seeking tenants for Panorama and new loans for a residential building along Jersey City's waterfront (in both of which Mr Kushner still has a stake). More important, it is also looking for investors for 666 Fifth Avenue and One Journal Square (in which Mr Kushner does not have a stake). But the scrutiny that has accompanied Mr Kushner's White House role appears to be hindering, not helping.

In January the *New York Times* reported that Kushner Companies was seeking equity capital for 666 Fifth from Anbang, one of China's biggest insurers, which has ties to Beijing's political elite. At the moment 666 Fifth Avenue's debt—of \$1.4bn, accord-

►ing to Vornado's recent filings—eclipses the value of the office building itself, says Jed Reagan of Green Street, a research firm. That is partly Kushner Companies' own doing, because of the price it paid and because it is intentionally letting the building slowly empty of its office tenants so it can be rebuilt. The new design, created by Zaha Hadid, an architect who died last year, would include a hotel, luxurious flats, new space for shops and would cost \$7.5bn.

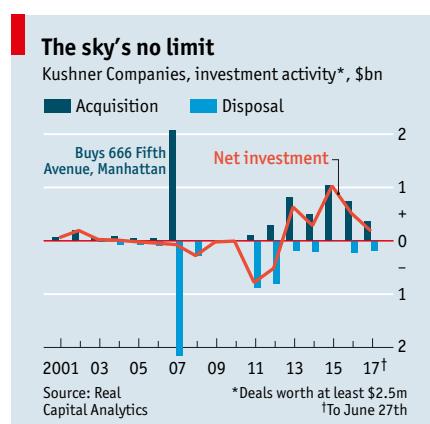
The talks with Anbang fell apart in March amid protests from ethics experts and from Democrats, who fretted about conflicts of interest and threats to national security. Another avenue also recently closed. For over two years, Kushner Companies has talked to Sheikh Hamad bin Jassim al-Thani, an eminent Qatari, about investing in 666 Fifth. This month *The Intercept*, a news site, reported that HBJ, as he is known, had agreed to invest \$500m if Mr Kushner could raise other money elsewhere. Kushner Companies confirmed on July 11th that talks had recently ended and that it is reassessing the financing structure of the redevelopment project.

Some speculate that Mr Kushner has looked elsewhere, too. In December he met with the head of a government-owned Russian bank that is subject to American sanctions. Vnesheconombank said it was a business meeting. The White House said that Mr Kushner was “acting in his capacity as a transition official”.

The proposed One Journal Square development has also hit trouble. In May Nicole Meyer, Mr Kushner’s sister, courted Chinese investors as part of America’s “EB-5” visa programme, which offers a path to citizenship for certain investors. In Beijing Ms Meyer touted One Journal Square, explained Mr Kushner’s new role in Washington and said the building “means a lot to me and my entire family”. That sparked accusations that the family was exploiting Mr Kushner’s public role. Kushner Companies apologised “if that mention of her brother was in any way interpreted as an attempt to lure investors”.

On May 7th Jersey City’s mayor, Steven Fulop, said the project would not receive the tax breaks and bonds that Kushner Companies had sought. The city might not have granted them in any circumstance—the Kushners had asked for a particularly generous package. But Mr Fulop, a Democrat, and city councilmen are up for re-election, and Mr Trump received just 14% of the city’s vote in November. Kushner Companies had already lost its anchor tenant, WeWork, a shared-office company.

If Kushner Companies is not yet benefiting from proximity to the presidency, the potential for conflicts remains enormous. Corporate-tax reform would have a sizeable impact on property firms, for example. Mr Trump has said he wants a 15% corporate tax to apply to pass-through



entities, which would include the LLCs that comprise much of the Kushner businesses (and Mr Trump’s as well). Loosening of financial regulation, expected under Mr Trump, ought to benefit lenders to Kushner Companies. Citigroup, for example, recently provided \$425m to refinance one of its projects in Brooklyn. Blackstone, which lent \$375m for Panorama, is raising an infrastructure fund that might be expected to find investment opportunities in Mr Trump’s infrastructure plan. And so on.

Richard Painter, the chief ethics lawyer under President George W. Bush, says that some of this “stinks to high heaven”. That

does not mean that Mr Kushner has or is likely to violate any law. The rules governing conflicts of interest bar him from “personally or substantially” participating in matters with a “direct and predictable” effect on his finances. But policies that benefit Mr Kushner’s parents or Kushner Companies’ partners may be allowed, depending on circumstances. “That’s the grey area,” says Larry Noble of the Campaign Legal Centre in Washington, DC.

What seems to have developed, in sum, is a lose-lose situation. Mr Trump’s presidency appears to be doing Kushner Companies as much harm as good. If potential business partners continue to be wary of the scrutiny that comes with involvement with a firm bearing his name, Mr Kushner might end up having to choose between his property interests and his public role.

Yet the list of potential conflicts is so long that public confidence in policymaking is at risk. A White House spokesman says Mr Kushner will recuse himself in any matter with “a direct and predictable effect” on entities in which he retains a financial interest. Those issues include EB-5 financing and affordable housing, he notes. But the White House has not published a complete list of matters in which Mr Kushner would decline to participate. And no such list is planned. ■

## The Trump family’s businesses (2)

# Not one to avoid a conflict

Six months into his presidency Donald Trump’s conflicts of interest look worse, and his handling of them less principled, even than many expected

“PRETTY close to a laughing stock.” That is Walter Shaub’s verdict on America’s standing in the world, at least from an ethics point of view, under President Donald Trump. Mr Shaub’s view counts: he stepped down this week as head of the Office of Government Ethics, a federal watchdog.

He is leaving his job six months early, frustrated at the president’s failure to separate himself from his businesses, at White House foot-dragging on disclosing ethics waivers for staff, at its failure to admonish a Trump adviser who plugged the family’s products in an interview, and more. “It’s hard for the United States to pursue international anticorruption and ethics initiatives when we’re not even keeping our own side of the street clean,” Mr Shaub told *The New York Times*.

No American leader has ever entered office with such wide business interests as Mr Trump. In the context of the country’s corporate landscape, his group is small, mostly domestic and rather mediocre, but

encompasses hundreds of firms that run hotels, golf courses, licensing agreements, merchandise deals and more, in over two dozen countries. Keeping tabs on the potential for self-dealing is “a monumental task”, says Kathleen Clark, an ethics expert at Washington University. In some areas, particularly abroad, increased scrutiny appears to be making deals harder to pull off. But in others, such as his American hotels and golf clubs, Mr Trump already appears to be monetising the presidency.

On becoming president, Mr Trump put his businesses in a trust. But it is run by two of his sons, Eric and Donald junior, and it is “revocable”, meaning its provisions can be changed at any time. Eric has since said he will update his father with profit reports, even though Mr Trump pledged not to talk business with his children while in office. Mr Trump, the Trump Organisation and his daughter, Ivanka, who owns a fashion business and is a White House adviser, have all hired ethics advisers to review deals for potential problems. But how the ►

process works is opaque.

Mr Shaub was unimpressed by Mr Trump's appearances at his own for-profit properties, which he has visited more than 40 times as president—most recently to attend the US Women's Open, held this month at one of his golf clubs, in New Jersey. The visits serve as a form of marketing, and his firm has not been shy about cashing in. Mar-a-Lago, a Trump resort in Florida where the president hosts other world leaders, doubled its initial fee for new members to \$200,000 after the election. The club made a profit of \$37m in the latest reporting period (January 2016–spring 2017), compared with \$15.5m in 2014–15.

When Eric Trump opened a golf course at Turnberry in Scotland in June, he said his family had “made Turnberry great again”. Staff wore “Make Turnberry great again” hats—a reference to Mr Trump's campaign slogan and, critics say, an attempt to cash in on his political power. Eric recently said: “Our brand is the hottest it has ever been...the stars have all aligned.”

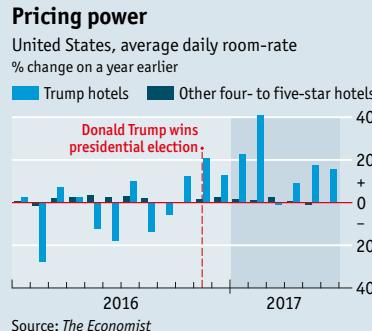
American golf courses have benefited from at least one of Mr Trump's policy decisions: his move to scrap a proposed environmental rule crafted to protect drinking-water supplies. The national golf-course association had long lobbied to have the regulation ditched, arguing it could have “a devastating economic impact”.

With some Trump projects, the benefits could flow the other way, from business to politics. Take a network of budget hotels, branded “American Idea”, dreamed up by the Trump sons on the campaign trail last year. They have signed letters of intent with developers in numerous cities, including four in Mississippi. Bringing jobs to Republican-leaning states that are struggling economically could further boost support for the president in such places.

Mr Trump's appointments also cause concern. He has picked Lynne Patton, a former event planner for the family, to run the Department of Housing and Urban Development's regional office covering New York. In that role Ms Patton will oversee Starrett City, a housing development that is part-owned by the Trump Organisation and that receives federal subsidies.

Foreign deals are no less troubling. The ethics plan laid out by Mr Trump in January promised no new foreign contracts during his presidency. But his company will press ahead with projects already in the works. There are many: an estimated 159 of the 565 Trump firms do business abroad. Some license the Trump name for skyscrapers and hotels, often to politically connected local partners.

An example of how such deals raise questions about Mr Trump's motives is the current Gulf spat over Qatar's alleged support for terrorists. Mr Trump has firmly backed Saudi Arabia, the United Arab Emirates and others in their boycott of



their neighbour. It is reasonable to ask if it is a coincidence that he has strong business ties with the Saudis and Emiratis but few with Qatar. Saudis are big buyers of Trump apartments, and the kingdom is investing \$20bn in an American infrastructure fund. A Trump-branded golf course in the UAE made Mr Trump as much as \$10m in 2015–16. By contrast, Mr Trump's past efforts to break into Qatar have failed.

Tracking such business relationships is not easy because of the opacity of Mr Trump's holdings. He makes liberal use of LLCs—anonymous shell companies that do not have to publish financial information—often in complex combinations with regular corporations. He has refused to publish his tax returns.

A fog surrounds those doing business with the Trumps, too. Many have grown less transparent of late. An investigation by *USA Today* found that the percentage of buyers of Trump condos structuring their purchases through LLCs has jumped from single digits to two-thirds. Suppliers are scuttling into the shadows, too. Those shipping goods to Ivanka's businesses in America typically identified themselves on bills of lading before the Trump presidency. Now they usually do not.

The Trumps' fallback position is that, le-



Golf conflict

gally speaking, it is impossible for the president to be conflicted because he is exempt from ethics laws. The thinking when Congress blessed this exemption, in the 1980s, was that the president's remit is so broad that any policy decision could pose a potential conflict. Nevertheless, some see avenues of attack. Several lawsuits, including one from Democratic lawmakers, accuse Mr Trump of causing harm by violating the constitution's Emoluments Clause, which forbids American officeholders from accepting money from foreign governments. One way he allegedly does so is by accepting payments from diplomats at his hotels.

The lawsuits particularly focus on the newly refurbished Trump International Hotel in Washington, DC. Owned by the federal government, the hotel's lease agreement includes a provision barring elected officials from holding an interest. But the General Services Administration, which manages federal property, ruled in March that Mr Trump's 60-year lease on the hotel did not breach that requirement since the property had been placed in a trust (as long as he received no proceeds while president). Having initially said it would donate all hotel profits from foreign officials to the Treasury, the Trump Organisation now says requiring such guests to identify themselves would be “impractical” and “diminish the guest experience”.

### Unpresidented

It remains unclear whether controversial transactions such as these will add greatly to the Trump empire's profits. Deals are often smaller than you might imagine: the developer behind Trump Tower in Mumbai, founded by a member of India's ruling party, paid just \$5m for the licence. Some deals are being scrapped under scrutiny—as was the case, in January, with a tower in the Black Sea resort of Batumi.

Moreover, forces beyond Mr Trump's control are likely to have a bigger impact on his businesses' profits than conflicted dealmaking. A recent analysis of his properties by Bloomberg found that his three flagship office blocks in Manhattan—Trump Tower, 40 Wall Street and 1290 Avenue of the Americas—are making less money than envisaged when loans were issued, because of the softening of the New York office market. The combined present value of the three blocks has fallen by an estimated \$380m over the past year.

Mr Shaub believes that Mr Trump has rejected ethical norms embraced by all other administrations since the 1970s. He recommends several changes to federal law, including greater powers for the oversight office and stricter disclosure rules. Rightly so. Whether or not Mr Trump's group benefits materially from his spell in office, any doubt over whether policies are crafted with the American people in mind or his own bottom line is corrosive. ■

## 3D printing and brands

# Model citizens

## The spread of 3D printing creates intellectual-property headaches

**G**ROOT, a character from Disney's film "Guardians of the Galaxy", is usually mass-produced by the entertainment company as a small, collectable figurine and sold by retailers such as Toys "R" Us. But just before the release of the second film in the franchise earlier this year, Byambasuren Erdenejargal, a Mongolian enthusiast, noticed that people in a 3D-printing group on Facebook were searching for a computer model of Groot. So Mr Erdenejargal decided to create one. He spent four days perfecting the design and its printability before uploading his creation to Thingiverse, an online 3D-printing community based in New York. His digital model of the arboreal creature has since been downloaded (and probably printed in physical form) over 75,000 times.

Fans of popular TV programmes and films have long used arts and crafts to express their attachment to fictional characters. Etsy, an online marketplace for artisanal products, is full of Harry Potter-inspired golden-snitch charms. But a combination of 3D modelling, scanning and cheap 3D printers allows fans to reproduce items like never before.

At Thingiverse, one of many such sites, people downloaded 6.6m ready-to-3D-print designs in the 30 days to July 11th. Globally, over 424,000 desktop 3D printers costing under \$5,000 were purchased in 2016, according to Wohlers, an American consultancy. As the 3D-printing community grows, companies that own well-known brands, such as media firms, are having to pay closer attention.

Some firms are taking a hard line



Do try this at home

against people copying their products. One option is to send intellectual-property "takedown" notices requiring people to remove their digital models from the internet. HBO, a subscription-TV firm owned by Time Warner, recently sent such a notice to a Thingiverse user who had 3D-printed an Iron Throne iPhone holder, in homage to its series "Game of Thrones".

Disney thinks it has a way to foil computer scanners, which can generate a digital model of an item, by adding reflective material to its plastic products. But like some other firms, it is also experimenting with the technology itself. In 2016 it started selling its own 3D-printed versions of its Star Wars characters through Shapeways, an American online 3D-printing service, which allows goods to be printed on demand when ordered by people without their own 3D printers.

Other companies are using 3D-printing providers to create merchandise for them, too. Universal Studios, owned by Comcast, a media conglomerate, is working with Sculpteo, a French 3D-printing service. Clément Moreau, Sculpteo's chief executive, worked with the studio to create a customisable 3D-printed version of the DeLorean time-travel car for the 30th anniversary of its 1985 film "Back to the Future". Although Sculpteo is responsible for printing the cars, being able to customise its design gives fans greater control.

Skoda, a Czech carmaker owned by Volkswagen, is also working with Sculpteo to offer its customers small, personalised models of their own vehicles. Indeed, although only a fifth of Sculpteo's total orders come from individuals wanting 3D-printing services, about half of the items it makes end up in the hands of consumers. That shows companies are using 3D printing as a manufacturing process and not just as a way to make prototypes.

Some brands are interacting more directly with modellers. A firm called MyMiniFactory, which is based in London,

works on behalf of brands to source high-quality 3D digital models from individuals for corporate websites. This avoids valuable IP being displayed next to crummy models that may well fall apart when printed. Agustin Flowlalistik, a Spanish 3D modeller, has collaborated with Capcom, a Japanese video-game firm, through MyMiniFactory. One of his most notable fan creations, however, is a series of nine geometric models of Pokémons created for last year's 20th anniversary of the franchise, which is co-owned by Nintendo, another Japanese firm. Uploaded to Thingiverse, his models have now been downloaded hundreds of thousands of times in total. ■

## Brazil's labour reform

# Bye-bye, Benito

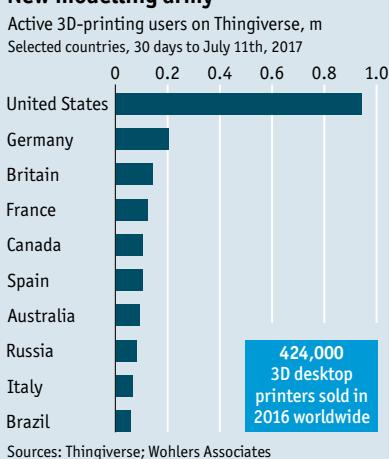
SÃO PAULO

An overhaul of Mussolini-era labour laws should encourage job creation

IN THE litany of bosses' gripes about Brazil's inclement business climate, rigid labour laws vie for pride of place with its convoluted tax laws and its licensing rules (on everything from health and safety to protection of cultural heritage). No wonder: Brazil ranks a miserable 117th out of 138 countries on labour-market efficiency, according to the World Economic Forum. Its rigid labour law was transplanted from Benito Mussolini's Italy in 1943. Employers find it thoroughly unsuited to a modern economy and cheered on July 13th, when the president, Michel Temer, signed into law the biggest overhaul of the unwieldy statute in 50 years.

The reform is a big victory for the unpopular Mr Temer, who is under investigation in a corruption scandal (he denies wrongdoing). It introduces more flexible

## New modelling army



▶ working hours, eases restrictions on part-time work, relaxes how workers can divvy up their holidays and cuts the statutory lunch hour to 30 minutes. It also scraps dues that all employees must pay to their company's designated union, regardless of whether or not they are members. Just as important, collective agreements between employers and workers will overrule many of the labour code's provisions.

Once the new rules take effect in four months' time, they will be valid for existing employment contracts, not just new ones. Mr Temer hopes they will dent Brazil's unemployment rate, stuck above 13% after a three-year recession.

Bosses are ecstatic about the changes. The National Confederation of Industry said that the reform represents "longed-for progress". Banco Santander, a Spanish-owned bank, said it reckons the reform could eventually lead to the creation of 2.3m new jobs.

Small firms also have much to gain. The new rules "formalise what we now do informally", enthuses a São Paulo caterer. The "bank" of actual hours worked by her cooks and waiters, necessary in a business where inflexible nine-to-five contracts make little sense, will now be legal. An executive at a European multinational says that an unofficial spreadsheet that keeps track of his employees' real time off, which he confesses to maintaining alongside an official tally of employees' annual 30 vacation days, can also be consigned to the dustbin. (The old law said that leave had to be split into at most two segments, with one holiday lasting at least 20 days.)

Such ruses have been common in Brazilian workplaces, but are risky. Employees who leave or are laid off regularly sue employers over the slightest of transgressions of the labour code, spurred on by litigious lawyers. Last year Brazil's labour courts heard nearly 4m cases (see chart), mostly brought by aggrieved workers. Fines levied on firms totalled 24bn reais (\$7bn).

The reform ought to reduce such legal risks, which can afflict firms whether they observe the rules or not. Gabriel Margulies, whose company, UnderMe, produces

50,000 pairs of undergarments a month, says he will at last be able to grant requests to staff who would prefer, say, to go home early in exchange for a shorter lunch break. Until now he has declined for fear of losing in court. That has not stopped former employees from suing in the hope that Brazil's famously worker-friendly judges side with them. Even unsuccessful suits are an unwelcome distraction from running a business, Mr Margulies laments.

Maurício Guidi of Pinheiro Neto, a firm of lawyers, observes that the reform might even change this confrontational workplace culture into a more consensual one.

But it remains to be seen how the labour unions will react, notes Marcelo Silva, vice-chairman of Magazine Luiza, a big retailer. The main union confederations have condemned the reform. They fume about the loss of revenue from dues. To placate them, Mr Temer has hinted he may amend the reform by decree, which is subject to a simple up-or-down vote in Congress, in order to phase out the obligatory dues gradually (and possibly water down some other provisions). But he cannot go too far. The only way for the scandal-hit president to keep his job may be to help some of his 13.8m unemployed compatriots find work. ■

### Soul traders

## Who you gonna call?

PARIS

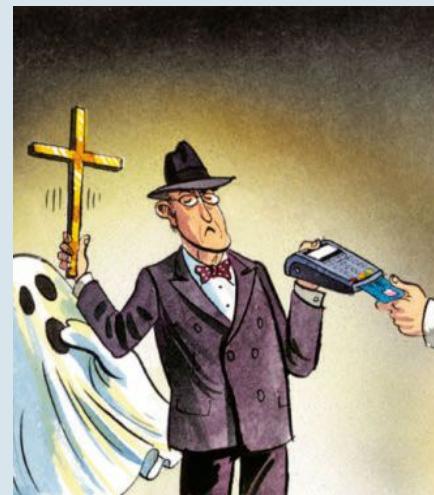
**The Catholic church has left a big gap in the exorcism market**

FOR A man poised for combat with evil spirits, Philippe Moscato looks remarkably at ease. In casual clothes and chatting about the tools of his trade—a "Vogel" crystal, compass, steel crucifix, pendulum and bag of salt from Jerusalem—he says he can deliver unreal results. Hired to exorcise an apartment in a wealthy district of central Paris, he predicts that the air will change. In the winter, he says, the owners will no longer need their central heating, the result of beneficial vibrations.

Mr Moscato's work involves first wagging a pendulum, supposedly to assess the flat's readiness, then lighting a candle, reciting from an exorcism manual, before blessing salty water that he splashes in every room. As he sprinkles, he delivers a flow of incantations. For an hour's work he pockets €155 (\$178). He has requests three or four times a week to de-spoil property, and exorcises a person on average once a week. Paris, Lyon and the French Riviera are the areas most contaminated by bad spirits, he says. Demand for ghostbusting fluctuates. Following terrorist attacks in France and Belgium, late in 2015 and early in 2016, respectively, Mr Moscato said he had "an incredible avalanche" of requests.

Alessandra Nucci, a writer on Catholic affairs, says that there are more and more "independent operators" like Mr Moscato in Europe. The church has neglected exorcisms for a long time, she says, despite strong demand from the public for them. There are some 100 exorcist priests licensed by the church in France, according to the International Association of Exorcists in Rome, but most are inactive.

Another independent operator, Grégory Noel, makes a speciality of exorcising farms. For up to €500 a pop, Jean



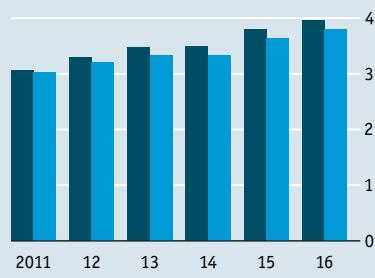
Clément provides a ceremony to release harmful "waves". A third, Jean de Paracol, in southern France, markets a service to help small businesses that have been blighted by black magic. Gabriel Despréaux, near to Paris, says he has practised for decades but only started charging a fee two years ago. He now works as many as 15 hours a day dealing with clients. In a good month his business is generating €12,000 before tax.

What might explain rising demand? Television programmes that depict exorcism, notably imports from America such as Fox's "The Exorcist", may play a part. The relative ease of finding practitioners online is also a factor. Word-of-mouth recommendations from satisfied customers matter, too. The owner of the Paris apartment is reluctant to say if her experiment helped to improve the air. "The whole thing is freakish, but just by believing, it might make a difference," she says. Then, as Mr Moscato leaves, a sunbeam suddenly lights up her apartment.

### Labour pains

Brazil, labour lawsuits, m

■ New cases ■ Rulings



# Schumpeter | Reinventing Uber

An action plan for the ride-sharing firm's next chief executive



IT IS said that Travis Kalanick, who resigned as Uber's boss last month, has been reading Shakespeare's "Henry V". Prince Hal's transformation, from wastrel prince to sober monarch, is doubtless one he would like to emulate. But as a guide to the ride-hailing firm's financial dilemma, "Macbeth" is the best play. This line especially resonates: "I am in blood stepp'd in so far that, should I wade no more, returning were as tedious as go o'er."

Uber has bled money for years in an attempt to become the absolute ruler of its industry. Once Mr Kalanick's replacement is found, voices will whisper that the firm, like Macbeth himself, is in too deep to alter course. But the new boss must change Uber from a company that sacrifices anything for its ambitions, to one which has a realistic valuation and uses resources efficiently.

Its product is elegantly simple. Uber makes a market between drivers and passengers and takes a cut of about a fifth of the fare. The more people use its service, the better it functions, with lower waiting periods for passengers, and better use of drivers' time. Some 55m people in 574 cities use it every month. Underlying sales were \$4bn in 2016, over double what they were the year before (all figures exclude Uber's Chinese arm, which it sold to a local rival, Didi Chuxing, last year). Uber's main trouble is high expectations. Its supporters think it will become the next Alphabet or Facebook. At its last funding round in 2016 (it is private), investors valued it at a whopping \$68bn.

But the next boss will have to deal with an income statement that is scarier than the Thane of Cawdor. Underlying pre-tax losses were \$3bn-3.5bn last year and about \$800m in the most recent quarter. Some \$1bn-2bn of last year's red ink was because of subsidies that Uber paid to drivers and passengers to draw them to its platform. At least another \$1bn went on overheads and on developing driverless cars; money is also being splashed on a new food-delivery venture and a plan to build flying cars.

To put its 2016 loss in perspective, that number was larger than the cumulative loss made by Silicon Valley's least profit-conscious big company—Amazon—in 1995-2002. Measured by sales, Uber is the world's 1,158th-biggest firm. Judged by cash losses, it ranks in the top 20. It is now eight years old, but still probably years away from being stable enough to make an initial public offering of shares. In contrast, Amazon went public at the age of

three, Alphabet at six and Facebook at eight.

Investors rationalise its valuation by assuming that in the long run it will be highly profitable, with a dominant share of a large market. In 2014 Bill Gurley, a well-known tech investor who was then an Uber director, estimated that the pool of consumer spending that it could try and capture might be over \$1trn, with ride-hailing and ride-sharing replacing car ownership. Today many Silicon Valley types think that estimate is too conservative.

But a discounted cashflow model gives a sense of the leap of faith that Uber's valuation requires. After adjusting for its net cash of \$5bn and for its stake in Didi, worth \$6bn, you have to believe that its sales will increase tenfold by 2026. Operating margins would have to rise to 25%, from about -80% today.

That is a huge stretch. Admittedly, Amazon and Alphabet, two of history's most successful firms, both grew their sales at least that quickly in the decade after they reached Uber's level, and Facebook is likely to as well. But over the same periods these firms' operating margins show an total average rise of only one percentage point. Put simply, Uber finds it desperately hard to make money. It is not clear that it breaks even reliably across the group of cities where it has been active for longest.

So the new chief executive will have to deliver a bleak message; that ride-hailing is locked in a vicious circle. Low prices and high subsidies lead to losses, so firms must raise capital continually, requiring them to exhibit rising valuations. To justify these they must frequently enter new cities and dream up new products. Even more speculative capital is then drawn in by the paper gains seemingly on offer. In the past year, ten of Uber's competitors, such as Lyft in America and Grab in South-East Asia, have together raised or are raising, roughly \$1bn. That will be used to finance still more price wars to win market share.

## Double, double toil and trouble

Uber is on course to use up its existing cash and credit lines in three years. Its next boss must break the cycle before then by cutting subsidies and talking down its valuation. It could lose market share and may need to exit scores of cities. On July 13th it said that it will merge its operations in Russia with a competitor. Similar deals need to follow. Although Uber should continue to invest in driverless cars, some of its more experimental "moon shot" projects will probably be for the chop. Its investors, including Goldman Sachs, Saudi Arabia's government and Jay-z, a rapper, could face paper losses. Staff paid in stock will be furious.

Yet over time the aim should be a firm with a lower market share of a more stable industry. Successful, dominant firms, such as Google and AT&T, don't seek absolute monopolies by killing off weaker rivals. They allow them enough space to plod on. That lowers the risk of antitrust problems and deters new entrants. By signalling that Uber's valuation is too high its new boss would knock valuations across the ride-hailing industry and slow the flood of speculative capital—in the end, a good thing.

Once the losses abate, the priority should be to create a more "capital light" model. Perhaps Uber could license its brand and technology to local partners in some markets. It could concentrate subsidies on customers who sign up to long-term contracts. The biggest impediment may be Mr Kalanick. With allies, he still controls a significant share, probably a majority, of the company's voting rights. Anyone taking on tech's toughest job must have the inner steel to confront him. They should remember another quote from the bard: "I must be cruel only to be kind." ■



China Inc

## Reinstatement

SHANGHAI

**Reforms meant to fix China's ailing government-owned firms instead have emboldened them**

**A**CCORDING to company lore, Yunnan Baiyao, a musty-smelling medical powder, played a vital role during the Long March. As China's Communist troops fled from attacks in the 1930s, trekking thousands of miles to a new base, they spread its yellow granules on their wounds to stanch bleeding. To this day, instructions on the Yunnan Baiyao bottle recommend application after being shot or stabbed. Many Chinese households keep some in stock to deal with more run-of-the-mill cuts. But the government has recently put its maker into service to treat a different kind of ailment: the financial weakness of state-owned enterprises (SOEs).

Yunnan Baiyao has emerged as a poster-child of China's new round of SOE reform. The company, previously owned by the south-western province of Yunnan, sold a 50% stake to a private investor earlier this year. The same firm had tried to buy a slice of Yunnan Baiyao in 2009 but was blocked. Its success this time has been held up in the official press as proof that a push to overhaul sluggish state companies is at last gaining momentum under Xi Jinping, China's president.

But for many investors and analysts, the Yunnan Baiyao case proves just the opposite: that SOE reforms are stuck in a rut. The sale, after all, left half the company in state hands. And a traditional Chinese medical powder is far removed from industries such as energy and finance, which the gov-

ernment deems strategic and is less willing to open to private capital.

It is hard to overstate the importance of getting SOE reforms right. In the 1980s, when China was starting to open to the world, the state sector dominated its economy, accounting for nearly four-fifths of output. A big factor behind China's remarkable growth since then has been the relative decline of SOEs, to the point that they account for less than a fifth of output today. As state firms stood still, a vibrant private sector sprouted around them.

Over the past few years the state sector has, by several measures, stopped shrinking. There are still more than 150,000 SOEs in operation, two-thirds owned by local governments and the rest under central control. Private firms are much more productive, but state firms gobble up a disproportionate share of resources. They take about half of all bank loans and are the main culprits behind China's big increase in corporate debt. Since 2015 investment by SOEs has grown faster than private-sector investment, reversing a decades-long trend (see chart 1 on next page).

For China this has the makings of a damaging cycle. As growth slows, the government leans on SOEs to spend more; but this drives up their debt further and so weighs on the economy. Putting a stop to this sequence is vital for China if it is to become wealthy. The IMF estimates that an ambitious programme of SOE reform could ex-

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pand the Chinese economy by nearly 10%, or about \$1tn, over the next decade.

The fate of China's state firms is also a global concern. By international standards, they are already massive. China's 200 biggest SOEs account for 18% of global revenues of integrated oil and gas companies, 6% in carmaking and 5% in construction (see chart 2). A series of mega-mergers currently under way is concentrating even more power in the hands of a few, giving them the heft to barge into new markets. For foreign firms this can smack of unfair competition, as if they are fighting against the Chinese state. The temptation for other countries to block foreign investments by SOEs will only increase, setting the stage for bitter disputes.

### Market failure

Back in 2013 Mr Xi seemed to grasp that change was needed. He vowed that market forces would play a "decisive role" in allocating resources and declared that reform of SOEs was a priority. Although a big-bang privatisation was never on the cards, the hope was that the government would make SOEs better run, more competitive and less coddled. There has been a bewildering array of directives and pilot programmes since then but little real progress. The fear is that the reforms, taken together, not only fail to solve the most pressing problems, but might even be aggravating them. SOEs are getting bigger, not smaller; their management has become more conservative; and their deficiencies are beginning to infect the economy more widely.

Keeping track of all the different experiments that fall under the heading of "SOE reform" is a full-time job. When Mr Xi put it on the agenda in 2013, the government broke it down into 34 separate initiatives, farmed out to different departments and agencies. It has since published at least 36 ►►

► supplementary documents and launched reform trials at 21 different firms. Provinces and cities have followed up with dozens of plans, guidelines and trials of their own.

Some promising ideas are afoot. After years of discussion, China has started to let state firms award shares to employees as part of their pay packages. SOEs had tried such schemes in the 1980s and 1990s, but the government stopped them, fearing that senior executives were siphoning off state assets, much like Russia's oligarchs.

Shanghai International Port Group (SIPG), a city-owned firm, is one of the companies pioneering employee ownership of shares. It also demonstrates how local SOEs, though smaller than their national peers, are often huge themselves: SIPG is the principal operator of Shanghai's cargo port, the world's busiest. In June 2015, as a first step, it allocated 1.8% of company shares to employees; some 16,000 of its 22,000 employees now hold a stake. Ding Xiangming, vice-president of the port group, believes he is already seeing results. "Workers are more focused on our company's growth," he says.

### Public and private

Shanghai is also an example of how parts of the country can outpace others in SOE reform. Last August the *People's Daily*, the Communist Party's main newspaper, hailed the city as a model for other local governments. Shanghai moved quickly to classify its SOEs as either commercial (eg, SAIC Motor) or in public service (eg, Shanghai Metro). This is a distinction that the central government wants to see applied nationwide, so that companies classified as commercial can be treated more like private firms. Shanghai's commercial SOEs have more leeway to hire managers from the private sector and to pay market rates.

Another potentially promising idea is "mixed-ownership reform", a fancy term for allowing SOEs to sell stakes to private investors, as in the case of Yunnan Baiyao. The thinking is that private shareholders will demand more from SOEs, especially if their investment is combined with a seat on the board. As a concept it is not new: many big SOEs have been listed on the stockmarket since the early 2000s, attracting outside investors. But Cao Zhilong of Shanghai United, a law firm, thinks this round of mixed-ownership reform could lead to bigger deals: "The word privatisation is not used. It is too sensitive. But the state can sell a majority."

At national level, the mixed-ownership trials have been disappointing. The state is mainly selling minority stakes in the subsidiaries of large groups, such as a 45% share in the logistics arm of China Eastern Airlines, a deal completed in June. But for local SOEs, outright sales are easier. Tuopai, a small town in Sichuan, sold a majority stake in its struggling liquor company to a

### On the rebound

China, state-controlled firms' share of fixed-asset investment\*, %



Chinese private-equity firm last year. The change in culture is already apparent. The company has rolled out slick new adverts and uses designer bottles instead of the old ones with ill-fitting labels. It has also cut about a third of production staff to make way for more automation, the kind of unpopular decision that a government-owned company is loth to make.

In general, though, such deals are rare. This cannot just be blamed on the government; a basic dynamic is also at work. "Profitable SOEs don't want to sell to outsiders and no one wants to buy a struggling SOE," says Hong Liang of Everbright Law.

What can be blamed on the government are conflicting messages. Less noted at the time of Mr Xi's 2013 pronouncement about market forces, but more glaring now, was his declaration that SOEs should continue to play a dominant role in the economy. The implication is that he wants state firms to be better run—hence the emphasis on the market—but only so that they better serve the party by helping it to manage the economy at home and carry China's flag into foreign territory. Mr Xi has made this point in increasingly strident terms. At a meeting on SOEs last October he devoted his comments not to reform but to the necessity of strengthening the party's grip. "The party's leadership of SOEs is a major political principle, and that principle must be insisted on," he said.

People who work in and with SOEs report a palpable change in atmosphere in recent years. "Party officials are not the same as the technocrats who used to run the SOEs," says a top banker. "They don't take risks. Doing nothing is what's safe." Some of the most capable employees are leaving SOEs altogether. Political education, always a part of life in state firms, has been stepped up. One manager who recently quit a big state bank said that a campaign exhorting workers to study the party constitution had been unusually intense.

At the same time the government has capped pay for senior executives, concerned that they were getting more than government employees of equivalent ranks, stoking resentment. Yet on an inter-

national basis, SOE bosses are dramatically underpaid. The president of PetroChina, the country's biggest oil company, earned 774,000 yuan (\$112,000) in 2016; the CEO of Chevron, a firm of roughly the same market value, pulled in a handsome \$24.7m.

Signs suggest that after seeing morale suffer without any improvement in performance, the party is rethinking at least some of its policies. A senior official in charge of supervising SOEs said in June that it would be wise to delegate power to company boards, giving them more say over long-term planning and hiring decisions. Li Keqiang, China's prime minister, told a meeting of 100 leading executives in April that the government might try to implement a system of performance-linked pay at big state firms. At a conference on July 15th, Mr Xi said it was vital that SOEs reduce their excessive debts (see chart 3 on next page).

But Mr Xi's emphasis on party leadership has also created cover for those seeking to defend and even expand state power. The most important role in this is played by SASAC, the arm of the government that oversees most SOEs. It has pushed for the creation of bigger "national champions" under its control. It has combined China's two biggest railway-equipment makers and its two biggest shipping groups, and is reportedly working to knot together its two biggest chemical producers. Medium-sized companies, too, have seen plenty of such activity, affecting property, ports, cement and more.

Some mergers make sense: for instance, the steel sector is highly fragmented, a result of local protectionism. But most combinations look more dubious, because state firms are already oversized. The average SOE has about 13 times more assets than the average private-sector firm, according to World Bank estimates. What is more, in many industries, the only competition faced by state firms is from other state firms. Indeed, part of the rationale for the mergers is to prevent SOEs from butting up against each other as they go abroad to ➤

### Things of state

China, 200 biggest state-controlled firms' share of global market, by revenue, %

2008 2015



win business, as had happened with rail-way-equipment makers.

In the 1990s, when SOE reforms began, the vision was of the state controlling whole industries but with the companies in them battling each other to promote better management. The imperfections of this scheme are clear, judging by weak returns in the state sector. But the government's response is to create even bigger monsters. Chinese economists have described them as "red zaibatsu", a reference to Japan's sprawling, slow-moving conglomerates. Yanmei Xie of Gavekal Dragonomics, a research firm, is even blunter: policymakers "are trying to create conglomerates that can dominate domestic and international markets through sheer size".

The risk is that such supersized SOEs could hurt the global economy. In a paper published earlier this year, Caroline Freund and Dario Sidhu of the Peterson Institute of International Economics, a think-tank, argued that businesses around the world were operating in more fragmented environments, with the exception of sectors in which Chinese SOEs have large footprints. In these sectors, such as mining and civil engineering, concentration has increased as China's state firms have bulked up. Normally, it is the most productive companies that grow the fastest. China's SOEs, by contrast, are much less efficient than their international counterparts, even when they are growing more quickly, according to Ms Freund and Mr Sidhu.

### The business of state

The saving grace in the past was that the vast majority of SOE business was within China. That is changing: industries from construction to steel to railways are looking abroad. The "One Belt, One Road" strategy—the core of Mr Xi's foreign policy—has made foreign expansion an explicit part of their mandate. The danger is not just that they will elbow Chinese private-sector competitors aside but that in doing so, they will provoke a backlash. Big firms in other countries will demand state backing in order to level the playing field. Foreign regulators, already wary of Chinese capital, will turn more hostile. The drift away from free trade could easily gather steam.

This is not the only worry. One of the keys to China's economic rise hitherto has been its success in restricting the sprawl of state firms. They control the commanding heights of the economy, from transportation to power, but have largely been confined to these sectors. Hard-charging entrepreneurs have been free to break into new businesses around them. The manufacturers that led China's export assault on global markets were private. The tech firms that dominate the internet are private. The restaurants, cafés and shops that line city streets are private.

This model still works, for now. Within



the MSCI index of large listed Chinese firms, the state accounts for more than 80% of market capitalisation in sectors such as energy, industry and utilities, according to Morgan Stanley. But the state accounts for 40% or less of market value among consumer, health-care and IT companies, says the bank. With these newer sectors growing far more quickly than smoke-stack industries, private companies may well continue to outflank SOEs.

There is a big looming worry, however. One aspect of SOE reform is in fact making quick progress: the creation of what are known as "state capital investment and operation" companies (SCIOS), to help manage existing state assets and invest in new ones. This initially looked like part of the solution for China. It borrows an approach honed in Singapore, where Temasek, a government-owned holding company, manages a portfolio of state firms but does not meddle in their operations, apart from demanding that they deliver good returns. It is now clear that this is not what China has in mind. Government officials say that SCIOS should not seek to make money in their investments; rather, they are meant to be more like "policy funds", seeding firms and industries with government cash or money raised from SOE dividends without worrying about profit.

The other striking feature of SCIOS is that they are expressly enjoined to break

into new high-tech sectors. Provincial governments around the country have published plans over the past two years in which they promise to guide more than 80% of their funds into infrastructure, public services and, crucially, "strategic emerging industries", a category that refers to new energy, biotechnology and IT, among other areas. The upshot is that SCIOS, armed with cheap capital, seem set on expanding the state's reach into the private sector. "We should anticipate the emergence of literally thousands of well-resourced SCIOS," says Barry Naughton at the University of California in San Diego.

State-backed private-equity funds, which can be seen as forerunners to the investment function of the SCIOS, are already making a big impact. To give three examples from last year: the city of Shenzhen launched a 150bn yuan fund; Jiangxi, a relatively poor central province, created a 100bn yuan fund; and the city of Chengdu set up a 40bn yuan fund. This influx of cash is pushing up valuations. Bain & Co, a consultancy, calculates that private-equity deals in China were priced last year at a frothy 26-times earnings before interest, tax, depreciation and amortisation, compared with ten times in America. The state may turn out to be a wise investor but experience suggests otherwise. More likely, the state will crowd out private investors, hogging capital and allocating it poorly.

The outcome does not have to be this bleak. Optimists still think that Mr Xi could spring a surprise after a big Communist Party congress later this year. With his authority firmly entrenched, he might feel emboldened to unleash the market forces that he spoke of four years ago. But based on his rhetoric and actions so far, this looks like wishful thinking. SOEs, far from retreating, are on the march, drawing on government support to compensate for their weakness. They are making conquests at home and abroad. Cutting state firms down to size and opening them up to competition ought to be the point of SOE reform. Instead, China is beefing them up and driving them into new territory. ■



Can anything cure China's SOEs?

## Africa's savings and credit co-operatives

## Fixing the roof

KERICHO AND KAMPALA

## Credit unions in Africa need regulation, not handouts

THE most recent time Moses Kibet Biegong needed a quick loan was when his roof blew away. He got one from the Imarisha Savings and Credit Co-operative, in Kericho in western Kenya. Imarisha channels the savings of its 57,000 members into loans for school fees, business projects or, in Mr Biegong's case, roof repairs. It runs a fund to help with medical bills. And it pays dividends to its members from its investments, which include a shopping plaza that it opened last year.

Savings and credit co-operatives (SACCOs) like Imarisha are the African version of credit unions: member-owned co-ops, usually organised around a community or workplace. Some are rural self-help groups with a few dozen members and a safe. Others have branch networks and mobile apps. The largest SACCOs rival banks; Mwalimu National, which serves Kenyan teachers, has even bought one.

The co-operative model brings "a more humane face" to finance, argues Robert Shibutse, Mwalimu's boss. But SACCOs are not just a cuddly sideshow. In Kenya, where they are strongest, they provide more loans for land, housing, education and agriculture than banks or microfinance institutions. The World Bank estimates that SACCOs and other co-operatives account for over 90% of all housing credit in the country. In Rwanda they attract twice as many savers as banks. Membership is growing in Ghana and Tanzania.

SACCOs can be generous lenders, in part because their members are often colleagues or neighbours. That makes it easier to judge risks, urge repayment and serve the folk that banks tend to shun. They fill a "vacuum" in rural areas, says Lance Kashugyera, who leads a Ugandan government project on financial inclusion. In Kenya SACCOs typically offer better interest rates than banks. But members can view a loan as a right and are often allowed to borrow up to three times their savings. In 2016 the largest Kenyan SACCOs had loan-to-deposit ratios of 109%, meaning they had to use other sources of funding than their members. "The demand for credit is high, but the savings culture is poor," laments an officer at a Ugandan SACCO.

In Uganda the greatest danger has come from politicians bearing gifts. In 2005 the government promised "a SACCO in every sub-county", backed up with donations and cheap credit. Local bigshots hastily formed co-ops to get their hands on the



Striking a co-operative note

money. Members saw loans as a handout from the ruling party and made little effort to repay. When the cash ran out, SACCOs failed. "They were a bit political," sighs James Lubambo, an official in Iganga district, reeling off the names of 11 local SACCOs that have recently collapsed.

Indeed, the state of SACCOs often reflects a country's politics. After a poor showing in Kampala in last year's elections, Yoweri Museveni, Uganda's president, has personally delivered 100m shill-

ling (\$28,000) cheques to SACCOs in the city. In Rwanda, by contrast, an efficient but overbearing government has built a successful SACCO sector from scratch—even if a quarter of members felt obliged to join out of a sense of civic duty, according to one survey.

There are better ways for governments to help. One is by plugging the yawning gaps in regulation, which in some countries bundles SACCOs together with other, non-financial co-operatives. Occasional tales of failure and fraud also do little for public confidence. In 2010 Kenya created a new regulator for the largest "deposit-taking" SACCOs: it is gradually enforcing capital requirements, but remains hugely under-resourced. Uganda brought in a new set of rules on July 1st, after more than a decade of discussion. It is also running a seven-year project which, among other things, will train leaders in small rural SACCOs to manage savings and credit better.

There are other challenges. Kenyan SACCOs face a squeeze as a rate cap on bank loans intensifies competition for the most creditworthy borrowers. And they will need to adapt to mobile banking, which is helping banks reach customers that SACCOs could once keep to themselves. But the co-operative model remains distinctive. Mr Biegong doubts that a bank would have financed his roof repairs. The SACCO, he says, is "our hope". ■

## Private equity

## Stepping up to the plate

NEW YORK

## KKR lays out a succession plan in an industry still largely unprepared for the future

**I**N MOST four-decade-old firms run by greying co-founders, investors would have long since demanded clarity on succession. But private equity works differently: the industry has been dominated by its pioneers ever since its origins in the 1970s. So an announcement on July 17th about its future leadership by KKR, one of the world's largest private-equity firms, puts it a step ahead of its rivals. Its aim of ensuring that the firm has the right structure in place "for decades to come" is not obviously shared across the industry.

KKR has been run since 1976 by two of its founders, Henry Kravis and George Roberts (both in their early 70s). They are staying on as co-chairmen and co-chief executives but with less of a day-to-day role. Lining up behind them are a pair of 40-somethings, Joe Bae and Scott Nuttall, who will join the board and take the titles of co-president and co-chief operating officer.

Such explicit, public succession plan-

ning is unusual. Stephen Schwarzman, the boss and co-founder of Blackstone, the world's largest private-equity firm, has hinted that Jonathan Gray, head of its property arm, could succeed him. But the chiefs of other behemoths, such as Leon Black of Apollo, or David Rubenstein, William Conway and Daniel D'Aniello, the trio behind and atop Carlyle, have largely kept silent about their heirs. So too have the bosses of many smaller firms.

Public reticence does not necessarily imply a lack of planning. Most private-equity firms are private partnerships and do not face the level of scrutiny accorded to publicly listed firms like KKR. But there is often pressure to reveal succession plans from investors who are committing capital that could be tied up for ten years or more.

Not having a scheme for a smooth transition of power carries risk in all businesses. But the potential for acrimonious disputes, not least over money, is particularly ►

► high in private equity. In a recent analysis of over 700 firms, Josh Lerner and Victoria Ivashina of Harvard Business School found that compensation of partners in the industry was inextricably tied, not to individual investment success, but rather to whether they were there at a firm's birth. The average founder receives nearly 20% of all profits from "carried interest" and owns a 31% stake in his firm; a non-founding senior partner gets on average only 11% of profits and owns less than 14% of the firm.

Such unequal arrangements can make a transition trickier. Reallocation of profits or transferring outsize ownership stakes to

other partners risks internal bickering. In 2010 Justin Wender, the anointed successor of John Castle, the founder of an American firm called Castle Harlan, left amid a dispute about "future ownership". Friction over succession and profit-sharing at Charterhouse, a British firm, came to light in 2014 in the form of a lawsuit by a disgruntled former partner, who alleged, among other things, that the firm tried to force him to sell his stake at an excessively low price. Charterhouse won the case.

Mr Lerner worries that a growing trend of exiting founders selling their stakes externally causes other problems, particular-

ly for private firms. If such firms are no longer in the hands of those who make the profits, for example, that may weaken the alignment of interests that has driven much of the industry's success.

All these concerns will come to a head when increasing numbers of founders step back. Large firms like KKR have diverse businesses and big teams of executives; smaller counterparts, where power is concentrated with individual founders, may have more trouble adjusting. All the more reason to follow KKR's lead on leadership. Success and succession will become ever more intertwined. ■

## Buttonwood | The bonds that break

### A sell-off of corporate bonds could lead to a breaking-point for the market

**G**OOD generals know that the next war will be fought with different weapons and tactics from the last. Similarly, financial regulators are right to worry that the next crisis may not resemble the credit crunch of 2007-08.

The last crisis arose from the interaction between the market for mortgage-backed securities and the banking system. As investors became unsure of the banks' exposure to bad debts, they cut back on their lending to the sector, causing a liquidity squeeze. Since then, central banks have insisted that commercial banks improve their capital ratios to ensure they are less vulnerable.

Might the next crisis originate not in the banking system, but in the bond market? That is the subject of a new paper\* from the Bank of England. The worry centres on the "liquidity mismatch" between mutual funds, which offer instant redemption to their clients, and the corporate-bond market, where many securities may be hard to trade in a crisis. The danger is that forced selling, to return money to investors, leads to big falls in bond prices, creating a feedback loop.

If that concern seems fanciful, think back to the summer of 2016, when British mutual property funds had to suspend redemptions in the wake of the EU referendum vote. Fund managers simply could not sell properties fast enough to pay off their investors.

The corporate-bond market is a particular concern because it is much less liquid than the equities market. That liquidity has fallen in recent years, because banks have become less willing to act as market-makers. This reluctance is rooted in the regulations imposed after the last crisis, which require banks to hold more capital.

The Bank of England's study focused on European mutual funds that own in-

vestment-grade bonds (the safest category). Since 2005, the worst month for redemptions in this sector occurred in October 2008, when outflows reached the equivalent of 1% of assets under management each week. The sell-off was accompanied by a rise in bond spreads—the gap between the yield on investment-grade bonds and that on government debt—of around a percentage point.

Some of that increase was obviously caused by a deterioration in the economy—investors realised that bond issuers were more likely to default. But the bank reckons that around half the shift was the result of a decline in liquidity. In other words, bond investors demanded a higher yield to compensate them for the difficulty they might face in selling their holdings.

The bank reckons that, if a 1% outflow of mutual-fund assets happened today, then European investment-grade spreads would rise, for liquidity reasons alone, by around four-tenths of a percentage point. That may not sound much, but it is around a third of the average spread since 2000.

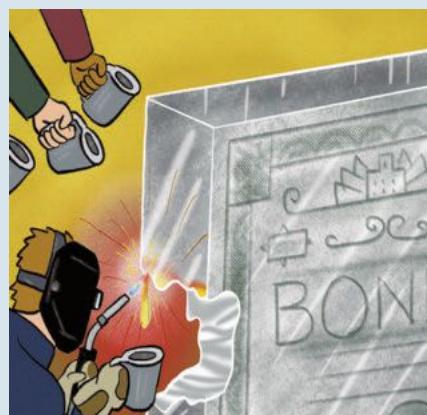
What if the sell-off is greater than it was in 2008? After all, near-zero rates on cash

must have pushed a lot of investors into corporate-bond funds in recent years. Some of those investors may be using bond funds as "rainy day" money and will thus be reluctant to sit tight if their savings are losing value.

Others could step in to buy the bonds. Long-term holders like pension funds and insurance companies are obvious candidates to do so, although they tend to be slow to react. Hedge funds are more nimble bargain-hunters but they often depend on financing from the banks, and that may not be available in a crisis.

Finally, the banks themselves could step in, but they face capital charges on their market-making activities. The moment could come, the bank suggests, when "dealers reach the limit of their capacity to absorb those asset sales". This would be the "market-breaking point". And that stage could be reached when redemptions equal 1.3% of net assets of corporate-bond funds—in other words, only 30% higher than during the 2008 crisis.

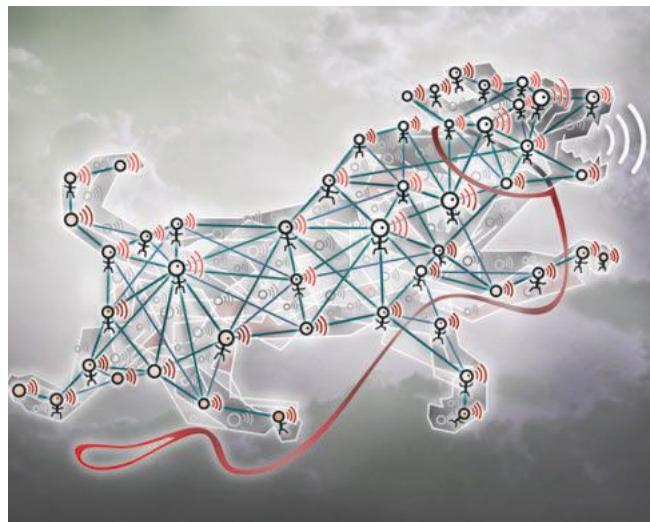
A sell-off in corporate bonds ought not to be as damaging as the mortgage-related crisis of 2008. Investors don't tend to use borrowed money to buy such bonds, and the big asset-management companies don't back funds with their own capital. Corporate bonds also comprise only a small part of most portfolios. But it could still be traumatic if bond funds need to be suspended. That could undermine retail investors' confidence in the liquidity of the mutual funds on which many depend for their retirement income. The bank is right to be alert to the risks.



\* "Simulating stress across the financial system: the resilience of corporate-bond markets and the role of investment funds", Financial Stability Paper No 42

# Free exchange | Take back control

**When elites appear powerless to help, voters give populists a chance**



WITH the defeat of Marine Le Pen in her bid for the French presidency, establishment politicians in rich countries breathed a sigh of relief. The fortunes of extremist candidates have faltered since the populist surge that put Donald Trump into the White House. But it is hard to be confident that this was populism's high-water mark without a better understanding of what caused the swell in the first place. The most convincing explanations suggest that populist upswings are not in the past.

It is tempting to dismiss the rise of radicalism as an inevitable after-effect of the global financial crisis. Studies show that the vote shares of extreme parties, particularly on the right, tend to increase in the years after a crisis. The Depression spawned some of the 20th century's most dangerous and radical populist movements. But the facts do not fit that story precisely. In Europe, for example, populist parties have steadily won more voters since the 1980s. What is more, populist rage is rarely focused on finance. Trade and immigration are more prominent targets. The clearest recent manifestations of the populist surge—Mr Trump's victory and Brexit—have only an indirect link to the financial crisis.

Rival theories blame populism on deep cultural insecurities prompted by demographic and social change. In a forthcoming paper Noam Gidron and Peter Hall reckon that right-wing political success is built on a decline in the subjective social status of white men. Both economic hardship and relative improvements in the perceived status of other groups, such as women and racial minorities, seem to contribute to male insecurity. Around 2010 American women without a college degree overtook similarly educated men when both self-assessed their place in the social hierarchy. Men's perception of their relative status has also fallen in Europe. The paper links declining status to support for right-wing populism. Yet this too seems only a partial explanation. The recent rise in left-wing populism has been just as striking.

A third explanation is captured neatly in a new paper by Dani Rodrik of Harvard University, who reckons that globalisation's role cannot be ignored. He suggests that populism may become more attractive as global integration matures. Cutting tariffs by that extra little bit yields much smaller increases in GDP than previous reductions and delivers less perceptible consumer benefits; but such cuts continue to impose costs on vulnerable workers.

Eventually this asymmetry produces a backlash.

The form it takes depends, however, on which sort of integration is the greatest local irritant. Frustration with trade and financial integration often breeds left-wing populism, which feeds off class divisions in society; Latin American populism tends to fall into this category. When immigration is seen as the source of disruption, right-wing populism, which exploits ethnic or religious divisions, is more common. In Europe, for example, populists have been far more hostile to the free movement of people than to open trade. But faced with both sorts of integration Europe has produced examples of each and America has sprouted competing left-wing and right-wing populist leaders.

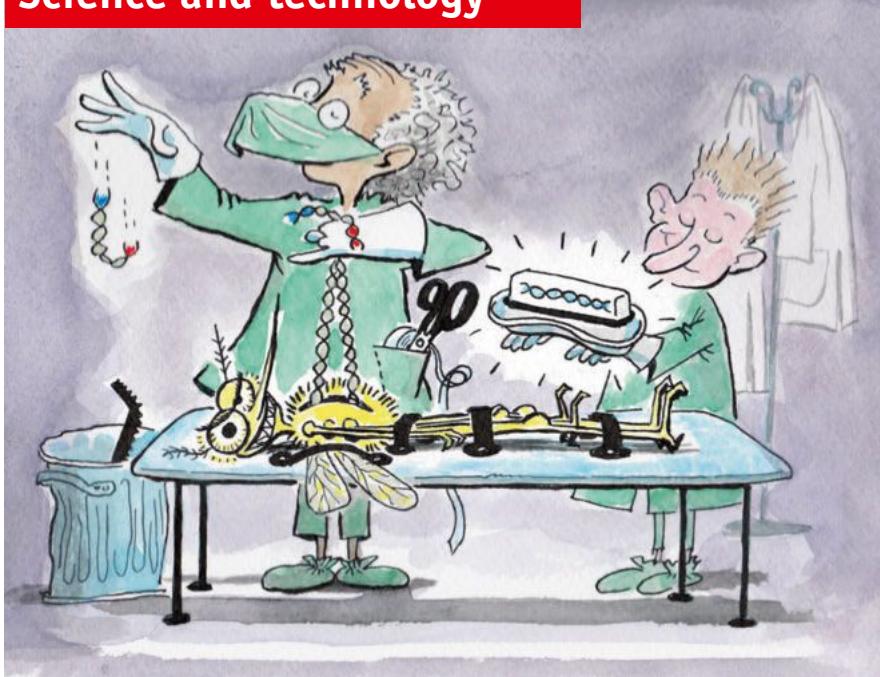
These hypotheses are plausible (and compatible). But they are still incomplete. The rejection of established elites is perhaps the defining characteristic of a populist movement, yet what is not always clear is why mainstream parties should be so unresponsive in the face of discord. In another new paper, Luigi Guiso, Helios Herrera, Massimo Morelli and Tommaso Sonno provide a clever framework for answering that critical question. Establishment parties, they suggest, cannot respond to supporters' concerns because of their respect for institutional constraints, like the rules of the European Union, or because of an unwillingness to break norms like repaying sovereign debt.

But keeping faith with institutions can mean letting down voters. When elected leaders fail to deliver hoped-for improvements, the public disengages. Depressed turnout is an opportunity for political entrepreneurs. Almost invariably, the authors argue, populists promise to relieve the stresses caused by institutional constraints. But the genre of populism depends on how turnout varies in some groups compared with others. If right-wing voters (such as older men) are less prone to sit out elections, then a populist candidate is more likely to be right-wing. Populist policies vary as a result: a left-wing firebrand might attack the budget strictures imposed by European institutions, whereas a right-winger might focus on ending free movement of labour.

If there is anything that unites the policies of Mr Trump with Brexit and the beliefs of European populists, it is a promise to break free of constraints. But a populist upswing propelled by unhappiness with established institutions raises an awkward question: if these institutions are worthwhile, why are people so frustrated by them? The authors argue that populists highlight the short-run advantages of wrecking institutions while downplaying the long-run consequences. That certainly describes the spendthrift recklessness of Hugo Chávez in Venezuela. To some degree, "populism" is another word for heterodoxies that seem doomed to fail.

## I demand satisfaction

Politicians are shackled by all manner of things—from international institutions and the whims of capital markets to ideological commitments to particular theories of economic growth. Such constraints are not always sensible—think of the unforgiving fetters of the gold standard, for example. But they are often valuable and working out which do more harm than good is rarely easy. Unhappy voters put all of them at risk, however. And if politicians cannot satisfy disenchanted citizens while operating within established limits, then institution-smashing populists will soon be on the march again. ■



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### Gene drives

## Resistance is inevitable

### A promising tool for dealing with pests and pathogens runs into an old enemy

IT IS life's lottery, blessing some and cursing others in equal number: the chance of a sexually reproducing organism's offspring inheriting a particular version of a gene from a particular parent is 50%. Usually. But there are exceptions. Gene drives are stretches of DNA that change those odds to favour one parent's version of a gene over the other's. That version will thus tend to spread through a population. If the odds are stacked sufficiently in its favour it can do so fast and, within a few generations, become the only version of the gene in question that remains in circulation.

Researchers realised, soon after the discovery of gene drives half a century ago, that they might be forged into tools for eradicating diseases and pests. For example, a drive promulgating a genetic variant that made mosquitoes unable to host the parasite that causes malaria could be used to help eliminate the disease. If the propagating variant made female mosquitoes sterile, it might provide a means to eliminate the troublesome insects themselves.

Engineering gene drives to do humanity's bidding in this way proved, however, devilishly difficult. The idea therefore languished until 2015, when Valentino Gantz and Ethan Bier of the University of California, San Diego, used CRISPR-Cas9, a recently discovered gene-editing tool, to make a gene drive that could be inserted any-

where in a target genome that they chose.

Those findings sparked concerns about the effects gene-drive-carrying organisms could have if they were ever to be released into the world. For example, a gene drive that somehow hopped from a target species into the genomes of other animals might wipe them out before anything could be done about it. A study published in *PLOS Genetics*, by Philipp Messer of Cornell University and his colleagues suggests, however, that those who would deploy gene drives against scourges such as malaria face a more immediate hurdle: such drives simply may not work. Just as insects and pathogens evolve resistance to new pesticides and antibiotics, so gene drives, too, may provoke resistance—and may do so faster than many suspected.

### Life finds a way

In nature, elements of the CRISPR-Cas9 system help bacteria to ward off viral infections. Some viruses replicate themselves by inserting their DNA into the genomes of their hosts. This hijacks a cell's protein-making machinery, causing it to turn out components for new viruses. CRISPR-Cas9 selectively excises such foreign DNA, eliminating the invaders.

The excision mechanism consists of two molecules: an enzyme (Cas9) derived from a bacterium called *Streptococcus pyo-*

genes, and a piece of RNA, a chemical akin to DNA that is made up of similar genetic letters. This "guide" RNA will stick only to a section of DNA with a letter-sequence complementary to its own. The enzyme is bound to the guide RNA. The guide RNA is bound to the DNA. Hence the enzyme recognises the DNA it has to cut, and snips it at the correct location. By inserting the gene for Cas9 into an organism, together with genetic material that instructs a cell to produce the correct guide RNA, biologists can therefore use CRISPR-Cas9 to sever a genome at a specific point.

They can then insert at that point whatever payload of other genes they might like—to modify mosquitoes so they cannot transmit diseases, say—knowing that the cell's DNA-repair mechanisms will subsequently kick in to repair the incision around the newly inserted genes.

Handily, the system works in any organism, not just the bacteria in which Cas9 is found naturally. To use it as a gene drive, all that is required is to include in the payload the genes for the CRISPR-Cas9 system itself, and to ensure that some copies get inserted into an organism's germ cells—those that develop into sperm or eggs. This will mean that the gene drive is passed on to all of that organism's offspring.

CRISPR-Cas9 gene drives have, though, a significant drawback. When the drive cuts the genome but fails, for some reason, to insert itself into the incision, the cell instead inserts new genetic letters to replace those cut away by the enzyme before it rejoins the severed DNA strands. This process often changes the letter sequence at the site. That means the guide RNA can no longer recognise it. And that, in turn, means the organism (and its progeny) are now resistant to the drive.

► Dr Messer wanted to understand this process. To do so, he and his colleagues observed the effects of introducing a CRISPR-Cas9 gene drive they had developed into fruitflies—*insects commonly used in genetic studies*.

Their drive's payload was a gene that encodes red fluorescent protein, a substance normally found in a species of sea anemone. By further genetic tweaking, the researchers arranged for this protein to be expressed, in particular, in the insects' eyes. They thus knew that flies with fluorescent eyes carried their gene drive. Also, the guide RNA they selected meant the drive inserted this payload into the middle of a gene named "yellow", thus disrupting that gene's action. Flies which inherit a defective version of "yellow" have yellow bodies, rather than black ones.

After experiments with thousands of flies, Dr Messer and his team found that the gene drive successfully inserted itself into the insects' DNA about half the time, producing flies with fluorescent eyes and yellow bodies. The other half of the insects nearly all had yellow bodies, but did not have fluorescent eyes. That indicated CRISPR-Cas9 had cut the DNA in the right place, thus disrupting the function of "yellow", but had failed to insert itself into the incision. Sequencing the genomes of these flies confirmed that in virtually all cases the consequence was a mutation that rendered the flies (and would have rendered any offspring) resistant to the gene drive.

#### Red signal

The team then repeated their experiments with fruitfly lines from five continents. They found that the proportion of flies becoming resistant to the drive varied from about 60% down to 4%. Differences in resistance to the drive were not caused by any initial differences in the target sequence. That did not vary between the five lines. They must therefore have stemmed from other (as yet unknown) genetic differences between the flies. This is a worry because it suggests that even if a drive works well in laboratory animals, it may fail in the wild when it encounters populations with higher resistance. Getting to the bottom of what is causing some lines to be more resistant than others will be an important step towards the development of gene drives that can spread traits through a species, Dr Messer reckons.

Two further modifications of CRISPR-Cas9 gene drives may help. The first is to equip them with several guide RNAs, allowing Cas9 to cut chromosomes at more than one place. An organism would have to develop resistant DNA sequences at all of these to become fully immune to the drive. Dr Messer and his colleagues have made such a drive, containing two guide RNAs, and have found that it did indeed lower the proportion of flies that devel-

oped resistance—though estimates made with computer models suggest this is still not enough for the drive to reach more than about half the population.

The second approach is to put the drive into the middle of a gene that, unlike "yellow", an organism needs to survive. This might be expected to disrupt the gene and kill the organism. But if the inserted DNA has, at one end, a replica of the part of the disrupted gene that has been displaced by the insertion, this can meld seamlessly with its counterpart in the animal, preserving the gene's function and Cas9's ability

to recognise it. If the join is not seamless, though, the gene will fail and the animal will die. Mutant genes resistant to the drive will thus be unable to spread.

At least two groups, one based at Imperial College, in London, and the other at Harvard University and the Massachusetts Institute of Technology, are working on drives aimed at essential genes in mosquitoes and which use multiple guide RNAs. If they succeed, they will breathe new life into the field. As Dr Messer observes, "it is difficult to cheat evolution." Whether it is impossible to do so remains to be seen. ■

#### Artificial intelligence

## Admiring the scenery

#### Computer analysis of what people find scenic may help town planners

**B**EAUTY, proverbially, is in the eye of the beholder. But surroundings matter. A paper published two years ago in *Nature* found a correlation between people's sense of well-being and the "scenicness" of where they lived. The paper's authors measured scenicness by asking volunteers to play an online game called Scenic-or-Not, which invites participants to look at photographs of neighbourhoods and rate their scenic value on a scale of one to ten.

The correlation, the paper's authors found, held true whether a neighbourhood was urban, suburban or rural. It bore no relation to respondents' social and economic status. Nor did levels of air pollution have any influence on it. The authors also discovered that differences in respondents' self-reported health were better explained by the scenicness of where those respondents lived than by the amount of green space around them.

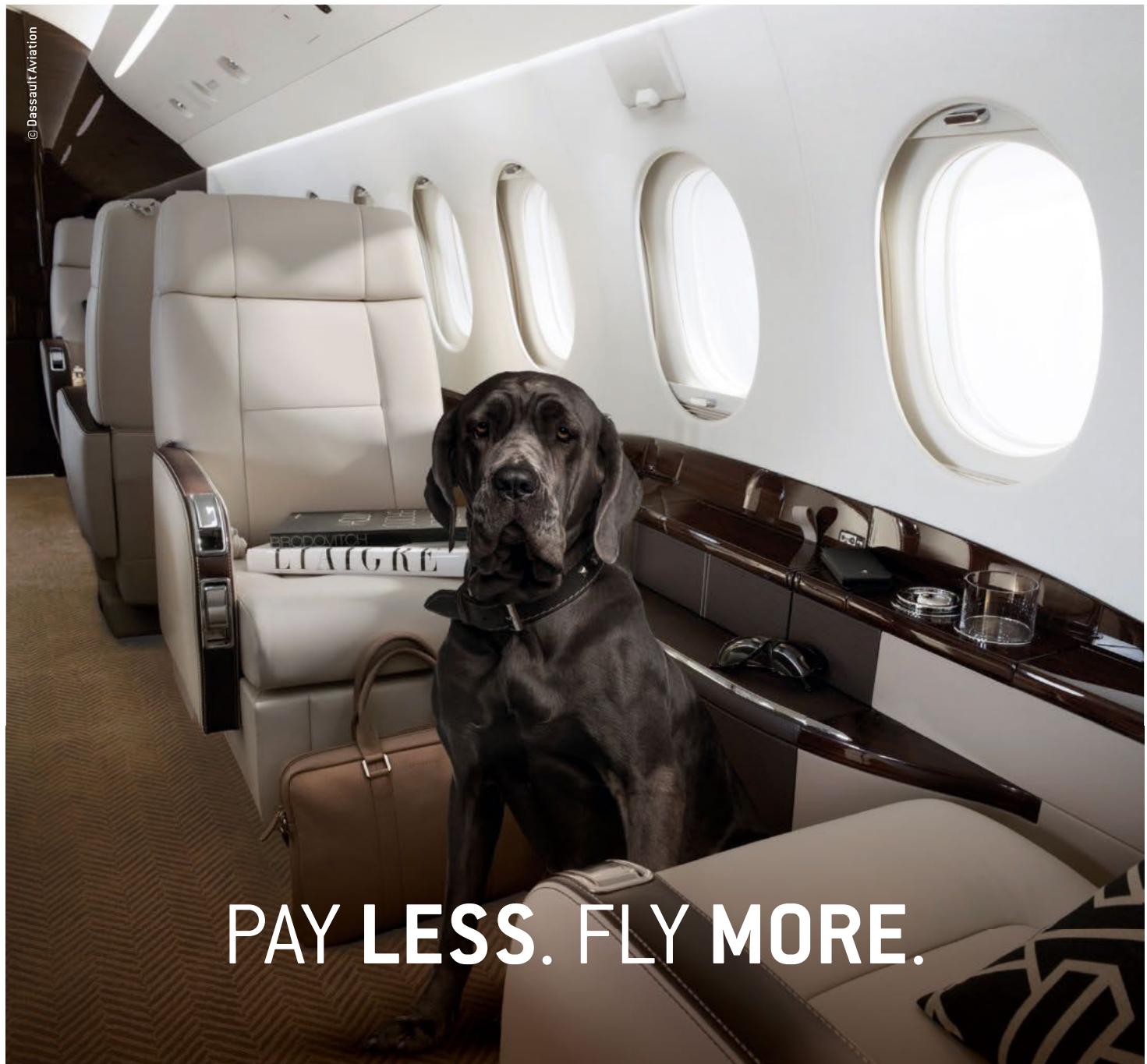
Pinning down what scenicness actually

is, though, has always been a frustrating exercise for scientific types. The team behind that *Nature* paper, Chanuki Seresinhe and her colleagues at Warwick Business School, have nevertheless decided to have a go. And they think they have succeeded. As they report in *Royal Society Open Science*, they have adapted a computer program called Places to recognise beautiful landscapes, whether natural or artificial, using the criteria that a human beholder would employ.

Places is a convolutional neural network (CNN), a type of program that can learn to recognise features in sets of data, such as images, presented to it. CNNs often form the basis of face-recognition software. Places, though, as its name suggests, is optimised to recognise geographical features. Ms Seresinhe and her team taught the program to identify such things as mountains, beaches and fields, and various sorts of buildings, in pictures present- ►



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ed to it. Having done so, they then fed it with 200,000 photos that had been assessed by players of Scenic-or-Not. The program's task was to work out, by analysing each photograph's features in the context of its Scenic-or-Not ratings, what it is that makes a landscape scenic.

Most of the results are not surprising. Lakes and horizons scored well. So did valleys and snowy mountains. In artificial landscapes castles, churches and cottages were seen as scenic. Hospitals, garages and motels not so much. Ms Seresinhe's analysis did, however, confirm one important but non-obvious finding from her previous study. Green spaces are not, in and of themselves, scenic. To be so they need to involve contours and trees.

This observation plays into an idea promulgated 30 years ago by Edward Wilson, an evolutionary biologist at Harvard Uni-

versity. He suggested that the sorts of landscapes people prefer—and which they sculpt their parks and gardens to resemble—are those that echo the African savannahs in which *Homo sapiens* evolved. Gently undulating ground with a mixture of trees, shrubs and open spaces, in other words (though, ideally, without the accompanying dangerous wild animals).

In particular, the parks laid out by 18th-century European magnates often fit these criteria. And those parks are also replete with follies—small buildings or imitation ruins of the sort Ms Seresinhe's work suggests people generally find scenic, too. There is a message here for town planners. Less grass and more trees and bushes would be welcome. And perhaps, also, the odd deliberate folly dotted around, as opposed to the accidental follies that make up so much of modern architecture. ■

show a spike in sulphate levels in layers laid down during those years. But the cores give no hint of the volcano's whereabouts, because sulphates from an eruption mix rapidly into the atmosphere and are soon spread evenly around Earth.

Things changed, though, in 2003, when flooding exposed the forest which has piqued Dr Büntgen's interest. Preliminary research suggested that the trees in it were alive during the 9th century. This led him to assemble a team of physicists, chemists, biologists, historians and geographers to investigate the matter, starting with an analysis of the buried trees' annual growth rings.

In particular, the team searched for signs of an ill-understood atomic marker found in tree rings of a certain age from all around the world. Rings that grew in 775, palaeobotanists have found, contain 20 times the normal amount of carbon's most common radioactive isotope, <sup>14</sup>C. That year is also the date of an enigmatic event recorded in the Anglo-Saxon Chronicle, a collection of annals describing the history of early England. This is the appearance of a "red crucifix" in the heavens after sunset. The best modern guess is that the Chronicle's writers were looking at an unusually powerful manifestation of the northern lights, and that the high <sup>14</sup>C levels are a consequence of this isotope being generated abundantly in the atmosphere by elevated levels of solar radiation, which also stimulated the auroras.

Dr Büntgen and his colleagues searched the trees for this <sup>14</sup>C spike—and they found it. As they report in *Geology*, the spike appears in rings that grew 47 years before the burial of the forest. That dates the cataclysm which caused the burial to 822.

The cataclysm itself appears, from the direction the knocked-over trees are pointing in, to have been a flood resulting from the melting and sudden rupturing of Myrdalsjokull, the glacier that overlies Katla. This glacier is 35km from the forest, so the flood in question must have been enormous. The forest's fate, combined with the ice-core data from Greenland, suggests Katla was either erupting in 822, or had done so recently, and thus weakened the glacier. Any eruption of sufficient power to provoke such a flood would also have been big enough to precipitate a temporary change in the world's climate of the sort that Radbertus reports.

Those of Norse descent who lived through the events of the 820s, would not, of course, have feared the anger of a god they did not believe in. But they might have feared they were witnessing Fimbulwinter—three summerless years marking the onset of Ragnarok, the twilight of their own gods. Katla, however, ceased erupting and both Ragnarok and the Day of Judgement were avoided. As for Radbertus, a quarter of a millennium later, in 1073, he was canonised by Pope Gregory VII. ■

## Volcanology

# A song of ice and fire

## Events in Iceland explain years of famine in Europe in the Dark Ages

IT SEEMED like a curse. The summer of 821 was wet, cold and yielded a poor harvest. Then winter came. Temperatures plunged. Blizzards smothered towns and villages. The Danube, the Rhine and the Seine—rivers that never froze—froze so hard that the ice covering them could be crossed not just on foot but by horse and cart. Nor did spring bring respite. Terrible hailstorms followed the snow. Plague and famine followed the storms. The next few winters were worse. Fear stalked the land. Paschasius Radbertus, a monk of Corbie, in what is now northern France, wrote that God Himself was angry. Yet it was not God that wrought this destruction, according to Ulf Büntgen of the University of Cambridge, but rather a volcano now called Katla, on what was then an unknown island, now called Iceland.

At the moment Katla, one of Iceland's largest volcanoes, located near the island's southern tip, sleeps beneath 700 metres of ice. It has so slept, albeit fitfully, for almost 100 years. Its last eruption big enough to break through the ice was in 1918. A score of such ice-breaking awakenings have been recorded by Icelanders since the first Norsemen settled there in 870. In 821, however, Iceland was not on the Norsemen's horizon. They were concentrating their activities on the lootable monasteries and villages of coastal Europe. There is thus no man-made record of what Katla was up to then. But Dr Büntgen thinks he has found a natural one. A memorandum of an erup-



Katla boils over in 1918

tion that coincides with the events described by Radbertus is, he believes, written in a prehistoric forest.

Large volcanic eruptions can affect the weather. In particular they eject sulphur dioxide, which reacts with atmospheric gases to form sulphate aerosols that reflect sunlight back into space, cooling the air beneath. That is well known. So the suspicion that what happened in the early 820s was precipitated by such an eruption has been around for a long time.

This suspicion is backed up, moreover, by ice cores collected in Greenland. These



Soviet history

## The war for memory

**After the Great Patriotic War came the struggle to reckon with—and manipulate—the stories**

“I AM writing a book about war,” Svetlana Alexievich noted in her diary in 1978. Russian does not have definite and indefinite articles, but Ms Alexievich, at the time a 30-year-old Soviet author, born to a Belarusian father and a Ukrainian mother, did not need one. There was only one war, defining the country at the cost of 20m lives: the Great Patriotic War of 1941-45.

There had been many accounts, but Ms Alexievich’s “The Unwomanly Face of War”, published in 1985 and released this week in its first post-Soviet English edition, was unusual: an oral history told by women who enlisted in the army straight after school, learning to kill and die before they learned to live or give life. Some tales were blood-curdling—like that of a 16-year-old nurse who bit off the smashed arm of a wounded soldier to save his life, and days later volunteered to execute those who had fled the field. Other stories were heart-breaking, like that of a girl who first kissed her beloved man only when he was about to be buried.

The book was followed by other oral histories of people caught in calamities: the Soviet invasion of Afghanistan, the Chernobyl disaster, the collapse of the Soviet empire. In 2015 she won the Nobel prize in literature “for her polyphonic writings”. For her, the nightmares of the 20th century made fiction impossible. “Nothing may be invented...The witnesses must

**The Unwomanly Face of War.** By Svetlana Alexievich. Random House; 384 pages; \$30. Penguin Modern Classics; 331 pages; £12.99

speak,” she said in her acceptance speech. Her work has been called journalism or history, but it defies easy classification.

Ms Alexievich’s greatest talent may be not writing, but listening and getting witnesses to talk. The book is filled with more than 200 voices. Yet, filtered by “the human ear”, as she calls herself, they vary little in tone or rhetoric. Her book reflects an uneasy relationship between memory, which often involves mythologising, and history as a multitude of dimensions. A memoir is not a reconstruction of the past, but a record of the time when the memoir is produced and of the mental state of the person remembering. As such, Ms Alexievich’s book is a testimony to the late 1970s and early 1980s and the war for memory which she took part in.

The fight for memory began as soon as the war stopped. Stalin feared the feelings the war awoke in his people. (“The only time we were free was during the war. At the front,” Ms Alexievich was told.) Reminders of suffering were cleared off the streets. Crippled veterans who pushed themselves on self-made wheeled platforms with hands—if they had any—were

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rounded up and sent to a camp on the island of Valaam. Russian prisoners-of-war were sent to the gulag as potential traitors. “Liberation” brought not freedom, but a new wave of repression and anti-Semitic campaigns. “After the Victory everybody became silent. Silent and afraid, as before the war,” one man told Ms Alexievich.

Victory day—the only unifying and truly national Soviet holiday—became part of the official calendar and mass culture only in 1965. Leonid Brezhnev, the Soviet leader from 1964 to 1982, saw the war as the main source of legitimacy for a stagnating system, and covered himself in military medals: Hero of the Soviet Union, Order of Victory. Liberals and the Soviet apparatchiks fought over its memory, and Ms Alexievich was on the front lines. The bleeding memories of her witnesses clashed with the gloss and bombast of the official rhetoric. Her book was published when Mikhail Gorbachev came to power, hoping to put a human face on socialism.

Even so, the censor demanded cuts, such as the story of a young partisan woman who drowned her crying baby to avoid alerting German soldiers. Those cuts are restored in the new edition—as are her conversations with the censor, who was particularly scandalised by the description of menstruation on the battle front. “Who will go to fight after such books?” the censor demanded “You humiliate women with a primitive naturalism...You make them into ordinary women, females.”

More important, the battle for memory unfolded in the minds of storytellers themselves. A woman who joined a tank brigade at 16 tells Ms Alexievich “how it was”, only to follow her story a few weeks later with a letter that included an edit of the transcript of their interview—with every human detail crossed out. The suppression ➤

► of the human and the humane in people was crucial to surviving Soviet life.

Having defeated fascism in Germany, the Soviet Union imported some of its ideas and practices, which bore fruits decades later. Waving the banners of the second world war and holding the photographs of those who perished in it defeating fascism, today's Kremlin has restored Soviet symbols, declared the supremacy of the state over the individual and annexed Crimea. Unleashing a war against Ukraine, Kremlin propaganda described Ukrainians who demanded dignity as "fascists" and Russian soldiers as "anti-fascist liberators". The exploitation of the memory of the war has been the central element of modern Russian ideology. It is what makes Ms Alexievich's work so relevant today. ■

#### Hunter-gatherer economics

## Living off the land

**Affluence Without Abundance: The Disappearing World of the Bushmen.** By James Suzman. Bloomsbury; 297 pages; \$29

**I**N JANUARY 1488, Bartolomeu Dias, a Portuguese explorer, rounded Africa's southern cape and put to shore to take on food and water. There he found a group, smaller and lighter-skinned than the other Africans he had encountered, who, mystified by the odd men appearing out of the infinity of the sea, chased them back to their boat under a hail of arrows.

The exchange, notes James Suzman in his new book "Affluence Without Abundance", was a meeting of two distant branches of the human family tree: Europeans descended from ancient tribes that migrated out of Africa, and people commonly known as the San, who had called southern Africa home for at least 150,000 years. Just as important, the meeting represented the collision of humanity's most ancient and durable form of economic organisation with its most powerful. The latter, wielded by Europeans, has dominated the half millennium since that scrape on the beach. But modern capitalist societies may have something to learn from the ways of their ancient forebears.

Mr Suzman is an anthropologist who has spent years studying the Bushmen of the Kalahari Desert: a San people related to those who greeted Dias on the beach, some of whom maintain the hunting and gathering lifestyle that sustained them for 150 millennia. But "Affluence Without Abundance" is not simply a description of Bushman life. Mr Suzman deftly weaves his experiences and observations with les-

sons on human evolution, the history of human migration and the fate of African communities since the arrival of Europeans. The overarching aim of the book is more ambitious still: to challenge the reader's ideas about both hunter-gatherer life and human nature.

Life spent hunting and gathering, while occasionally trying, was not a tale of constant toil and privation. Food could run short during droughts or annual lean periods, but reliance on a broad range of food sources typically afforded such tribes a reliable, well-balanced diet. Even around the arid Kalahari food is plentiful (at least when the tribes are not forced to share the land with farmers and ranchers)—so much so that the typical adult need work less than 20 hours per week.

The contrast with farming societies, which dominated history after the domestication of plants and animals about 10,000 years ago, is stark. Farmed land is more productive, which allowed the more populous farmers to push hunter-gatherers off all but the most remote or inhospitable land. But farming societies depend heavily on a few staples, leaving them poorly nourished and vulnerable to crop failure. That high productivity also took endless, mind-numbing work: to prepare and tend the fields, keep up the homestead and defend the surpluses needed to feed everyone from one harvest to the next.

Mr Suzman argues that the dramatic cultural shift resulting from the adoption of agriculture gave rise to impulses that people in modern rich countries, the heirs of farming societies, regard as naturally human—especially the insatiable desire to accumulate. Farming teaches people to accept inequality and to valorise work. But for the vast majority of human history there was little point in accumulating, since most of what was needed could easily be got from the surrounding environment. Nor was there anything heroic about work; spending time getting more food than one could eat was a foolish waste.

Modern San struggle to cope in a market economy, thanks to this heritage (and to anti-San bigotry). Employers struggle to keep them on the job: offered higher wages they work fewer hours rather than more. Yet Mr Suzman also reckons, after years of studying the Bushmen, that a world in which people work and worry less is possible. Humanity spent many more thousands of years living that way than working its fingers to the bone, after all.

It is a nice idea. But Mr Suzman's recounting of recent history makes clear that modern life is like riding a bicycle, in which stopping means toppling over. Having created countless problems by turning to agriculture, rich societies have little choice but to press on: working, striving and inventing, even as this progress creates more problems in need of solving. ■

#### Colonial atrocities

## Hearing their cries

**The Addis Ababa Massacre: Italy's National Shame.** By Ian Campbell. Hurst; 478 pages; £30. To be published in America by Oxford University Press in August

**N**EAR the village of Affile, on a pictureque hillside east of Rome, stands a monument, unveiled in 2012 and built with public funds, to Rodolfo Graziani, one of Mussolini's most brilliant generals. He was a key figure in Italy's brutal campaigns in Africa in the decade before the second world war.

Inside a roundabout in Addis Ababa lies another monument. This giant obelisk, perhaps the Ethiopian capital's finest piece of public art, was donated by Josip Tito, then president of Yugoslavia, in 1955. Six bronze reliefs depict a massacre, the worst in Ethiopian history, carried out by Italian forces during the occupation of 1936-41 while Graziani was viceroy of Italy's new colony. According to the Ethiopian government, some 30,000 Ethiopians died during the campaign of terror in February 1937.

Official Italian estimates usually number between 600 and 2,000, but they are certainly much too low. The most plausible figure, argues Ian Campbell in the first comprehensive account of the massacre, may be 20,000. In Italy Graziani's great crime is seen as little more than a typical European colonial atrocity—no worse than the British at Amritsar, for instance, where 1,000 people (according to India's count) were slaughtered in 1919.

But, as Mr Campbell's meticulous work makes plain, this was no typical colonial ►



Italy would rather not talk about it

## Victorian history

## Summer of '58

**One Hot Summer: Dickens, Darwin, Disraeli and the Great Stink of 1858.** By Rosemary Ashton. Yale University Press; 338 pages; \$30 and £25

**I**F YOU wanted to devote an entire book to a year in Victorian Britain, 1858 would not be an obvious choice. Rosemary Ashton, who has done just that, admits as much. No famous novel was published, and the government, like many just before it, collapsed in a vote of no confidence. Historians prefer 1859: Charles Darwin published his "On the Origin of Species", the Liberal Party was founded, and Dickens, Tennyson, Eliot and Mill all produced major works. 1861 brought the death of Prince Albert and Queen Victoria's withdrawal from public life. So why 1858?

Ms Ashton sees the year's importance reflected in the lives of three Victorians. Benjamin Disraeli would have to wait until 1868 to become prime minister. But his second run as chancellor, beginning in 1858, proved his worthiness as he steered important bills through Parliament, at times acting in place of the gout-ridden prime minister Lord Derby. Dickens began his popular reading tours, earning fantastic sums. And Darwin, after years of pondering evolution, was panicked into finalising his theory after realising that others were reaching con-

clusions similar to his.

The book's real strength is its description of London quivering between modernity and the dark ages. Amid record-breaking heat and the stench of a filthy Thames, engineers proposed an improved sewer system, still believing the (soon to fall from favour) airborne theory of infection. Laws making divorce easier were accompanied by infamous cases in which husbands tried to have their wives declared insane. While the government allowed the first non-Christians to sit in Parliament, pious scientists vehemently opposed Darwinian evolution.

Against this backdrop Ms Ashton narrates scandals of high society, drawing on private correspondence and the penny papers. A well-known doctor was accused of an affair with a married patient, preventing him from verifying her sanity in the divorce court (presided over by the wonderfully named Sir Cresswell Cresswell). A "hot headed and almost paranoid" Dickens, who tormented his wife and resented his "numerous and expensive family", read rumours of his infidelities in the press. The book focuses a bit too much on these squabbles, when it could give more space to the completion of a transatlantic telegraph cable or the downfall of the East India Company. But there is plenty to enjoy in this panorama of Victorians in their heyday.

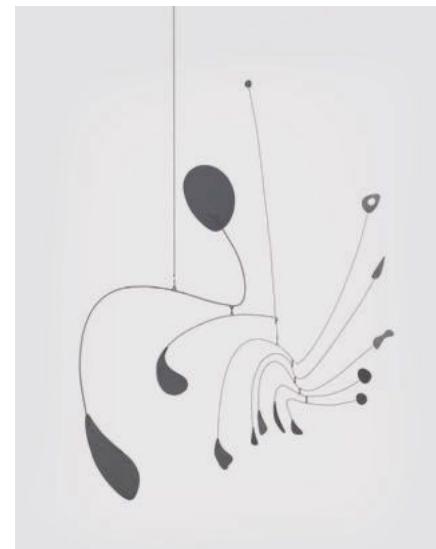
► atrocity. After a failed attempt on Graziani's life, the Italians' bloody revenge lasted three days. Led by the local "Blackshirts"—Mussolini's paramilitaries, officially granted *carta bianca*—regular soldiers, carabinieri and perhaps more than half of Addis Ababa's Italian civilians took part. In this ghoulish massacre, witnesses reported crushed babies, disembowelled pregnant women and the burning of entire families.

Mr Campbell argues that this was a methodical effort to wipe out Ethiopian resistance to Italian rule, more like later Nazi war crimes than earlier colonial massacres. He charges both Graziani and the local Fascist Party leader, Guido Cortese, with personal responsibility. Though unconscious when the killing began, Graziani took control of the subsequent reprisal executions, aimed in particular at eliminating the Ethiopian nobility and intelligentsia.

Graziani was never prosecuted for crimes in Africa, though he was convicted for collaboration with the Nazis and briefly imprisoned. Britain, wary of setting awkward precedents, played an outsized role

in sheltering Italians with blood on their hands. Mr Campbell cites a telegram written by Winston Churchill to his ambassador in Rome in 1944, instructing him to protect Marshal Badoglio, Italian commander of the Ethiopian northern front, who used poison gas, and is considered the top war criminal by Ethiopia.

Italy was never forced to reckon with Fascism as Germany was with Nazism. Few post-war Italian historians ever tackled the massacre. Those that did were often denounced as unpatriotic. Angelo Del Boca, writing in the 1960s, was accused by the Italian army of being a "liar" for his research on Graziani's crimes. When "Lion of the Desert"—a film depicting his actions in Libya—was released in 1981, it was soon banned, for damaging the honour of the Italian army. To this day Italian schoolchildren are not taught about the Addis Ababa massacre. Graziani is little known; his sins even less so. Mr Campbell's book will be welcomed by the Ethiopian government, which has long argued that its citizens deserve an apology. ■



Alexander Calder

## Sculpture in motion

**The artist who put the fourth dimension at the heart of his work**

**A**LEXANDER CALDER (1898-1976), the inventor of those delicate, floating structures of wire and metal known as "mobiles", was not the first modern sculptor to set his works in motion. That distinction may belong to his friend Marcel Duchamp, who in 1913 mounted a bicycle wheel on top of a stool and called it art. But sculptors have always played with movement, whether in medieval processions in which the statues of saints were carried through the streets, or in the Baroque works of Gian Lorenzo Bernini, whose spiralling compositions invite the viewer to move around them in order to appreciate forms unfolding in time as well as space. Sculpture is inherently participatory, closer to the real, living world than painting. But no sculptor has incorporated the fourth dimension with Calder's intelligence, dedication and sly humour.

"Calder: Hypermobility", at the Whitney Museum in New York until October 23rd, chronicles the artist's long investigation of form in motion. It contains many of the classic mobiles, like "Hanging Spider" (pictured), a whimsical sky-borne filigree in black dancing on ambient currents, or "Blizzard (Roxbury Flurry)", which captures the subtle atmospheric effects of a winter storm in wire and metal.

The surprises here are the experimental, motorised sculptures that preceded these classic, familiar works. Before he hit upon the happy notion of allowing air currents or a gentle touch to introduce movement, Calder activated his sculptures ►

► through the less elegant expedient of jerry-rigged motors. These early works are chunky, quirky, infused with a Dadaist irreverence and sense of play. "Two Spheres" consists of white balls against a black panel, one slowly turning while the other moves up and down. Both the forms and the motions are simple to the point of banality. But there is a revolution and a revelation lurking in these childlike elements—a demonstration that the immaterial stuff of time can be evoked through the most material of forms.

Calder's work is a crucial link between high-modernist abstraction and today's

performance and video art. Even at their most static, his works are theatrical, transforming the act of seeing into an open-ended choreographed experience. The Whitney show stresses this aspect not only by deploying an "activator" in the gallery to give his mobiles an occasional gentle nudge—but also by inviting contemporary musicians, dancers and other performers to stage works inspired by the sculptures.

Calder's fascination with alternative experiences included the element of sound, as seen in "Red Disc and Gong", a mobile in which shifting air currents cause a mallet to strike a gong at unpredictable

intervals, creating a minimalist music that anticipates the chance-driven compositions of John Cage. Through this most economical of means, Calder vastly expands the expressive reach of the medium.

Over the decades, Calder's reputation has suffered from over-familiarity. His works can feel too ingratiating, too crowd-pleasing, too user-friendly—the ubiquitous décor of the corporate lobby and the child's nursery. "Calder: Hypermobility" reveals an artist no less delightful than the one of the popular imagination, but also a pioneering sculptor who engineered a profound shift in this ancient practice. ■

## Johnson | The Americanisms are coming!

**But British English is being influenced, not destroyed, by the American sort**

P AUL REVERE'S ride through Concord, Massachusetts, warning that "the British are coming! The British are coming!", is said to have saved America's revolution from an early defeat that could have proved fatal. Much of the story, sadly for his legend, is myth. But now many Britons suspect that British English is losing a war to the American kind. As with Revere's ride, it can be hard to winkle out the truth.

In 2011 the BBC published a broadside by Matthew Engel, citing five common Americanisms, and inviting readers to send in their own least-favourite ones. They did so with gusto, adding that these Yankeeisms made them "thoroughly disgusted" and the like. Mr Engel had hit a nerve, and last month he published "That's the Way it Crumbles", a book bemoaning the Americanisation of British English. He is at pains to say that he is not anti-American. He merely wants to protect his country's distinctive dialect.

But in that article from 2011, four of five of Mr Engel's "Americanisms" were, in fact, of British origin. So were many of the ones readers sent in. "Gotten", one wrote, "makes me shudder." Yet it is the original English participle, replaced later in Britain by "got". "Fall" for autumn and "mad" for angry, too, were born in England, before fading there in the early modern era. Mr Engel is more careful in the new book to point out such round-trippers.

It is true that America is influencing British usage. "Smart" is increasingly describing the intelligent as much as the well dressed. (Never mind that "smart" first was used this way in Britain in 1571.) Many Britons prefer "movies" to "films". And "fries" and "cookies" are now appearing alongside "chips" and "biscuits". But are they always replacing them?

No: "smart" is savvy, whereas "clever" is swotty. "Fries" are thin and crispy, and



"cookies" are American styles like chocolate-chip, notes Lynne Murphy, an American linguist at Sussex University writing her own book about the relationship between British and American English. "Movies" tend to come from Hollywood; "film" is still preferred for the latest gritty cinema from Europe. In other words, these Americanisms are not an impoverishment of British English. They are additions to it.

The traffic goes both ways: "scones", both the things and the word, have made their way to America (though not the pronunciation: most Americans make it rhyme with "cones"). Ben Yagoda, an American academic, keeps a website of "Not One-Off Britishisms" used by stylish Yanks, from "ginger" hair to "nick" for "steal". Mr Engel replies that these are limited to intellectuals in America. Americanisms, he says, are taking deeper root among ordinary Britons.

English has always sucked up words

from around the globe. Mr Engel's fear is that in the past half-century, one source has come to dominate: America, thanks to its cultural, technological and political heft. But he goes even further in saying that, in a century, it is possible to imagine "American English absorb[ing] the British version completely".

This is—to use another Americanism—horsefeathers. American and British English differ on many levels: spelling, pronunciation, vocabulary, style and grammar. Mr Engel focuses on showing that some British words are giving way to, or making room for, American alternatives. But these are a fraction of the huge vocabulary otherwise shared by the two dialects. It is easy to find a newspaper article in which not a single word (spelling aside) is distinctly British or American. In other domains (recipes and car-parts, for example) differences are frequent. But these domains are local and personal, and highly resistant to change.

Overall, British English is in rude health. Pronunciation differences affect virtually every word, and British pronunciation is hardly converging on American. The few grammatical differences (for example "I will" in America, versus "I will do" in Britain) show little sign of changing either. There is little appetite in Britain for American spelling. And that ineffable quality of style makes articles by British or American writers distinct, even in the absence of obvious shibboleths.

American influence on global (not just British) English is rising. But varieties from Ireland to India to Australia retain a clear identity. Even within America, local dialects, especially the southern one, are going strong. All of these, and British English too, are constantly innovating. Mr Engel is right to dread a "linguistic monoculture". He is wrong to think that it is likely.

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## Appointments



### PRESIDENT OF THE EUROPEAN PATENT OFFICE

The post of President of the European Patent Office falls vacant on 1 July 2018.

The President manages the Office, under powers laid down in the European Patent Convention (Article 10 EPC). The official languages of the European Patent Office are English, French and German.

Candidates must have a diploma of completed studies at university level and proven high-level management experience. Their past career in the private or public sector must give evidence of:

- in-depth understanding of the needs of an international organisation.
- thorough knowledge and proven practical application of modern management methods, including an outstanding ability to establish and foster social dialogue.
- a genuine aptitude for communication, negotiating skills and the ability to make their opinions count.
- an excellent command of at least one of the official languages.

Practical experience in patent matters, in-depth understanding of the patent system and knowledge of the European Patent Organisation would be an advantage.

The complete application files of the candidates must be sent to the Council Secretariat\* to arrive by 14 September 2017 (date of receipt by the Secretariat). They must be submitted in one of the Organisation's official languages. They must include a curriculum vitae showing nationality of at least one contracting state, official confirmation of that state's support, and a letter of motivation. The submission of any further items with a view to clarifying and supporting the application is at the candidate's discretion.

The appointment will be made by the Administrative Council, in a decision taken under Article 11(1) EPC (the applicable majority being three-quarters of the votes of the contracting states represented and voting, in accordance with Article 35(2) EPC). External professional advice may be used in the evaluation process.

The term of office is five years, starting on 1 July 2018, and it may be renewed. The conditions of contract are subject to negotiation between the successful candidate and the Chairman of the Administrative Council, within a framework (model contract) set by the Council.

\*Address:

Council Secretariat

- Reference P2018 -

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**Economic data**

% change on year ago

	Gross domestic product			Industrial production		Consumer prices		Unemployment rate, %		Current-account balance		Budget balance	Interest rates, %	Currency units, per \$	
	latest	qtr*	2017†	latest	2017†	latest	2017†	latest	2017†	latest 12 months, \$bn	% of GDP 2017†	% of GDP 2017†	10-year gov't bonds, latest	Jul 19th	year ago
United States	+2.1 Q1	+1.4	+2.2	+2.0 Jun	+1.6 Jun	+2.0	4.4 Jun	-449.3 Q1	-2.6	-3.5	2.26	-	-	-	-
China	+6.9 Q2	+7.0	+6.7	+7.6 Jun	+1.5 Jun	+2.0	4.0 Q1§	+169.5 Q1	+1.6	-4.1	3.57§§	6.76	6.69	-	-
Japan	+1.3 Q1	+1.0	+1.3	+6.5 May	+0.4 May	+0.6	3.1 May	+188.6 May	+3.6	-5.1	0.11	112	106	-	-
Britain	+2.0 Q1	+0.8	+1.6	-0.3 May	+2.6 Jun	+2.7	4.5 Apr††	-99.8 Q1	-3.1	-3.6	1.30	0.77	0.76	-	-
Canada	+2.3 Q1	+3.7	+2.3	+5.7 Apr	+1.3 May	+1.8	6.5 Jun	-48.4 Q1	-2.6	-2.4	1.90	1.26	1.30	-	-
Euro area	+1.9 Q1	+2.3	+1.9	+4.0 May	+1.3 Jun	+1.6	9.3 May	+391.1 Apr	+3.1	-1.4	0.55	0.87	0.91	-	-
Austria	+2.3 Q1	+5.7	+1.8	+3.3 Apr	+1.9 Jun	+2.0	5.4 May	+6.4 Q1	+2.3	-1.1	0.72	0.87	0.91	-	-
Belgium	+1.6 Q1	+2.6	+1.6	+2.2 Apr	+1.6 Jun	+2.2	7.6 Mar	-4.2 Mar	+0.3	-2.3	0.84	0.87	0.91	-	-
France	+1.1 Q1	+1.9	+1.5	+3.2 May	+0.7 Jun	+1.2	9.6 May	-22.4 May	-1.2	-3.1	0.83	0.87	0.91	-	-
Germany	+1.7 Q1	+2.4	+1.8	+4.9 May	+1.6 Jun	+1.7	3.9 May‡	+272.4 May	+8.0	+0.5	0.55	0.87	0.91	-	-
Greece	+0.8 Q1	+1.8	+1.0	+5.4 May	+1.0 Jun	+1.3	21.7 Apr	-0.8 Apr	-1.2	-1.3	5.26	0.87	0.91	-	-
Italy	+1.2 Q1	+1.8	+1.1	+2.8 May	+1.2 Jun	+1.4	11.3 May	+48.6 Apr	+2.1	-2.3	2.19	0.87	0.91	-	-
Netherlands	+3.2 Q1	+1.7	+2.2	+3.8 May	+1.1 Jun	+1.2	6.1 May	+68.4 Q1	+9.4	+0.7	0.68	0.87	0.91	-	-
Spain	+3.0 Q1	+3.3	+2.9	+4.6 May	+1.5 Jun	+2.0	17.7 May	+21.1 Apr	+1.8	-3.3	1.65	0.87	0.91	-	-
Czech Republic	+4.0 Q1	+6.3	+3.0	+8.1 May	+2.3 Jun	+2.3	3.0 May‡	+14.4 Q1	+0.9	-0.5	0.92	22.6	24.5	-	-
Denmark	+3.6 Q1	+2.5	+1.6	+6.2 May	+0.6 Jun	+1.2	4.3 May	+26.1 May	+7.7	-0.6	0.66	6.46	6.76	-	-
Norway	+2.6 Q1	+0.9	+1.8	-1.4 May	+1.9 Jun	+2.4	4.6 Apr‡‡	+22.4 Q1	+7.6	+4.2	1.70	8.06	8.51	-	-
Poland	+4.4 Q1	+4.5	+3.6	+4.5 Jun	+1.5 Jun	+2.0	7.2 Jun§	-2.2 May	-0.8	-2.8	3.28	3.66	3.98	-	-
Russia	+0.5 Q1	na	+1.4	+3.6 Jun	+4.4 Jun	+4.2	5.1 Jun§	+33.6 Q2	+2.2	-2.2	8.13	59.1	63.4	-	-
Sweden	+2.2 Q1	+1.7	+2.6	+8.0 May	+1.7 Jun	+1.6	7.2 May§	+22.0 Q1	+4.8	+0.3	0.67	8.28	8.61	-	-
Switzerland	+1.1 Q1	+1.1	+1.4	-1.3 Q1	+0.2 Jun	+0.5	3.2 Jun	+73.6 Q1	+9.9	+0.2	0.01	0.95	0.99	-	-
Turkey	+5.0 Q1	na	+3.4	+4.1 May	+10.9 Jun	+10.2	10.5 Apr§	-35.3 May	-4.4	-2.3	10.50	3.52	3.03	-	-
Australia	+1.7 Q1	+1.1	+2.4	-0.8 Q1	+2.1 Q1	+2.2	5.6 Jun	-25.0 Q1	-1.6	-1.8	2.67	1.26	1.34	-	-
Hong Kong	+4.3 Q1	+2.9	+3.0	+0.2 Q1	+2.0 May	+1.6	3.1 Jun‡‡	+14.8 Q1	+6.6	+1.7	1.55	7.81	7.76	-	-
India	+6.1 Q1	+7.2	+7.1	+1.7 May	+1.5 Jun	+4.2	5.0 2015	-15.2 Q1	-1.2	-3.2	6.45	64.3	67.2	-	-
Indonesia	+5.0 Q1	na	+5.2	+4.0 May	+4.4 Jun	+4.3	5.3 Q3§	-14.6 Q1	-1.7	-2.2	6.93	13,319	13,089	-	-
Malaysia	+5.6 Q1	na	+5.2	+4.6 May	+3.6 Jun	+4.0	3.4 May§	+6.6 Q1	+3.6	-3.0	3.96	4.29	4.00	-	-
Pakistan	+5.7 2017**	na	+5.7	+6.3 May	+3.9 Jun	+4.8	5.9 2015	-9.2 Q1	-3.6	-4.5	8.93††	105	105	-	-
Philippines	+6.4 Q1	+4.5	+6.5	+5.8 May	+2.7 Jun	+3.0	5.7 Q2§	-0.4 Mar	+0.4	-2.8	4.65	50.9	46.9	-	-
Singapore	+2.5 Q2	+0.4	+2.9	+5.0 May	+1.4 May	+1.3	2.2 Q1	+59.0 Q1	+19.1	-1.0	2.08	1.37	1.35	-	-
South Korea	+3.0 Q1	+4.3	+2.6	+0.1 May	+1.9 Jun	+1.9	3.8 Jun§	+88.3 May	+6.0	+0.9	2.26	1,121	1,136	-	-
Taiwan	+2.6 Q1	+3.8	+2.4	+0.8 May	+1.0 Jun	+0.5	3.8 May	+69.1 Q1	+12.8	-0.9	1.07	30.4	32.0	-	-
Thailand	+3.3 Q1	+5.2	+3.4	+1.4 May	+nil Jun	+0.7	1.3 May§	+45.1 Q1	+11.5	-2.3	2.33	33.6	34.9	-	-
Argentina	+0.3 Q1	+4.3	+2.5	-2.5 Oct	+21.9 Jun‡	+24.2	9.2 Q1§	-16.8 Q1	-2.8	-5.9	na	17.4	15.3	-	-
Brazil	-0.4 Q1	+4.3	+0.6	+3.9 May	+3.0 Jun	+3.8	13.3 May§	-18.1 May	-1.0	-7.8	9.39	3.16	3.28	-	-
Chile	+0.1 Q1	+0.7	+1.5	+0.1 May	+1.7 Jun	+2.8	7.0 May‡‡	-5.0 Q1	-1.4	-2.7	4.23	654	651	-	-
Colombia	+1.1 Q1	-0.9	+2.0	-0.6 May	+4.0 Jun	+4.1	9.4 May§	-11.9 Q1	-3.6	-3.2	6.70	3,010	2,935	-	-
Mexico	+2.8 Q1	+2.7	+2.0	+1.0 May	+6.3 Jun	+5.4	3.5 May	-22.0 Q1	-2.2	-1.9	6.82	17.5	18.6	-	-
Venezuela	-8.8 Q4~	-6.2	-7.0	na	na	+591	7.3 Apr§	-17.8 Q3~	-0.6	-19.6	11.02	10.0	9.99	-	-
Egypt	+4.3 Q1	na	+3.5	+25.1 May	+29.8 Jun	+22.5	12.0 Q1§	-18.0 Q1	-5.8	-10.8	na	17.9	8.88	-	-
Israel	+4.0 Q1	+1.4	+3.7	+4.2 Apr	-0.2 Jun	+1.0	4.5 May	+11.7 Q1	+3.9	-2.5	1.88	3.57	3.86	-	-
Saudi Arabia	+1.7 2016	na	-0.5	na	-0.4 Jun	+2.2	5.6 2016	-1.0 Q1	+1.3	-7.4	3.68	3.75	3.75	-	-
South Africa	+1.0 Q1	-0.7	+0.7	-1.9 May	+5.1 Jun	+5.5	27.7 Q1§	-7.9 Q1	-3.2	-3.2	8.64	12.9	14.4	-	-

Source: Haver Analytics. \*% change on previous quarter, annual rate. †The Economist poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 \*\*Year ending June. ††Latest 3 months. §§3-month moving average. §§5-year yield. ††Dollar-denominated bonds.

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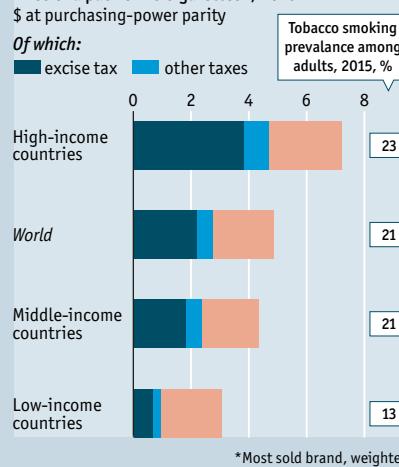
## Markets

	% change on			
	Index Jul 19th	one week	Dec 30th 2016 in local currency terms	in \$
United States (DJIA)	21,640.8	+0.5	+9.5	+9.5
China (SSEA)	3,383.8	+1.0	+4.1	+7.1
Japan (Nikkei 225)	20,020.9	-0.4	+4.7	+9.4
Britain (FTSE 100)	7,430.9	+0.2	+4.0	+9.8
Canada (S&P TSX)	15,244.7	+0.7	-0.3	+6.2
Euro area (FTSE Euro 100)	1,200.0	-0.3	+7.9	+17.8
Euro area (EURO STOXX 50)	3,500.3	-0.4	+6.4	+16.2
Austria (ATX)	3,193.3	+0.7	+22.0	+33.2
Belgium (Bel 20)	3,901.4	+0.9	+8.2	+18.1
France (CAC 40)	5,216.1	-0.1	+7.3	+17.2
Germany (DAX)*	12,452.1	-1.4	+8.5	+18.4
Greece (Athex Comp)	853.5	+1.2	+32.6	+44.8
Italy (FTSE/MIB)	21,479.0	+0.2	+11.7	+21.9
Netherlands (AEX)	524.3	+1.5	+8.5	+18.5
Spain (Madrid SE)	1,066.2	+0.3	+13.0	+23.4
Czech Republic (PX)	1,007.9	+0.9	+9.4	+23.7
Denmark (OMXCB)	912.4	+0.5	+14.3	+24.8
Hungary (BUX)	35,789.3	-0.2	+11.8	+23.1
Norway (OSEAX)	796.1	+1.5	+4.1	+11.2
Poland (WIG)	62,533.5	+1.5	+20.8	+38.0
Russia (RTS, \$ terms)	1,043.1	+1.7	-9.5	-9.5
Sweden (OMX30)	1,610.0	-2.5	+6.1	+16.4
Switzerland (SMI)	9,024.3	+0.1	+9.8	+16.9
Turkey (BIST)	107,417.5	+3.5	+37.5	+37.4
Australia (All Ord.)	5,779.4	+1.1	+1.1	+11.4
Hong Kong (Hang Seng)	26,672.2	+2.4	+21.2	+20.4
India (BSE)	31,955.4	+0.5	+20.0	+26.6
Indonesia (JSX)	5,806.7	-0.2	+9.6	+10.9
Malaysia (KLCSE)	1,757.3	nil	+7.0	+12.0
Pakistan (KSE)	45,418.7	+3.7	-5.0	-5.7
Singapore (STI)	3,325.1	+3.6	+15.4	+21.9
South Korea (KOSPI)	2,429.9	+1.6	+19.9	+29.2
Taiwan (TWI)	10,506.1	+0.8	+13.5	+20.4
Thailand (SET)	1,575.9	+0.1	+2.1	+8.8
Argentina (MERV)	21,450.4	-3.6	+26.8	+15.7
Brazil (BVSP)	65,179.9	+0.5	+8.2	+11.6
Chile (IGPA)	25,150.2	+1.7	+21.3	+24.2
Colombia (IGBC)	10,880.4	-2.2	+7.7	+7.4
Mexico (IPC)	51,086.9	+0.5	+11.9	+31.7
Venezuela (IBC)	131,324.1	+5.5	+314	na
Egypt (EGX 30)	13,707.1	+0.1	+11.0	+12.1
Israel (TA-125)	1,307.1	+0.4	+2.4	+10.4
Saudi Arabia (Tadawul)	7,229.6	-1.1	-0.1	-0.1
South Africa (JSE AS)	54,091.1	+2.2	+6.8	+12.9

## Cigarette prices

The average price of a pack of cigarettes (adjusted for purchasing power) was \$4.87 last year, according to the World Health Organisation. Excise tax, value-added tax and custom duties account for most of the price variation around the world: the non-tax share of the retail price is fairly similar. In high-income countries, where cigarettes are most expensive, taxes make up on average 65% of the total price. Tax accounts for over half the price in almost 80% of high-income countries, compared with around 50% of middle-income countries and less than 20% of low-income countries. The WHO reckons there is ample scope to raise taxes on tobacco products, which is also the best way to reduce consumption.

Price of a pack of 20 cigarettes\*, 2016



\*Most sold brand, weighted average by number of smokers

Source: WHO

## Other markets

	% change on			
	Index Jul 19th	one week	Dec 30th 2016 in local currency terms	in \$
United States (S&P 500)	2,473.8	+1.3	+10.5	+10.5
United States (NAScomp)	6,385.0	+2.0	+18.6	+18.6
China (SSEB, \$ terms)	329.0	+0.3	-3.8	-3.8
Japan (Topix)	1,621.9	+0.2	+6.8	+11.5
Europe (FTSEurofirst 300)	1,513.7	-0.1	+6.0	+15.7
World, dev'd (MSCI)	1,958.6	+1.3	+11.8	+11.8
Emerging markets (MSCI)	1,060.1	+2.9	+22.9	+22.9
World, all (MSCI)	476.7	+1.5	+13.0	+13.0
World bonds (Citigroup)	930.8	+1.1	+5.3	+5.3
EMBI+ (JP Morgan)	826.3	+0.7	+7.0	+7.0
Hedge funds (HFRX)	1,242.1 <sup>§</sup>	+0.2	+3.2	+3.2
Volatility, US (VIX)	9.8	+10.3	+14.0 (levels)	
CDSs, Eur (iTRAXX) <sup>†</sup>	52.7	-4.6	-26.9	-20.2
CDSs, N Am (CDX) <sup>†</sup>	57.5	-4.5	-15.2	-15.2
Carbon trading (EU ETS) €	5.4	+0.6	-17.9	-10.4

Sources: IHS Markit; Thomson Reuters. \*Total return index.

†Credit-default-swap spreads, basis points. <sup>§</sup>Jul 18th.

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## The Economist commodity-price index

	2005=100			
	Jul 11th	Jul 18th*	% change on one month	% change on one year
<b>Dollar Index</b>				
All Items	145.1	144.4	+2.3	+4.0
Food	159.0	156.6	+2.1	-1.8
<b>Industrials</b>				
All	130.6	131.7	+2.5	+12.2
Nfa <sup>‡</sup>	130.7	131.6	+1.7	+4.6
Metals	130.6	131.8	+2.8	+15.8
<b>Sterling Index</b>				
All items	205.5	201.7	-0.9	+5.0
<b>Euro Index</b>				
All items	158.0	155.0	-1.7	-1.1
<b>Gold</b>				
\$ per oz	1,210.7	1,242.0	-0.1	-6.7
<b>West Texas Intermediate</b>				
\$ per barrel	45.0	46.4	+6.6	+3.9

Sources: Bloomberg; CME Group; Cottlook; Darmenn & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. \*Provisional

<sup>‡</sup>Non-food agriculturals.

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## How are Asian businesses using artificial intelligence today?

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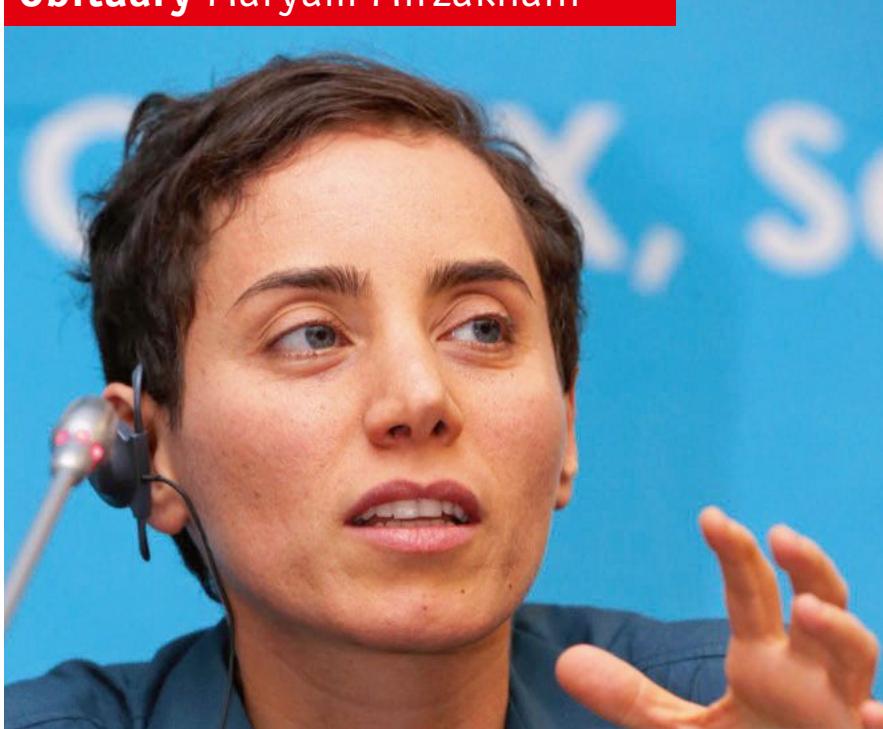
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## Adding up

**Maryam Mirzakhani, the world's leading female mathematician, died on July 14th, aged 40**

IMAGINE a frictionless ball rolling around a billiard table. Next, work out, on variously shaped tables, which set of ricochets would merely repeat a pattern, and which would eventually cover the whole surface. Full answers are still elusive, but it is the sort of mathematical puzzle that outsiders can at least imagine.

By Maryam Mirzakhani's standards, such problems were mundane. In her world, the billiard tables were abstract geometric objects which stretched and warped. The problems involved not just one table but a "moduli space", of all possible such surfaces. Fans called her work on these mind-spinning abstractions the "theorem of the decade".

Until the joy of maths claimed her, she wanted to be a novelist. Books cost next to nothing in the Iran of her childhood, and her earliest ambition was to read everything. Later, her maths had a literary tinge. She thrilled to the unfolding plot lines in the problems she studied—though unlike in literature, she said, they evolved like live characters. "Just as you start getting to know them, you look back and realise your first impression is mistaken."

By her own account she was a "slow" mathematician, both in the time it took her to get started (her first teacher in Tehran thought she lacked aptitude) and in the

way she approached problems: teasing out solutions by doodling for hours on vast sheets of paper. These would swathe the floor of their home, to the delight of her toddler, and to the amused bewilderment of her tidy-minded Czech husband. The point, she said, was not to write down all the details, but to stay connected with the problem. She also likened mathematical inquiry to being lost in a forest, gathering knowledge to come up with some new tricks, until you suddenly reach a hilltop and "see everything clearly".

But she was quick on other fronts. Encouraged by her teachers and older brother, she soared through the Iranian education system. She was the first girl to represent the country in the mathematical Olympiad, winning gold medals in two successive years. Her beloved abstract surfaces can be described geometrically, with angles, lengths and areas, or algebraically, with equations. She was fluent in both: a mathematical polyglot. She found it "refreshing" to cross what she dismissed as the "imaginary" boundaries between different branches of the subject.

After Harvard and a stint at Princeton, she ended up at Stanford, winning the Fields medal—broadly the maths equivalent of a Nobel prize—in 2014, the first woman to do so since its inception in 1936.

Her doctoral thesis alone was an academic earthquake, leading to papers published in the three most-admired mathematical journals. Of her great breakthroughs, perhaps the most easily explained involves hyperbolic surfaces: roughly, doughnuts with two or more holes, but where each point on the surface curves upwards, like a saddle. These exist, in theory, in infinite varieties. A big puzzle involves "geodesic" lines: the shortest distances between two surface points. Some may be infinitely long; others are "closed", forming loops with no endpoints. A fascinating and tiny handful, known as "simple", never cross themselves. Her thesis revealed a formula for how the number of simple closed geodesics of a given length rose as that length increased. Such work might seem abstruse to outsiders, but uses abound, from cosmology to cryptography.

She belied stereotypes. To Americans, she had to explain that in her native Iran (unlike Saudi Arabia) women's education and careers were not just tolerated but encouraged: her girls' high school was run by a national organisation responsible for hothousing young talent. She was not only the first woman to win the Fields medal, but the first Iranian, making her a celebrity there. Some media flinched piously from portraying her without a headscarf, a taboo which frayed after her death. Her marriage to a non-Muslim was not recognised, hampering family visits. Many also bemoaned her emigration, part of a debilitating brain drain. She moved to America for postgraduate study in 1999, a time when today's anti-Muslim immigration policies were unimaginable.

### Drawing a line

She quailed only before the limelight. She ignored a friend's e-mail telling her of the Fields award, assuming it was a practical joke. In remission from the cancer that would eventually kill her, she worried that chemotherapy had left her too weak to attend the awards ceremony.

Men have roughly five in every six maths-heavy academic jobs in America, part of a wider puzzle that neither nature nor nurture fully explains. One reason may be that maths talent and female fertility flower in the same crucial years. She acknowledged the problem of discouragement, but resisted pressure to be a role model; other women were doing great things too, and anyway research mattered more. At conferences, female colleagues, working in pairs, helped her dodge media inquiries. While one distracted the journalist, the other let her ricochet to a more familiar plane of being. ■

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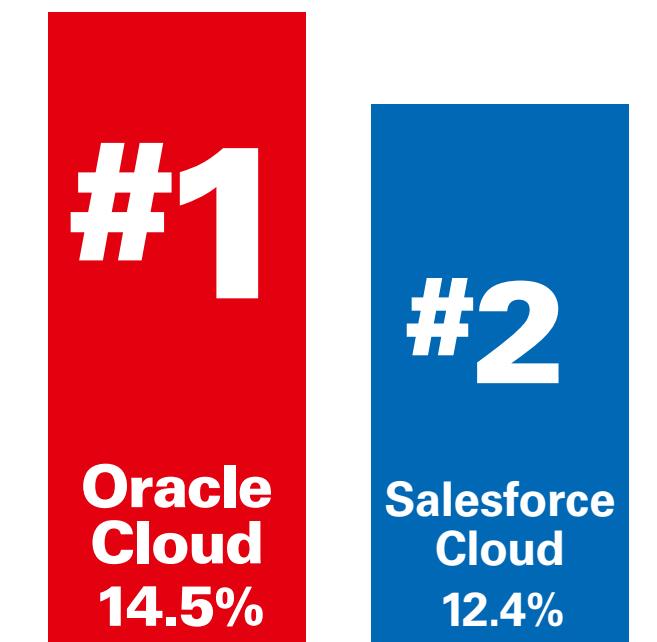
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For the purposes of this report, SaaS enterprise applications include the following application markets: CRM, engineering, ERP, operations and manufacturing, and SCM.  
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