

# The Economist

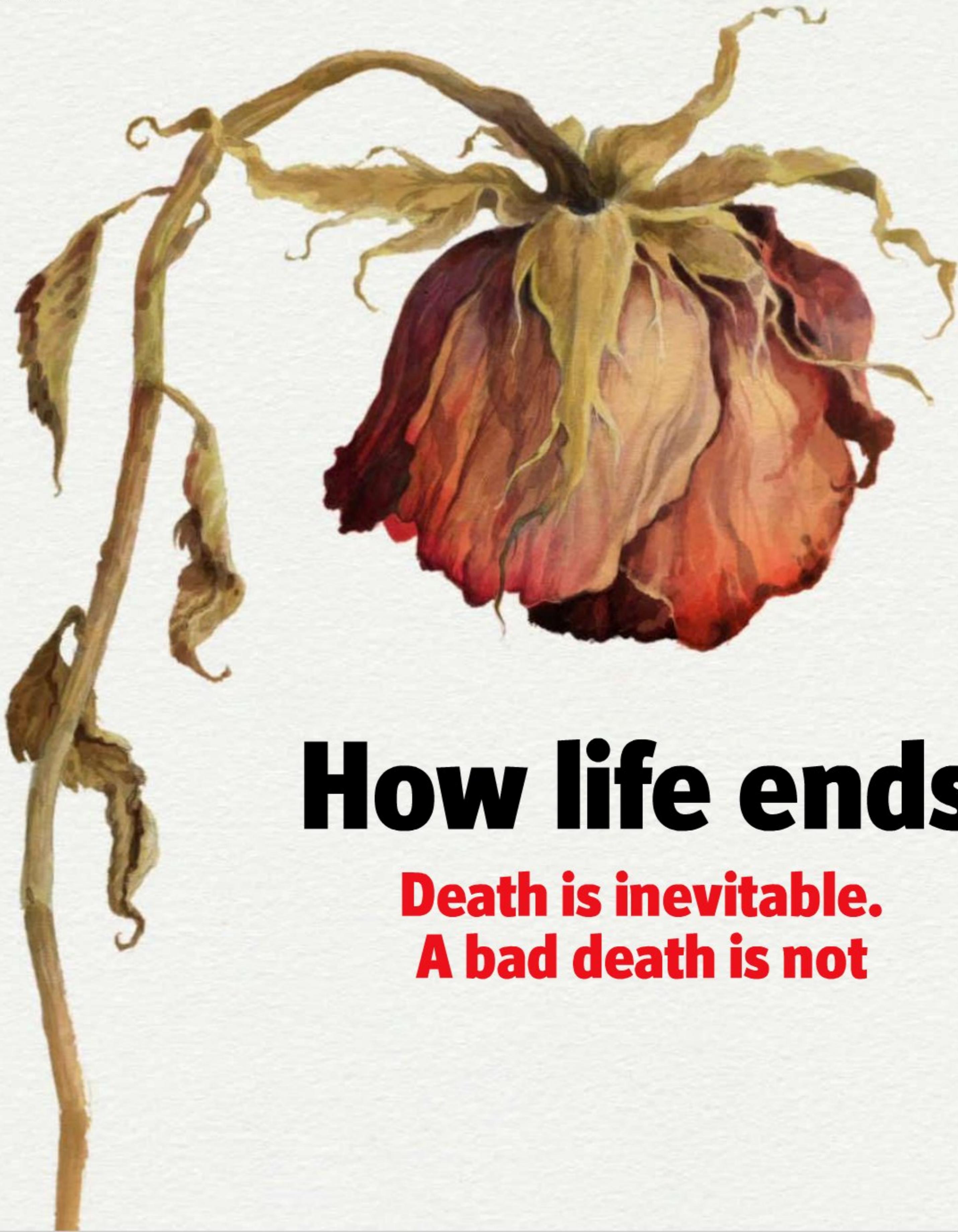
APRIL 29TH–MAY 5TH 2017

Farewell to the Arctic

The Trump tax plan

Tech offices: sofas and surveillance

Who is Emmanuel Macron?



## How life ends

**Death is inevitable.  
A bad death is not**



*How*

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## Politics



Emmanuel Macron topped the first round of the presidential election in **France** and will meet Marine Le Pen in a run-off on May 7th. Markets were buoyed by Mr Macron's performance: opinion polls put the former economy minister well ahead of his nationalist rival. A few days before the vote a policeman was killed by an Islamist on the Champs Élysées in Paris.

**Turkey** broadened its purge of people in public positions who the government claims belong to the movement allegedly behind last year's failed coup. Some 1,000 people, mostly police officers, were arrested, and another 2,200 were being sought. Another 9,000 police were suspended from duty.

### Power surge

A court in **South Africa** knocked back the government's plan to spend as much as 1trn rand (\$76bn) building nuclear power stations with help from Russia in a deal that critics say the country cannot afford. The courts ruled that an agreement signed with Russia was unconstitutional as it was not approved by parliament.

America started to withdraw its soldiers from the **Central African Republic** where they had been assisting in the fight against the Lord's Resistance Army, a rebel group notorious for using child soldiers that was formed in Uganda but later fled across the border.

The leader of the main opposition party in **Zambia**, Hakainde Hichilema, appeared in court. Mr Hichilema,

who has been repeatedly arrested by the government since narrowly losing an election in August 2016, was charged with treason after his motorcade failed to halt as it was being passed by one containing Zambia's president, Edgar Lungu.

**Israel's** prime minister, Benjamin Netanyahu, snubbed Germany's foreign minister, refusing to meet him during a trip to Jerusalem because he had visited two human-rights groups that Mr Netanyahu views as hostile.

**Iran's** Guardian Council ruled that Mahmoud Ahmadinejad, a former president, is ineligible to run in this year's presidential election.

### And on, and on...



More deaths during protests in **Venezuela** meant that at least 29 people have died in nearly a month of demonstrations for and against the country's authoritarian regime. They began after the supreme court usurped the powers of the legislature, which is controlled by the opposition, and continued even though the court changed its mind. Opposition politicians blamed some of the deaths on paramilitary groups. Venezuela said it will withdraw from the Organisation of American States, which has criticised its regime for crushing democracy.

A gang of about 50 men raided a security firm in the **Paraguayan** city of Ciudad del Este. After killing a police officer, they reportedly made off with millions of dollars. Some crossed the reservoir at the Itaipu hydroelectric dam to Brazil, where three robbers were killed in a shoot-out.

America levied duties averaging 20% on imports of softwood lumber from **Canada**. America claims that Canada subsidises the lumber by charging too little to firms that harvest the trees, which are mostly grown on public land. Donald Trump called Canada's protection for its dairy farmers "a disgrace". But he also said that America would not pull out of **NAFTA** and would instead seek to renegotiate the free-trade agreement.

### Don't hold your breath

Donald Trump laid out a wide-ranging **tax-reform** plan, the centrepiece of which is slashing corporation tax from 35% to 15%. Months of negotiations lie ahead with Congress, especially over the effect on future budget deficits.

The threat of a **government shutdown** seemed to be averted when Mr Trump backed away from insisting that funding for the wall he wants to build along the Mexican border should be included in a spending bill that will keep the government running until September 30th.

**Arkansas** began executing the eight prisoners it wants to put to death before a batch of a drug used in lethal injections reaches its expiry date. Two inmates were executed on the same evening.

An 18-year-old youth in Israel with American and Israeli citizenship was charged with making hoax bomb threats to **Jewish centres** in America. The threats sparked a furore earlier this year, which many people blamed on Mr Trump's supporters among the alt-right.

### Bolder

Taliban insurgents killed 140 soldiers in an assault on an Afghan army base. It was the deadliest attack on a military facility in **Afghanistan** since the toppling of the Taliban government in 2001.

India ordered telecoms firms to block the use of social networks in the state of **Kashmir**, which has been paralysed by

violent protests that the security services have been attempting to quell by force.

America began installing **THAAD**, an anti-missile system, in **South Korea**, despite local protests and objections from China.

Yameen Rasheed, an outspoken blogger in the **Maldives**, was murdered. He had been leading a campaign to locate an abducted journalist who had written about the nexus between politics, criminals and Islamic extremism.

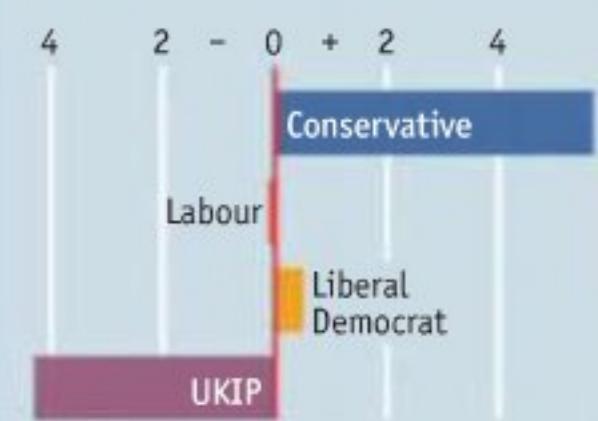
A **Chinese court** sentenced an American woman to three-and-a-half years in prison for spying. Sandy Phan-Gillis was detained in 2015 during a business trip. As she has already spent time in detention, she could be released early.

China launched its first domestically made **aircraft-carrier**. The ship will undergo extensive tests before being put into service. Meanwhile, China's first **cargo spacecraft** docked successfully with an orbiting space lab. It aims to build a manned space station by 2022.

### The Tories' purple patch

#### British election

% point change, five-poll averages before and after election announced



Sources: ComRes; ICM; Opinium; YouGov

**Britain's** political parties hit the trail in the first week of election campaigning. The governing Conservative Party capitalised on its position on Brexit. Labour's leader, Jeremy Corbyn, claimed his party could win. But rather than his fairy tale, the polls tell a sorry tale for Labour, showing it lagging far behind the Tories. The UK Independence Party has also slumped. UKIP's leader said he will not put up candidates in some seats where a pro-Brexit candidate can oust a pro-Remain one.

## Business

Credit Suisse announced plans to sell SFr4bn-worth (\$4bn) of new shares, two years after it raised SFr6bn in a similar share issue. The Swiss bank reported a better-than-expected profit for the first quarter, a boost for management. Last year Credit Suisse made a substantial loss, prompting a shareholder revolt over the pay of its chief executive and chairman.

### The farrago at Wells Fargo

Irate shareholders disrupted the annual meeting at **Wells Fargo**, peppering board members with questions about what they knew and when about a scandal in which fake accounts were created by staff under pressure to beat targets. All the bank's directors were re-elected at the meeting, but the chairman, Stephen Sanger, received only 56% support. He promised that the "clear message of dissatisfaction" had got through.

The British government at last recovered all the money it spent bailing out **Lloyds Banking Group** during the financial crisis, mostly by selling tranches of the shares it had bought but also because of hefty dividends it received after Lloyds returned to financial health. The bank doubled its pre-tax profit in the first quarter to £1.3bn (\$1.6bn) and lifted its outlook for the year.

The European Commission confirmed that **Greece** recorded a primary budget surplus (which excludes debt repayments) of 4.2% of GDP last year. That was the country's first such surplus in 21 years, but the IMF reckons Greece is not out of the woods yet.

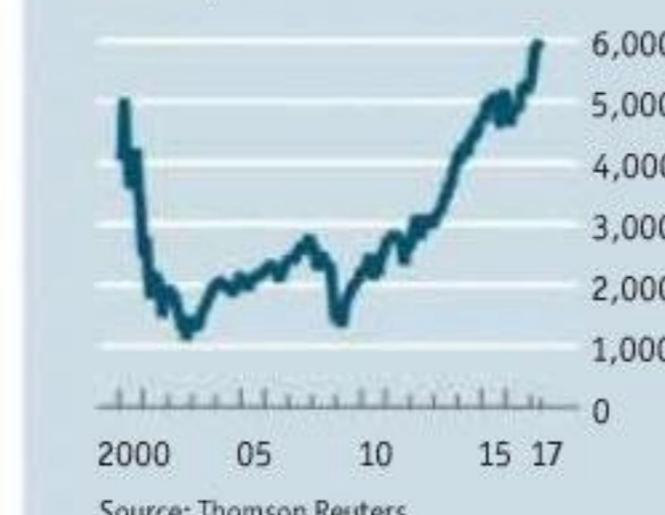
**SNCF**, the French state-owned rail company, joined a consortium that includes Stagecoach and Virgin Trains to bid for the contract to operate trains on the proposed **High Speed 2** link that will run between London and the north of England. SNCF will have a 30% stake in the joint venture.

**United Airlines** published a report into the case of a passenger who was violently removed from a plane because he refused to give up his seat after being bumped. United said it will reduce overbookings on certain flights, increase the amount for voluntarily giving up a seat to \$10,000 and give staff more training in how to calm tense situations.

### The dizzy heights

#### NASDAQ composite

February 5th 1971=100



The **NASDAQ stockmarket** index closed above the 6,000 mark for the first time. It breached 5,000 during the dotcom boom in 2000. After that bubble burst it didn't hit 5,000 again until March 2015. The biggest companies on the NASDAQ in 2000 were Microsoft, Cisco and Intel; today they are Apple, Google and Microsoft. The tech-heavy index has outperformed the S&P 500 so far this year. A post-election rally in the share

prices of banks and industrial companies has wavered and investors are instead piling into high-growth tech firms.

Facing up to criticisms that it is not doing enough to tackle the problem, **Google** decided to change the algorithm on its search engine in order to give less prominence to "fake news" and other "low-quality" content. Google and social-media sites such as Facebook were lambasted last year for hosting hoax news articles during the US election.

**LafargeHolcim** said that Eric Olsen would resign as chief executive following an independent internal report into the cement-maker's decision to keep a factory operating in Syria during the early years of the civil war. The report's summary acknowledged that Lafarge had paid off armed groups to keep workers safe and the plant open. But the firm says Mr Olsen "was not responsible" for the scandal.

**PPG**, an American chemical company, again raised its takeover offer for **AkzoNobel**, a Dutch maker of paints which owns the Dulux brand. Akzo has repeatedly spurned PPG's approaches, to the chagrin of some investors. This week it

roundly rejected a call by an activist hedge fund to hold a meeting of shareholders to discuss sacking the chairman.

Bernard Arnault simplified his holdings in **LVMH** and **Christian Dior** by unveiling a complex transaction to buy out investors in the latter. The deal is worth around €12bn (\$13bn). The luxury-goods business has picked up recently. But rather than make new purchases, Mr Arnault wants to consolidate his LVMH empire.

### Brought to heel

Famous for its stilettos and a favourite of Princess Diana, **Jimmy Choo** put itself up for sale following a run of bad results. The shoemaker is 70%-owned by JAB Holding, an investment firm that is focusing its business on building a coffee-retail empire.

For the first time in 130 years, Britain's electricity network generated power over a full day without having to use coal. The linchpin of the Industrial Revolution, coal now fuels only around 10% of Britain's electricity generation as coal-fired power stations are gradually phased out.

**Other economic data and news can be found on pages 72-73**



# How to have a better death

**Death is inevitable. A bad death is not**



In 1662 a London haberdasher with an eye for numbers published the first quantitative account of death. John Graunt tallied causes such as “the King’s Evil”, a tubercular disease believed to be cured by the monarch’s touch. Others seem uncanny, even poetic. In 1632, 15 Londoners “made away themselves”, 11 died of “grief” and a pair fell to “lethargy”.

Graunt’s book is a glimpse of the suddenness and terror of death before modern medicine. It came early, too: until the 20th century the average human lived about as long as a chimpanzee. Today science and economic growth mean that no land mammal lives longer. Yet an unintended consequence has been to turn dying into a medical experience.

How, when and where death happens has changed over the past century. As late as 1990 half of deaths worldwide were caused by chronic diseases; in 2015 the share was two-thirds. Most deaths in rich countries follow years of uneven deterioration. Roughly two-thirds happen in a hospital or nursing home. They often come after a crescendo of desperate treatment. Nearly a third of Americans who die after 65 will have spent time in an intensive-care unit in their final three months of life. Almost a fifth undergo surgery in their last month.

Such zealous intervention can be agonising for all concerned (see pages 45-48). Cancer patients who die in hospital typically experience more pain, stress and depression than similar patients who die in a hospice or at home. Their families are more likely to argue with doctors and each other, to suffer from post-traumatic stress disorder and to feel prolonged grief.

## What matters

Most important, these medicalised deaths do not seem to be what people want. Polls, including one carried out in four large countries by the Kaiser Family Foundation, an American think-tank, and *The Economist*, find that most people in good health hope that, when the time comes, they will die at home. And few, when asked about their hopes for their final days, say that their priority is to live as long as possible. Rather, they want to die free from pain, at peace, and surrounded by loved ones for whom they are not a burden.

Some deaths are unavoidably miserable. Not everyone will be in a condition to toast death’s imminence with champagne, as Anton Chekhov did. What people say they will want while they are well may change as the end nears (one reason why doctors are sceptical about the instructions set out in “living wills”). Dying at home is less appealing if all the medical kit is at the hospital. A treatment that is unbearable in the imagination can seem like the lesser of two evils when the alternative is death. Some patients will want to fight until all hope is lost.

But too often patients receive drastic treatment in spite of their dying wishes—by default, when doctors do “everything possible”, as they have been trained to, without talking through people’s preferences or ensuring that the prognosis is clearly understood. Just a third of American patients with ter-

minal cancer are asked about their goals at the end of life, for example whether they wish to attend a special event, such as a grandchild’s wedding, even if that means leaving hospital and risking an earlier death. In many other countries, the share is even lower. Most oncologists, who see a lot of dying patients, say that they have never been taught how to talk to them.

This newspaper has called for the legalisation of doctor-assisted dying, so that mentally fit, terminally ill patients can be helped to end their lives if that is their wish. But the right to die is just one part of better care at the end of life. The evidence suggests that most people want this option, but that few would, in the end, choose to exercise it. To give people the death they say they want, medicine should take some simple steps.

More palliative care is needed. This neglected branch of medicine deals with the relief of pain and other symptoms, such as breathlessness, as well as counselling for the terminally ill. Until recently it was often dismissed as barely medicine at all: mere tea and sympathy when all hope has gone. Even in Britain, where the hospice movement began, access to palliative care is patchy. Recent studies have shown how wrong-headed that is. Providing it earlier in the course of advanced cancer alongside the usual treatments turns out not only to reduce suffering, but to prolong life, too.

Most doctors enter medicine to help people delay death, not to talk about its inevitability. But talk they must. A good start would be the wider use of the “Serious Illness Conversation Guide” drawn up by Atul Gawande, a surgeon and author. It is a short questionnaire designed to find out what terminally ill patients know about their condition and to understand what their goals are as the end nears. Early research suggests it encourages more, earlier conversations and reduces suffering.

These changes should be part of a broad shift in the way health-care systems deal with serious illness. Much care for the chronically ill needs to move out of hospitals altogether. That would mean some health-care funding being diverted to social support. The financial incentives for doctors and hospitals need to change, too. They are typically paid by insurers and governments to do things to patients, not to try to prevent disease or to make patients comfortable. Medicare, America’s public health scheme for the over-65s, has recently started paying doctors for in-depth conversations with terminally ill patients; other national health-care systems, and insurers, should follow. Cost is not an obstacle, since informed, engaged patients will be less likely to want pointless procedures. Fewer doctors may be sued, as poor communication is a common theme in malpractice claims.

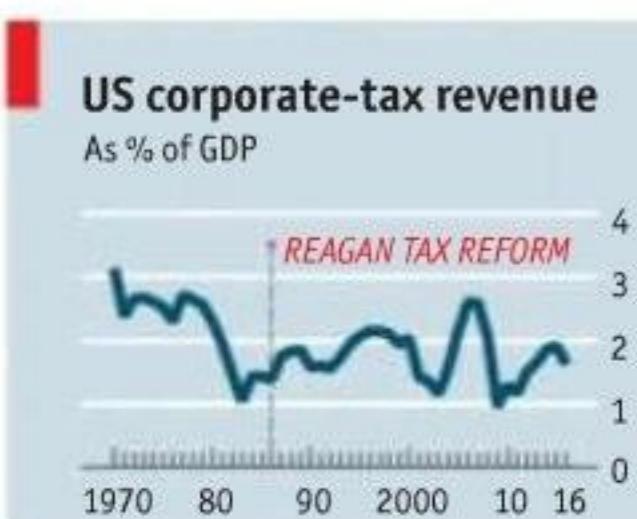
## One last thing before I go

Most people feel dread when they contemplate their mortality. As death has been hidden away in hospitals and nursing homes, it has become less familiar and harder to talk about. Politicians are scared to bring up end-of-life care in case they are accused of setting up “death panels”. But honest and open conversations with the dying should be as much a part of modern medicine as prescribing drugs or fixing broken bones. A better death means a better life, right until the end. ■

**Donald Trump's tax plan**

## Under audit

The Trump administration's tax plan does not match its laudable rhetoric



AMERICA'S tax system is a disaster. It is a self-defeating combination of fairly high tax rates and generous exemptions that mean little money is actually raised. It is mind-bogglingly complex: the income-tax code is so knotty that America has as many tax preparers per 1,000 people as Indonesia has doctors. It distorts behaviour: American firms have at least \$1trn-worth of cash stashed abroad to avoid the taxman.

Change is hard, but not impossible. In 1986 Ronald Reagan and lawmakers from both parties proved that, with sufficient patience, persistence and willingness to compromise, it can happen. Their bill slashed tax rates while broadening the tax base so much that no revenue was lost. In fact, the money raised from corporations rose after Reagan signed the bill. This newspaper would cheer heartily if the set of principles unveiled by the Trump administration on April 26th marked the first steps towards meaningful tax reform.

The White House is making many of the right noises. It promises simplification by, say, reducing seven personal income-tax brackets to three and getting rid of some of the deductions that distort behaviour and add complexity. It pledges tax relief for middle-income earners by doubling the income-tax threshold. It plans to replace America's extraterritorial approach, whereby foreign profits are subject to American taxes when they are repatriated, with a more sensible territorial one. Much of this is welcome. Alas, Mr Trump's tax plan is just an opening gambit. There are many reasons to doubt that America will end up with a Reaganite outcome.

To see why, consider corporate tax first. The Trump team wants to cut the corporate-tax rate to 15% from 35% today. But its claim to pay for the cuts with a sustained rise in economic

growth is fanciful. The plan does not include the lucrative border-adjustment provision sought by House Republicans. Instead, in addition to the promise of faster growth, it relies on a one-off tax on repatriated foreign profits and the abolition of deductions. The trouble is that some gaping loopholes have already been protected and others are likely to open up.

Take, for example, Mr Trump's desire to extend the 15% rate to individuals who run small firms (see page 50). This would cause high-earners to masquerade as firms in order to benefit from a lower rate. The administration thinks it can stop this, but history suggests otherwise. A failure to keep taxes for individuals and small firms the same was one of the mistakes of the 1986 tax reform; it contributed to the number of "s-corporations" growing by almost 500% between 1980 and 2002. More recently Kansas tried something a bit like Mr Trump's proposal at a state level. It led to a surge in avoidance.

Despite the doubling of the income-tax threshold, the proposed changes to personal tax contain a lot that is regressive. This week's outline includes big giveaways that benefit only the rich. The top rate of income tax would fall from 39.6% to 35%. The alternative minimum tax, which makes avoidance harder, would be scrapped. So too the estate tax, a change benefiting only those leaving more than \$5.5m to their heirs.

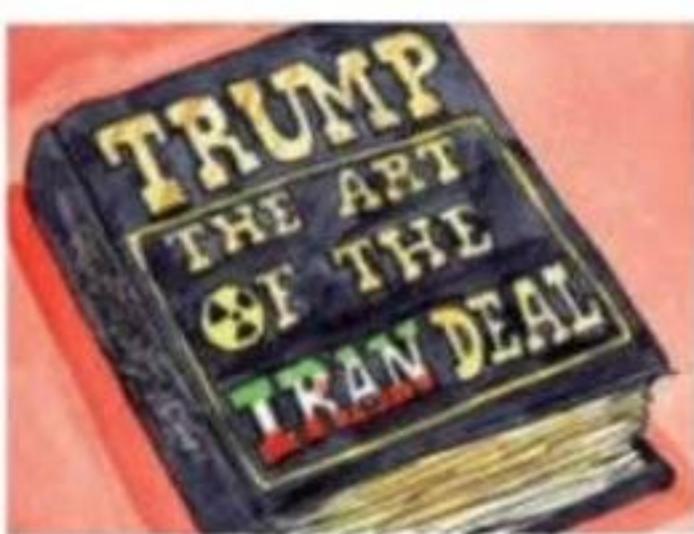
### Over to you

As just the opening round in a negotiation, this week's announcement could yet lead to something decent. To achieve sensible, long-lasting reform, Mr Trump needs the support of some Democrats in the Senate. In a best case that would lead the administration to think harder about how to make the plan revenue-neutral and to spread the benefits of lower taxes to the middle class. The danger is that it leads somewhere else entirely: a tax cut that principally benefits the rich and that is paid for with more borrowing. ■

**The nuclear deal with Iran**

## Waive hello

America has weeks to decide whether to ditch or uphold the agreement on Iran's nuclear programme



TIME is running out for Donald Trump to make up his mind about the Iran nuclear deal of 2015. Before May 17th President Trump must decide whether to continue Barack Obama's suspension of nuclear-related sanctions—Iran's reward for constraining its nuclear programme. If Mr Trump does not issue a waiver, sanctions will snap back. The other signatories to the deal will see America as the aggressor. Unless Iran goes on to violate the deal flagrantly, they will not follow suit. The chances are that Iran would then slowly crank its programme

up again. That would be a terrible outcome.

The Joint Comprehensive Plan of Action (JCPOA), as the deal is known, has got Iran to mothball most of its uranium-enrichment centrifuges and redesign its nuclear reactor at Arak to produce much less plutonium. Before the JCPOA, Iran was just a few months away from being able to make an atom bomb; that has been pushed back to a few years.

Mr Trump's words suggest that he thinks the agreement is already dead. What Mr Obama saw as his greatest foreign-policy achievement, his successor has branded "one of the worst deals I've ever seen".

However, the reality is more ambiguous. Rex Tillerson, America's secretary of state, sent a letter to Congress on April ►

► 18th declaring that Iran has complied with the terms of the nuclear deal—a judgment confirmed by James Mattis, the secretary of defence, on a visit to Israel, Iran's implacable enemy. Iranian compliance is good news. But, strangely, the State Department website buried it under the headline “Iran continues to sponsor terrorism”. Next, calling the deal flawed, Mr Tillerson said that the National Security Council would undertake a 90-day review to decide whether to maintain the suspension of the sanctions. And Mr Trump himself said that Iran had “broken the spirit of the agreement”. Asked whether America would still honour it, he said: “It’s possible that we won’t.”

Mr Tillerson complains that the deal only delays Iran from becoming a nuclear power and that its regional aggression is unrestrained. He is right. Yet the deal intentionally separated the nuclear programme from regional security because lumping the two together would have created stalemate. Some valuable provisions of the agreement, such as highly intrusive monitoring of Iran’s nuclear activities by international weapons inspectors, are permanent. Besides, the alternative is war.

Critics are also right to say that the idea that Iran might moderate with time is optimistic. But it is no less optimistic than

tearing the deal up in the hope of somehow getting something better. Mr Trump may reckon that by sounding tough he will win tweaks to the deal that he can claim as revolutionary. But that is a dangerous game. The Iranian presidential election comes two days after the waiver deadline on May 17th. If Mr Trump demurs, the chances of a hardline candidate winning will be greatly improved. Republicans in Congress are also spoiling to impose new sanctions on Iran. If the hardliners on both sides triumph, the deal’s fate will be sealed.

### Tough and self-defeating

Refusing to issue the waiver would also undermine America’s foreign-policy goals in Asia. Mr Tillerson compared the Iran deal to past failures to curb North Korea’s nuclear programme. In fact, the JCPOA reflects the lessons learned from those failures by building in extremely detailed requirements. If America hastily rips up the Iranian deal when Iran is compliant it would destroy any chance of one with North Korea.

Mr Trump can issue the waiver pending completion of the review of the nuclear deal. If that helps him find a way back from his campaign rhetoric, it will have served a purpose. ■

## The Arctic

# Polar bare

### The Arctic as it is known today is almost certainly gone



The shrinkage of the ice that covers the Arctic ocean. In the past 30 years, the minimum coverage of summer ice has fallen by half; its volume has fallen by three-quarters. On current trends, the Arctic ocean will be largely ice-free in summer by 2040.

Climate-change sceptics will shrug. Some may even celebrate: an ice-free Arctic ocean promises a shortcut for shipping between the Pacific coast of Asia and the Atlantic coasts of Europe and the Americas, and the possibility of prospecting for perhaps a fifth of the planet’s undiscovered supplies of oil and natural gas. Such reactions are profoundly misguided. Never mind that the low price of oil and gas means searching for them in the Arctic is no longer worthwhile. Or that the much-vaunted sea passages are likely to carry only a trickle of trade. The right response is fear. The Arctic is not merely a bellwether of matters climatic, but an actor in them (see pages 16-18).

The current period of global warming that Earth is undergoing is caused by certain gases in the atmosphere, notably carbon dioxide. These admit heat, in the form of sunlight, but block its radiation back into space, in the form of longer-wavelength infra-red. That traps heat in the air, the water and the land. More carbon dioxide equals more warming—a simple equation. Except it is not simple. A number of feedback loops complicate matters. Some dampen warming down; some speed it up. Two in the Arctic may speed it up quite a lot.

One is that seawater is much darker than ice. It absorbs heat

rather than reflecting it back into space. That melts more ice, which leaves more seawater exposed, which melts more ice. And so on. This helps explain why the Arctic is warming faster than the rest of the planet. The deal on climate change made in Paris in 2015 is meant to stop Earth’s surface temperature rising by more than 2°C above pre-industrial levels. In the unlikely event that it is fully implemented, winter temperatures over the Arctic ocean will still warm by between 5° and 9°C compared with their 1986-2005 average.

The second feedback loop concerns not the water but the land. In the Arctic much of this is permafrost. That frozen soil locks up a lot of organic material. If the permafrost melts its organic contents can escape as a result of fire or decay, in the form of carbon dioxide or methane (which is a more potent greenhouse gas than CO<sub>2</sub>). This will speed up global warming directly—and the soot from the fires, when it settles on the ice, will darken it and thus speed its melting still more.

### Dead habitat walking

A warming Arctic could have malevolent effects. The world’s winds are driven in large part by the temperature difference between the poles and the tropics. If the Arctic heats faster than the tropics, this difference will decrease and wind speeds will slow—as they have done, in the northern hemisphere, by between 5 and 15% in the past 30 years. Less wind might sound desirable. It is not. One consequence is erratic behaviour of the northern jet stream, a circumpolar current, the oscillations of which sometimes bring cold air south and warm air north. More exaggerated oscillations would spell blizzards and heat-waves in unexpected places at unexpected times.

Ocean currents, too, may slow. The melting of Arctic ice dilutes salt water moving north from the tropics. That makes it less dense, and thus less inclined to sink for the return journey ►

► in the ocean depths. This slowing of circulation will tug at currents around the world, with effects on everything from the Indian monsoon to the pattern of El Niño in the Pacific ocean.

The scariest possibility of all is that something happens to the ice cap covering Greenland. This contains about 10% of the world's fresh water. If bits of it melted, or just broke free to float in the water, sea levels could rise by a lot more than today's projection of 74cm by the end of the century. At the moment, the risk of this happening is hard to assess because data are difficult to gather. But loss of ice from Greenland is accelerating.

What to do about all this is a different question. Even if the Paris agreement is stuck to scrupulously, the amount of carbon

dioxide already in the atmosphere, together with that which will be added, looks bound eventually to make summer Arctic sea ice a thing of the past. Some talk of geoengineering—for example, spraying sulphates into the polar air to reflect sunlight back into space, or using salt to seed the creation of sunlight-blocking clouds. Such ideas would have unknown side-effects, but they are worth testing in pilot studies.

The hard truth, however, is that the Arctic as it is known today is almost certainly gone. Efforts to mitigate global warming by cutting emissions remain essential. But the state of the Arctic shows that humans cannot simply undo climate change. They will have to adapt to it. ■

## Central banks

# The wars of independence

### How best to preserve the benefits of central-bank autonomy



**O**N MAY 6th 1997 Gordon Brown, freshly installed as Britain's chancellor of the exchequer, announced that he was giving the Bank of England the responsibility for setting interest rates. The bank would be charged with meeting an inflation target set by the government.

The move was hailed as a political masterstroke. It gave substance to the new Labour government's claims to economic competence. Long-term borrowing costs fell sharply. The pound soared. The bank's governor, Eddie George, was delighted. But joy was not unconfined. Within weeks Mr Brown, wary of an over-mighty central bank, stripped it of its responsibilities for bank regulation and public-debt management.

Twenty years on, some fear that central banks have become too powerful. The Bank of England is back in charge of bank regulation. The European Central Bank (ECB) has added that job in the euro zone to a host of others it has picked up since the financial crisis. The Dodd-Frank act of 2010 gave America's Federal Reserve authority to ensure financial stability. Central banks have acquired more tools to go with their extra tasks. But they have also come in for louder criticism. The Bank of England was bashed for its assessment of Brexit. The ECB's quantitative-easing (QE) programme has been challenged in Germany's courts. A bill in Congress calls for the Fed's decisions to be audited. Savers moan about low interest rates.

The case for central-bank independence is as powerful as it was two decades ago. Interest rates need to be changed well before they will affect inflation. Politicians are loth to be pre-emptive. An independent central bank is more likely to act promptly to head off inflation—and this trustworthiness also affords it freedom to cut interest rates when recession looms.

Yet the critics should not be ignored. The history of central banks shows that their power can ebb and flow (see pages 56-58). Two of America's central banks folded before the Fed was established; Lyndon Johnson and Richard Nixon were not averse to bullying Fed chairmen into keeping interest rates low.

In addition, the financial crisis of 2008 forced central banks to make controversial decisions, in part because many governments were unable or unwilling to act themselves. They right-

ly put their resources at risk to bail out banks and keep credit markets working. To counter the bust that followed took a long period of near-zero interest rates and schemes such as QE. But the uneven effects on individuals of this newer sort of monetary policy were stark. One of the more reliable effects of QE was to raise share prices, favouring the well-off. Low rates are a salve to the indebted but hit deposit-holders.

Trade-offs of this kind are not new. The task of choosing how many jobs to sacrifice in order to hit an inflation target sooner rather than later is highly political. Yet there are ways in which central-bank powers might be circumscribed without hurting the bit of their autonomy that matters.

One is to follow the British model, in which the government sets an inflation target for the central bank to follow. Society's preferences over the "right" rate of inflation are not settled. It may sometimes be necessary to change the target. When low real interest rates are required, for example, it may make sense to aim higher on inflation. That is a decision for elected politicians. Ideally, this target should be symmetrical, meaning that inflation below the target is as undesirable as that above it. Otherwise, rate-setters who favour lower inflation have licence to indulge their preferences.

### The old lady sings the blues

Preserving the legitimacy of independent central banks also relies on the actions of central bankers themselves. It is not possible to make the setting of interest rates perfectly neutral or to free central banking from all residue of politics. But wise central bankers would limit their public comments to their own bailiwick. It is fine to point out that a looser fiscal stance would imply higher interest rates; but it is not obvious what is gained when a central banker directly criticises, or endorses, a specific tax plan or spending policy. Straying onto broader policy issues, as Mark Carney, of the Bank of England, has on climate change and Raghuram Rajan, of the Reserve Bank of India, did about religious tolerance, is likely to irk politicians and squander influence better saved for the bank's main tasks.

The benefits of central-bank autonomy far outweigh the costs, just as they did in 1997. The friction between politicians and bankers cannot simply be wished away. To keep the critics at bay, central bankers must be accountable for the powers delegated to them, and disciplined in their exercise. ■

**The diplomatic front**

Bagehot is correct: Britain needs a reinvigorated foreign policy led by a stronger Foreign Office (April 15th). The world is full of new uncertainties, not least Brexit and the election of President Donald Trump. The British are conflicted about what they want. For many the Brexit vote was about reducing our exposure to the world. If Britain expects a place at international top tables, we will need to be clear what we bring to the party.

That will not be achieved with Potemkin diplomacy. Fortunately, Britain still spends a lot on international action, but only a fraction of it on diplomacy, less than on pensioners' winter fuel allowance. Of every £1,000 of public spending, over £33 goes on defence, £12 on foreign aid and £2 on the Foreign Office.

Seven government departments now handle aspects of international policy. That includes the departments for aid, trade, defence, finance, interior (migration) and leaving the EU. To avoid fragmentation, the Foreign Office should co-ordinate international policy, as the Treasury does domestic economic policy. On Bagehot's question about who is the best person to lead this, I plead the Fifth.

**SIMON FRASER**  
Permanent under-secretary from  
2010 to 2015  
Foreign and Commonwealth  
Office  
London

**Brazil's academy awards**

Your account of the closeness of my election to the Brazilian Academy of Letters as reflecting a dispute between "the culture wing" and a supposed "public servants' clutch" in the academy was inaccurate ("Bard of Belíndia", April 15th). The vote is secret, but in my own calculations, out of the 18 votes I received, nine were from the strictly "literary" members and nine were from other culture representatives (such as journalists and historians). The vote was tight because my opponent, Eros Grau,

had already been a candidate to the academy on another occasion, when he obtained ten votes. Everyone expected him to surpass that mark this time. The only question was if he would reach the 17 votes needed to win. Fortunately for me, that didn't happen.

**EDMAR BACHA**  
*Rio de Janeiro*

**Guarding the cyber-gates**

There is an additional problem to the ones you mentioned in overcoming barriers to make computers more secure ("The myth of cyber-security", April 8th). When companies such as Apple suffer a hack (like the iCloud leak in 2014), they will investigate why the attack was successful and how similar incidents might be prevented. But they are not inclined to share their findings with rivals, such as Google or Microsoft. So even if one company works out how to defend itself against a particular threat, its peers and their customers remain at risk. The industry's giants are fighting their own fires but not helping others to extinguish theirs.

Our digital culture is also a problem, as it sees cyber-security as an individual pursuit, much like building a wall around your property. To make any headway, we need to start viewing the enemies of our enemy as our friends. Barack Obama signed an order in 2015 promoting information sharing and analysis centres to encourage intra-industry collaboration. That's a good start. But the private sector must take a less gladiatorial approach and routinely share security information with peers, including competitors.

**TONI GIDWANI**  
Director of research operations  
ThreatConnect  
Arlington, Virginia

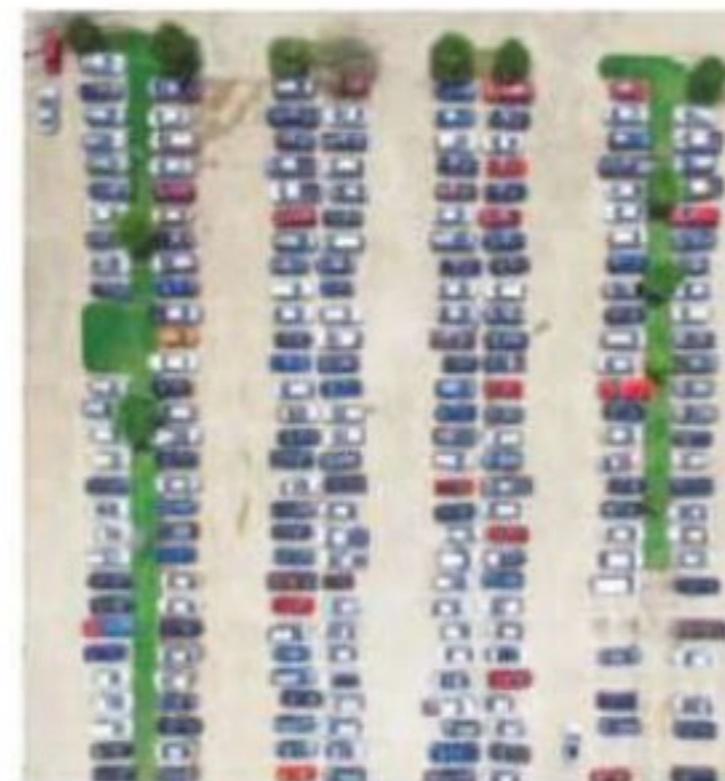
**Death on the roads**

Regarding drunk driving in India ("Bar wars", April 8th), I live in a student town and accidents from drunk driving are common, yet I have never seen a breathalyser in my life, nor have I heard anyone say

that they had to take a test. The Community Against Drunken Driving estimates that 70% of all road deaths in India are caused by drunk drivers, with the figure running between 44% and 67% in smaller cities.

The Supreme Court would not have had to take its decision to ban alcohol near highways if the legislature had put enough police on the ground to catch the offenders. With sales of more than 2.5m cars and 15m bikes every year, state governments will do their best to circumvent the court ruling. Indians have a reputation for policy *jugaad*; that figure of 400 traffic deaths a day looks set to go up.

**RAJESH KAMATH**  
Assistant professor  
Department of Public Health  
Manipal University  
*Manipal, India*

**They paved paradise**

Managing parking space for vehicles is important, but it is ultimately only treating the symptom of car congestion ("Sacred spaces", April 8th). Cars are used in a doubly inefficient way. They run for only 50 minutes in every 24 hours and carry just over a single passenger on average. If capacity could be doubled and the number of cars reduced accordingly, parking would no longer be an issue.

The answer is ride sharing. We ran simulations based on data from Lisbon, in which buses and cars were replaced by different types of shared vehicles. The results were striking. A very similar level of service was provided with less than 5% of the current car fleet. The need for street parking disappeared. We are running the same simulation for other

cities, among them Auckland, Dublin and Helsinki.

Self-driving vehicles, by contrast, are not in themselves the solution. They are likely to increase car use because those who can't drive now, will. They also reduce the incentives for sharing. So although parking space should become less of a problem with self-driving vehicles, city streets themselves might come to resemble parking lots.

**JOSÉ VIEGAS**  
Secretary-general  
International Transport Forum  
*Paris*

I would be more likely to join a carpool or take public transport if I knew that my fellow co-workers and I were going into and out of the office at the same time. The erosion of the traditional eight-hour work day is one reason why people don't share rides. We don't know exactly when we'll be heading home at the end of the day.

**TOD COLBY**  
*Orlando, Florida*

"Aparkalypse now" (April 8th) overlooked the importance of parking to employment and job creation. The private car lubricates the job market. In south-east England outside London, anyone with a car has access to a huge job market, with a radius of about 40 miles. Without it, he has access only to his home town and trains to London. To work its magic, the car needs to be able to park, and the parking must be affordable.

**KENNETH GRUNDEY**  
*High Wycombe, Buckinghamshire*

Praying to St Anthony may work for some when trying to find parking. Others ensure a slot by filling spaces with fake fire hydrants that they conveniently keep in their cars.

**JURGEN PAPE**  
*Granville, Ohio* ■

# Executive Focus



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*Registrar*



**Principal Adviser for Public Health Emergencies (PHE)**  
Position location and level: New York, D-1 • Closing Date: 21 May 2017

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- coordinate the cross-sectoral work on preparedness, response and recovery for PHE, including staff safety;
- provide knowledge management capacity to strengthen and inform programme decisions;
- provide leadership and coordination of existing organizational structures; and
- act as the organization's primary focal point with WHO on PHE and represent UNICEF in partner coordination mechanisms such as the Global Outbreak Alert and Response Network (GOARN).

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- An advanced university degree in Public Health, Medicine or another clinical area, is required.
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- Broad multi-sectoral knowledge and field experience in UNICEF programmes or other UN agencies and organizations in outbreaks in a development or emergency environment, is an asset.
- Strong organizational and people skills, including building and leading teams.
- Oral and written fluency in English is required and French is desirable. Knowledge of a third UN language is an asset.

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Deadline for application: 16th May 2017
- **Junior Economists** (Job ID 104057)  
Deadline for application: 10th May 2017
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The World Agroforestry Centre (ICRAF) is looking for a Regional Coordinator in charge of West and Central Africa to contextualize and deliver ICRAF's strategy and by extension, the CGIAR's Strategic Results Framework, in the assigned geographic and socio-political region, in partnership with appropriate and relevant regional and national partners from across all sectors of society, for the benefit of the region and beyond. S/he will also provide overall leadership within the region to represent ICRAF's interests in the region and ensure quality execution of ICRAF research activities in the region.

S/he will promote the right conditions for countries in the region to implement agroforestry R&D, development of CGIAR Research Programs and to provide support for ICRAF's work, through foresight studies.

S/he will lead the development and implementation of a regional strategy that responds to local needs and opportunities while furthering ICRAF's global mission.

S/he will monitor implementation and review/ improve the regional strategy as necessary.

S/he will facilitate institutional integration and coherence through regular communication and liaison with ICRAF's programmatic, thematic and geographic leadership.

For the full Job description please visit:

<http://worldagroforestry.org/working-for-icraf/vacancies>

Applications will be considered until 14 May 2017.

## Executive Focus



Investing in rural people

The International Fund for Agricultural Development (IFAD) is an international financial institution and a specialized United Nations agency dedicated to eradicating rural poverty and hunger. It does so by investing in rural people. IFAD finances programmes and projects that increase agricultural productivity and raise rural incomes, and advocates at the local, national and international level for policies that contribute to rural transformation.

IFAD is looking for seasoned professionals with strategic vision, a solid team orientation, proven capacity to generate results, and a deep understanding of and commitment to development. IFAD is currently seeking to recruit for executive and senior positions:

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An expert in legal affairs related to financial institutions operating in development. S/he is IFAD's legal adviser to the institution on all aspects of IFAD's operations and mandate, as well as all issues of administrative, institutional or other law as they may affect the institution and its mandate.
- **Secretary of IFAD, Office of the Secretary, grade D-1/D-2**  
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## Skating on thin ice

**Also in this section**

**18 The Arctic thaw and the world's weather**

KIRKENES, TROMSO AND WASHINGTON, DC

### Efforts to limit global warming will not stop the Arctic melting

**D**UE to the global warming, please keep the Snowhotel door closed" reads a sign at the entrance to what appears to be a giant white mound near Kirkenes, close to Norway's Arctic border with Russia. The owners want to preserve the frozen friezes of unicorns, reindeer and butterflies that adorn its walls. Patches of translucence in the ceilings of the hotel's 25 icy rooms suggest the warmth outside is winning. Artificial snow helps build the structure anew each November and it usually disappears before May. The season has shortened in recent years, says one employee; the cold comes later than before.

The Snowhotel's lengthening off-season is a small sign of an immense transformation in the Arctic, where the environment is changing more rapidly than in the rest of the world. Little can be done to keep its white wastes intact. A great thaw is inevitable as the climate responds to an accumulation of carbon emissions in the atmosphere. International efforts to limit global warming will at best slow the changes, perhaps making the consequences merely terrible rather than catastrophic.

"The Paris agreement will not save the Arctic as it is today," says Lars-Otto Reiersen, executive secretary of the group behind the latest edition of "Snow, Water, Ice, Permafrost in the Arctic" (SWIPA), a report produced under the auspices of the Arctic Council, a scientific-policy club for the

eight countries with territory in the Arctic Circle), as well as observers including China and India.

Atmospheric concentration of carbon dioxide has now reached 400 parts per million (ppm), up from 280 ppm three centuries ago; the Earth is on average 1°C hotter than in pre-industrial times. Although 190-odd countries signed up to limit warming to "well below" 2°C above pre-industrial temperatures in Paris in 2015, pledges for mitigating action are likely to see temperatures increase by around 3°C—assuming countries stick to their promises. But different parts of the world warm at different rates. Even if the Paris agreement is implemented in full, the Arctic will warm by between 5°C and 9°C above the 1986-2005 average over the Arctic ocean in winter.

The thaw is happening far faster than once expected. Over the past three decades the area of sea ice in the Arctic has fallen by more than half and its volume has plummeted by three-quarters (see map on next page). SWIPA estimates that the Arctic will be free of sea ice in the summer by 2040. Scientists previously suggested this would not occur until 2070. The thickness of ice in the central Arctic ocean declined by 65% between 1975 and 2012; record lows in the maximum extent of Arctic sea ice occurred in March.

The most worrying changes are happening in Greenland, which lost an aver-

age of 375bn tonnes of ice per year between 2011 and 2014—almost twice the rate at which it disappeared between 2003 and 2008 (see chart on next page). This is the equivalent of over 400 massive icebergs measuring 1km on each side disappearing each year. The shrinkage is all the more perturbing because its dynamics are not well understood. Working out what is going on in, around and underneath a supposedly frigid ice sheet is crucial to understanding how it will respond to further warming and the implications of its demise for rising global sea levels (see box).

### Cold, hard facts

The Arctic has been warming at twice the rate of the rest of the world for decades because of feedback loops that have reduced the albedo effect, a measure of the way Earth reflects heat. Unlike the rest of the planet the polar regions release more heat into space than they absorb, in effect cooling the planet, because sunlight is reflected by ice and snow. When it is replaced by water or dark ground, more heat is retained. That is precisely what is happening in the Arctic's defrosting landscape.

At sea, much Arctic ice once lingered throughout one year and into the next. In 1985 about 45% of ice was older (and thus thicker) but by 2016 that amount had fallen by half. Huge expanses of ice now melt and refreeze over the year. Older ice tends to be ➤

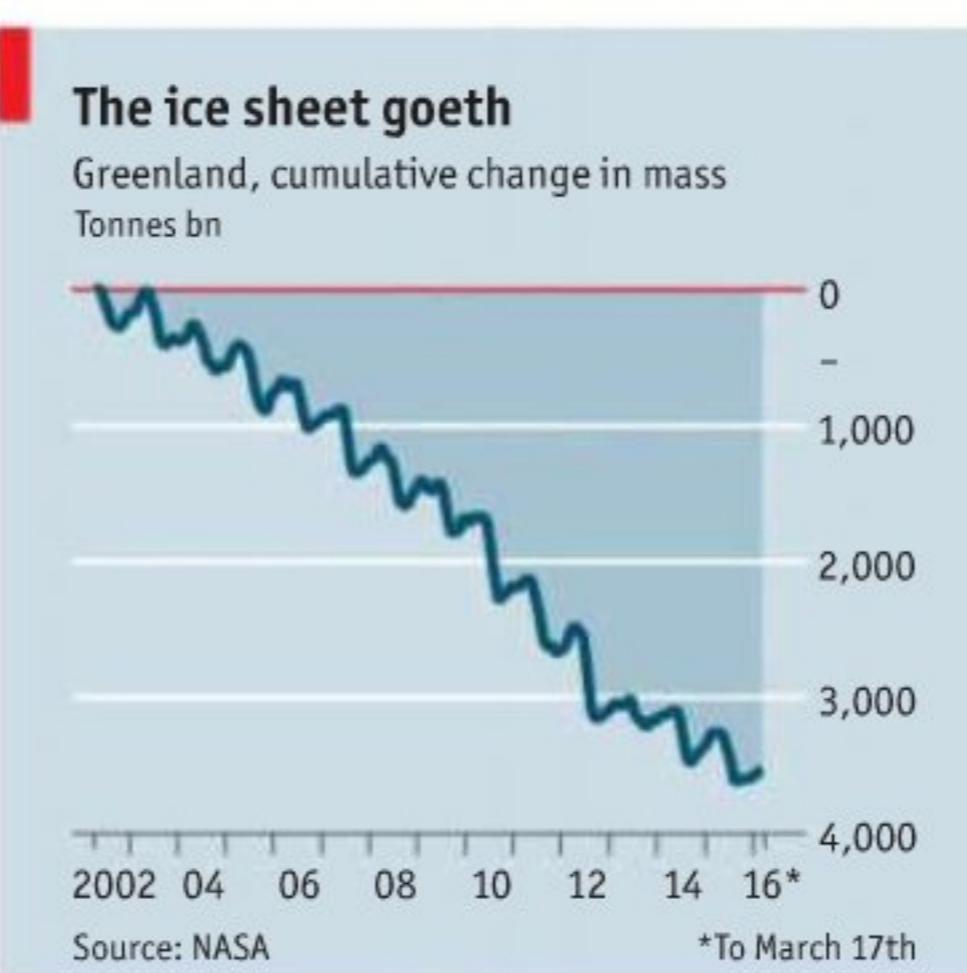
► jagged. When it melts, pools form between tough ridges, allowing some heat to reflect. Newly formed ice lets meltwater spread more evenly across its glassy surface. This reduces reflectivity still further.

As the land in the Arctic warms and once permanently frozen ground unfreezes, greenhouse gases are released. The dead plants and animals in Arctic permafrost hold about half the world's carbon stored in soil. As this organic matter thaws it decays, releasing carbon dioxide and methane, another powerful greenhouse gas, and insulating the planet still further. Unfrozen tundra is also tinder for fires. Shorter snowy periods mean fire seasons will lengthen. In Alaska and parts of America's West, the average length of the fire season has already jumped from 50 days in the 1970s to 125 now.

Changes in the environment are affecting the numbers and types of creatures that can live there, too. Arctic waters are increasingly full of life. The edge of the ice shelf is a feast for many species due to ice algae and phytoplankton that appear there at the end of winter. But decreasing ice may lead to mismatches between the timing of reproductive cycles in creatures such as shrimp and the availability of plankton. As water warms, larvae hatch earlier. Any impact on the populations of tiny crustaceans will affect other creatures higher up the food chain—cod, seals and polar bears—which need fat sources in their diet.

At the same time, new mouths are coming to feed. Zooplankton from southerly waters have moved north at a rate of 200km a decade as the ocean has warmed. Bigger fish have followed their dinner northward. This sounds like welcome news for hardy fishermen. But it is unclear whether the Arctic can sustain the new arrivals. They will compete with, and perhaps eat, specialised species dependent on the ice shelf's edge for food.

Some experts also argue that fresh wa-



ter from melting ice in the Barents Sea will curb the growth of the nutrients its inhabitants need. "It is all extremely uncertain, and depends on ocean-circulation patterns," says Michaela Aschan, a fisheries professor from the University of Tromsø.

Amid all this bad news about the state of the Arctic, the business opportunities associated with warming were supposed to cheer at least a few. The Arctic is an ocean covered in ice, ringed by land (whereas the Antarctic is a lump of land covered in ice, ringed by ocean). The eight Arctic countries have interests in shipping, fishing and drilling in the region. But finding profits amid the thaw is tough. Prospects look bleaker in many industries than they did five years ago as the risks are better understood.

The Arctic contains more than a fifth of the world's untapped hydrocarbon resources. But in the North American Arctic offshore drilling was banned in December almost everywhere to protect ecosystems (although Donald Trump may reverse the moratorium). Elsewhere, low prices and the difficulties of operating in the Arctic's dangerous waters now repel big firms attracted to the region back when oil fetched over \$100 a barrel.

In a stunning about-turn, Shell ended operations in the Chukchi Sea in 2015 after spending \$7bn on exploration there. It says it did not find enough oil to justify continuing. Russian firms, such as Rosneft, are proving harder. They have fewer opportunities to invest elsewhere, after all, and Russia needs the money. Low oil prices have taken a toll on an economy which relies on the Arctic for a fifth of GDP and a fifth of exports.

The shipping industry is another for which Arctic promise has drifted away. In theory shipping firms should benefit from access to a more open seaway. Using it to sail from northern Europe to north-east Asia can cut the length of voyages by two-fifths compared with travelling via the Suez Canal. But an expected shipping boom has not materialised. In 2012 only 1m tonnes of goods were shipped through the northern passage, a paltry level of activity yet one not achieved since.

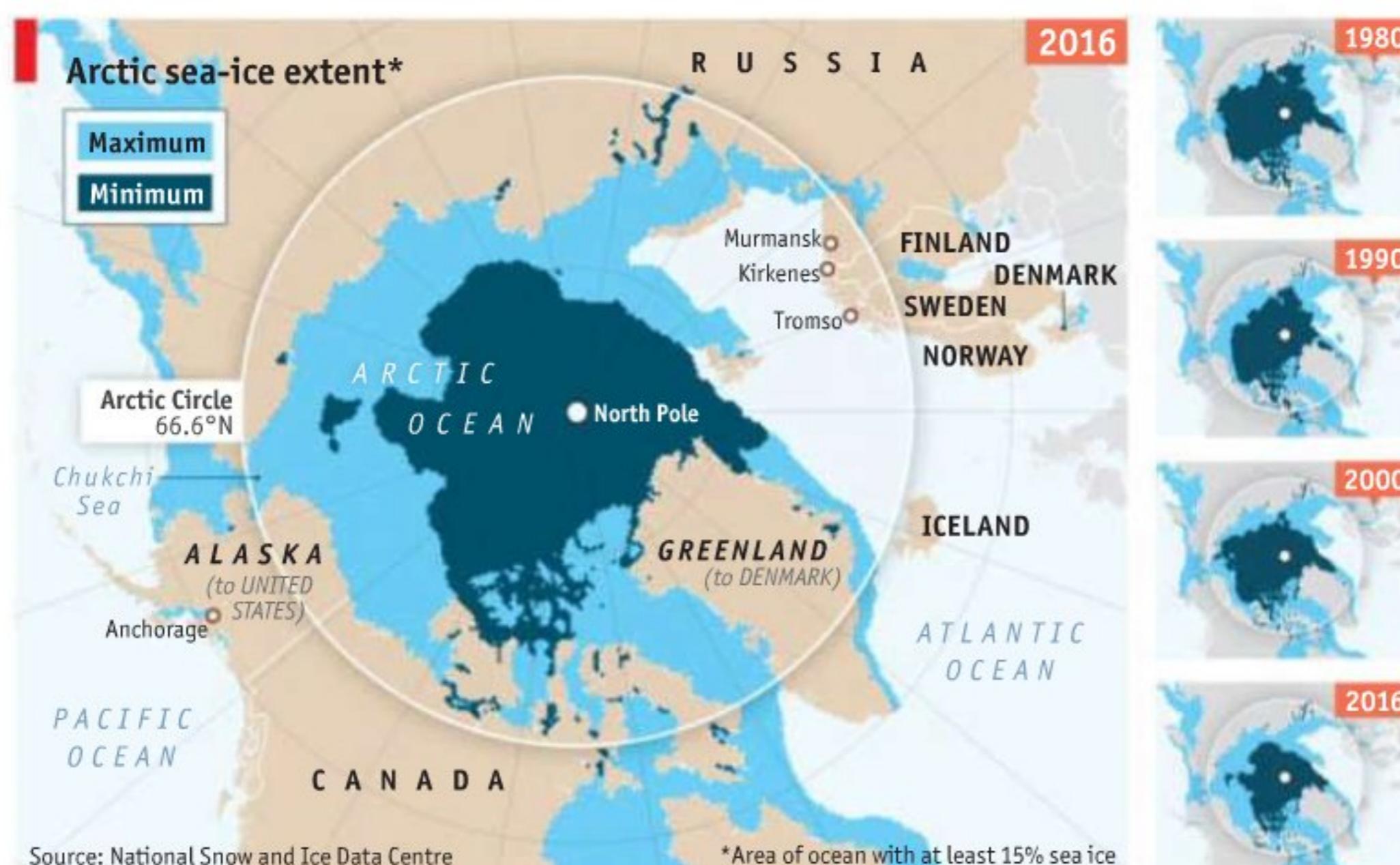
Even in the summer months the Arctic ocean is stormy, making timely delivery of goods impossible to guarantee. Drifting ice also poses a danger. Ships must be strengthened to withstand it, adding to construction costs. And a lack of coastal infrastructure, such as deepwater ports, means that spills of the heavy fuel oil that powers most vessels could wreak havoc on both ecosystems and reputations, because clean-up missions would have to set out from much farther away and would take much longer to be effective.

### Breaking the ice

A new Polar Code from the International Maritime Organisation, which regulates shipping, came into force at the beginning of the year to try to address some of these concerns. It bans sewage discharges in polar waters and ones of oily mixtures. America and Canada, among others, want to go further. For one thing, they want a ban on heavy fuel-oil (as there is in the Antarctic, which has various special protections).

Mining firms, interested in metals such as copper, are eyeing up the Arctic. But most firms do not have the experience to negotiate with indigenous groups over projects on their land (about one in ten people in the region is from such a group). And many of the inhabitants oppose development anyway. In Norway the Sami parliament, which represents Sami people from across the country, is wary. Jon Petter Gintal, who deals with international affairs at the parliament, says blighting the landscape would be foolish. Tourists, keen to see rugged natural beauty, may sustain the Arctic economy in future decades as traditional livelihoods, such as reindeer herding, prove harder to maintain.

Even if outsiders' commercial interest in the Arctic is cooling the region's population of around 4m people has little choice but to adapt to the changing climate. ►



► Northern Norway is the most densely populated area but Russia, which accounts for half of the Arctic coastline and has a fleet of nuclear submarines based at Murmansk, is the country keenest to extend its influence. Russia eventually wants ten new search-and-rescue stations along its shoreline. Five are open already. Russia is also aiming to boost its military presence by reopening Soviet military bases.

Despite tensions over Russian belligerence elsewhere in the world, its aspirations in the north have so far given little cause for concern. Locals in Kirkenes laugh about their neighbours: "They come across here all the time to shop. They like the nappies, they say they are better quality," explains one businessman. Oystein Bo, Norway's defence minister, is more guarded: "Russia is as interested as we are at keeping the Arctic a region of stability," he says. But if Rus-

sia decides to wield its power more forcefully this will only add to the problems in the Arctic.

Nothing, however, looms larger than the potential for environmental calamity. The question of thawing is rising up the list of priorities both of countries with territory in the region and those farther afield. Sticking to the Paris agreement could, eventually, stabilise temperatures. But more radical measures may be needed given that countries are unlikely to keep within the limits set in Paris.

### A change in the weather

One possibility for cooling the pole is geo-engineering, the deliberate modification of the climate to reduce warming. Pumping sulphate aerosols into the Arctic stratosphere from high-flying aircraft could be one way to blot out a bit of the sun. Such an

approach would cool Arctic summers but have little effect in winter because there would be no sunlight to reflect. Injecting salt crystals into clouds over the Arctic ocean, to enhance their reflectivity, might also encourage some cooling, though the helpfulness of this type of intervention is highly speculative.

Either way the gap between theory and practice is enormous and ethically fraught. Even if such ways to cool the planet could be managed on the vast scale necessary, other unwelcome outcomes cannot be discounted. When volcanoes release vast amounts of aerosols and sulphates into the air, they damage the ozone layer—might the same be true for geoengineering? If polar ice returned thanks to judicious management of solar radiation, water and weather cycles in the tropics might be altered if sulphates were released in just one hemisphere. And the ocean's chemistry would continue to change as concentrations of greenhouse gases in the atmosphere rise. If they ever happen at all, negotiations over large-scale geoengineering would be long and arduous.

Climate change has at least brought the Arctic fresh attention from world leaders. Xi Jinping, China's president, stopped in nearby Anchorage on his recent return from America. Barack Obama became the first sitting American president to visit the Arctic. In May a ministerial meeting of the Arctic Council, at which America will hand over the chairmanship to Finland for its two-year stint, offers an opportunity for Rex Tillerson, America's secretary of state, to set the new administration's policy for the region. To ensure political and commercial stability in a defrosting Arctic, and to limit the harm caused by and to the warming pole, countries need to pay it far greater attention. The danger is that it is already too late. ■

#### Sea levels and storms

## A thaw point

### As the Arctic melts the rest of the world suffers

**S**HINKING Arctic ice is sure to have unwelcome effects elsewhere on the planet. But what, precisely? Glaciologists and meteorologists are working furiously to understand two particularly complex issues that may cause huge upheavals: the stability of the Greenland ice sheet and its potential contribution to rising sea levels; and extreme weather elsewhere in the world that might result from the demise of the Arctic's white wastes.

Since the 1970s the Arctic has been the main cause of rising sea levels around the world. Over two-thirds of the Arctic's contribution derives from ice loss from Greenland, according to the latest SWIPA report. But little is known about how Greenland's vast ice sheet will react to future warming.

The dynamics of outlet glaciers and ice streams as they flow—ever faster—into the Arctic ocean, how pressurised meltwater combines with soft sediments to lubricate the bed of Greenland's ice sheet, and the impact of increased darkening across the ice sheet's surface are all poorly understood, says Alun Hubbard, a glaciologist at the University of Tromso. "Greenland is a large, sleeping giant being prodded by many different processes on all sides," he explains.

Getting to grips with what is going on will be tough. Fieldwork on Greenland's remote ice sheet is expensive and logistically taxing. But what is known now is frightening enough. Even if current emissions remain stable, the consensus is that global sea levels will rise by 74cm by the end of the century. Vast coastal cities such

as Rotterdam, New York and Mumbai will suffer.

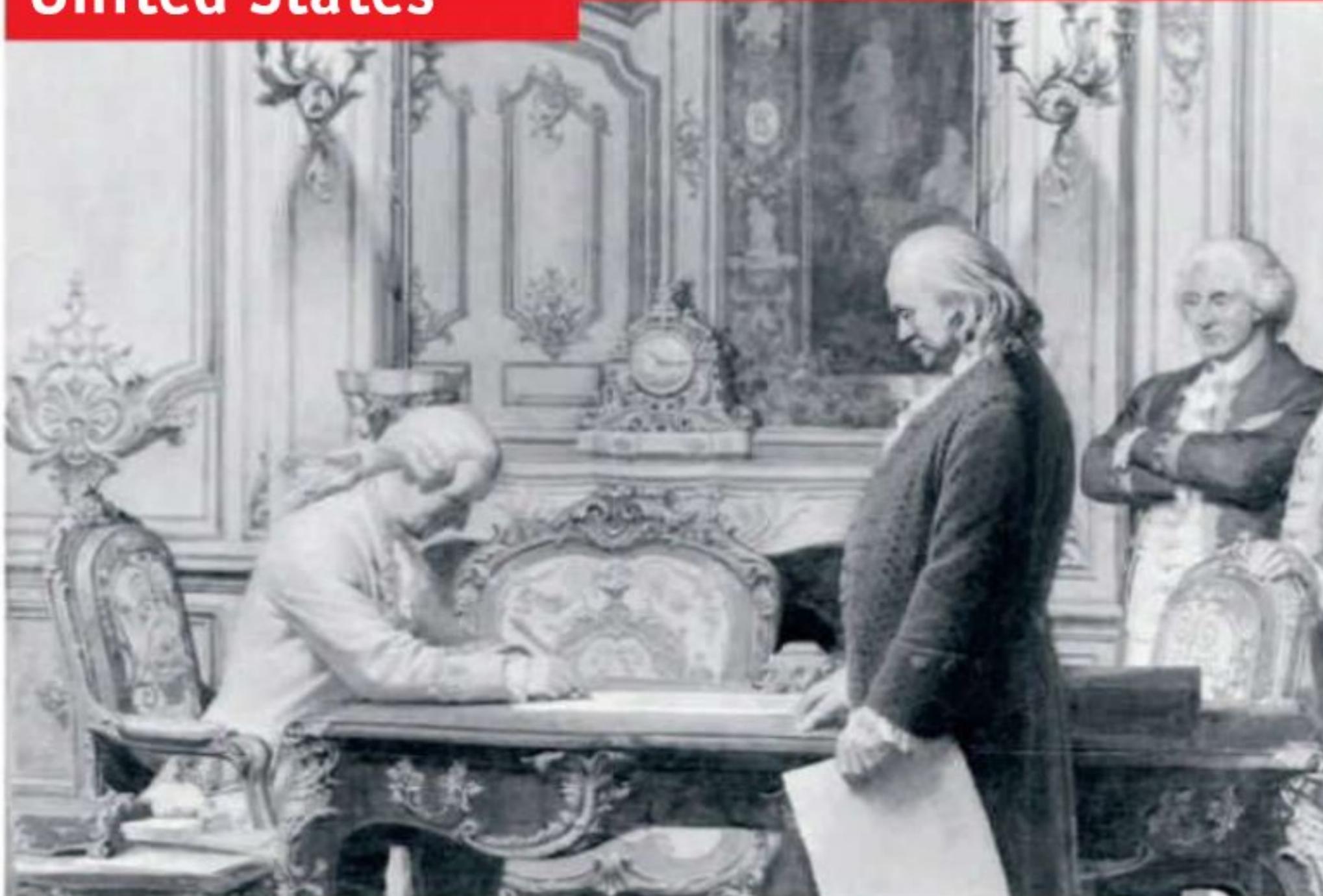
These may still be among the luckier ones: governments are more likely to pay to protect expensive property than poor rural settlements. Some villages in Alaska need relocating already. Receding sea ice has exposed coastlines to erosion from waves. But federal, state and local authorities are squabbling over how to do it and who should pay, even on this small scale.

Floods of icy meltwater will change the weather, too. By altering the salinity and temperature of different parts of the sea, circulation patterns both within the Arctic ocean and, consequently, in the atmosphere will change. That will affect weather and climate phenomena, such as India's monsoon season, thousands of miles to the south. Scientists agree as much. Where they differ is on just how large the effect will be and which processes are involved.

Extreme cold snaps pose a particular puzzle in this regard. Changes to wind patterns can bring cooler weather farther south, which could help explain frigid conditions in north-eastern America in recent winters. But these wind shifts have to be large enough to cancel out more general background warming stemming from the loss of sea ice, says James Screen of the University of Exeter. "In north-west Europe, it seems that these two effects of melting sea ice roughly balance out," he says. But climatic imbalances from Arctic melting could prove far more harmful elsewhere in the world.



Some like it cold

**American diplomacy**

## A tradition traduced

WASHINGTON, DC

**The State Department is far from perfect. But the administration's treatment of it is doing some real damage**

**F**EW Americans would have known it, but on New Year's Eve their diplomats probably prevented scores of killings in central Africa, and perhaps a war. President Joseph Kabilo, Congo's long-stay autocrat, had refused to leave power, as he was obliged to do. Angry protesters were taking to the streets of Kinshasa and Mr Kabilo's troops buckling up to see them there. Yet through a combination of adroit negotiating and the high-minded pushiness that comes with representing a values-based superpower, Tom Perriello, the State Department's then special envoy for the Great Lakes, and John Kerry, the then secretary of state, helped persuade Mr Kabilo to back down. The resulting deal, brokered by the Catholic church, committed Mr Kabilo to a power-sharing arrangement and retirement later this year. That would represent the first-ever peaceful transition in Congo. But it probably won't happen.

Three weeks later, Donald Trump became president and the State Department's 100-odd political appointees, including Mr Kerry and Mr Perriello, shipped out. That is normal in American transitions. But the most senior career diplomats were also pushed out, which is not. And only Mr Kerry has so far been replaced, by Rex Tillerson, a well-regarded former boss of Exxon Mobil. He had no ambition to be secretary of state—or knew he was being interviewed for the job—until Mr Trump offered it to him. Now installed as the voice of American foreign policy, he has main-

tained, notwithstanding his undoubted qualities, an oilman's aversion to public scrutiny. He rarely speaks to journalists or visits American embassies on his trips abroad. He appears absorbed by the ticklish task of arranging a 31% cut in his department's budget, which Mr Trump will shortly propose to Congress.

The vacant positions—in effect, almost the State Department's entire decision-making staff of under-secretaries, assistant secretaries and ambassadors—are being covered by mid-ranking civil servants, who lack the authority, or understanding of the administration's plans, to take the initiative. America's diplomatic operation is idling at best. A sense of demoralisation—described in interviews with a dozen serving and former diplomats—permeates it. “I went to a policy planning meeting the other day and we spent half the time talking about someone's bad back,” says a diplomat. “We've never been so bereft of leadership,” says another. A third predicts a wave of resignations.

**Ben Franklin's heirs**

To allies, the fallout from this neglect is less obvious. American diplomacy has become more passive than bungling. The American ambassador is still the most powerful foreign diplomat in just about any country, says a senior European politician. Still, there are costs to the administration's mismanagement of the State Department, including, for example, in Congo.

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After America went quiet on him, Mr Kabilo sabotaged the power-sharing agreement, renewing the prospect of violence.

The scale of the assault Mr Trump has launched on the State Department is unprecedented, yet consistent with a decades-old trend. The National Security Council, which has swollen from a staff of 20 in the late 1960s to over 400 under Barack Obama, has supplanted it as the primary instrument of foreign policymaking. Spending on diplomacy has been slashed in relative terms; in 1950, when American diplomats were overseeing the reconstruction of Europe and a propaganda war against the Soviet Union, it was half that of the defence budget; now, at less than 1% of the federal budget, it is only a tenth as large. This diminution is in part the result of large forces, including globalisation and communications technology. Most federal agencies, including the Treasury and the Department of Homeland Security, now communicate with their foreign counterparts directly, not, as they once did, through diplomats. “Foreign policy has become an all-government affair—every department is doing diplomacy and it's not clear that the State Department is the most influential,” says Jeremy Shapiro, a former State Department adviser now at the European Council on Foreign Relations. The result is a diplomatic cadre in reduced circumstances and exposed to political attack—yet which still performs, as Mr Perriello's brief triumph in Congo illustrates, important feats that no other agency can.

The department's Republican critics accuse it of behaving like a liberal think-tank, wont to lobby for exciting foreign interests, instead of pursuing America's. “The biggest problem with American diplomats is clientitis—they go native,” says a former ambassador. Yet that view, though indisputably valid at times, takes little account of the slow-moving and densely political ►

► nature of much of the department's work. There are few straightforward "America First" wins in diplomacy. And if more focused agencies such as the CIA and defence department, specialists in catching terrorists and dropping bombs, are easier to explain, they are also frequently prone to short-termism and error. It is doubtful that either could have prevailed with Mr Kabilo; it would not have occurred to them to try. Yet such diplomatic efforts also have security implications for America. As James Mattis, the defence secretary, once noted while admonishing Congress: "If you don't fund the State Department fully, then I need to buy more ammunition."

The objective should be to preserve the State Department's distinctive strengths, while tailoring it to its altered circumstances. A report last year by the Heritage

Foundation, a conservative think-tank, included useful recommendations on how this might be attempted. To avoid duplication, it suggested trimming the department's 68 special envoys and advisers. To obtain better value for money, it proposed a review of State's contributions to multilateral agencies, an exercise that led Britain to cut its support for four UN agencies. To counter some of the damaging effects of the internet, it recommended increasing public diplomacy—which the State Department could do with in America, as well as abroad, to counter its poor standing compared with the country's lionised soldiers. To streamline top-level decision-making, Heritage also suggested eliminating one of the department's two deputy posts, the deputy secretary for management and resources. Even diplomats who

disagree with these suggestions consider them broadly reasonable. While speaking up for the value of the deputy secretary position, Heather Higginbottom, who until recently occupied it, conceded: "But these things happen and it wouldn't be the biggest loss." Yet this sort of sensible institutional reform is not what the Trump administration appears to have in mind.

It needs money to fund a promised \$54bn increase in defence spending, and sees the State Department budget as one of the few places it can get it. It appears scarcely to have considered the consequences of its intended raid. "This is a hard-power budget, not a soft-power budget," was the most Mick Mulvaney, the director of the Office of Management and Budget, had to offer. That is precisely the knuckleheaded trade-off Mr Mattis advised against—a point since reiterated by over 120 retired generals and admirals, who have urged the administration to rethink.

Mr Tillerson, who seems hardly to have resisted the proposed cut, has also said little about how he would implement it. His advisers are said to be using the Heritage recommendations as a guide, however, which suggests a lot of top-level job cuts are in the offing. There is also an expectation that unfavoured departments dealing with climate change policy, and perhaps human rights, will be axed or amalgamated. A related plan, leaked to *Foreign Policy*, envisages cutting aid to developing countries by a third. It would also shrink America's overseas aid agency, USAID, and roll it into the State Department.

Congress is unlikely to approve such drastic measures. Lindsey Graham, a Republican senator prominent in foreign affairs, describes Mr Trump's budget proposals as "dead on arrival". Even so, says a well-placed Republican aide, there is an expectation on Capitol Hill that aid and diplomatic spending will take a cut. Meanwhile the running down of America's diplomacy, a great tradition which brought France into the War of Independence and helped build the international system after the second world war, continues.

One of the Trump administration's better ideas was to reduce the power of the NSC, in order to bolster the inter-agency policymaking process, and thereby the agencies themselves. In the case of the defence department, whose vastness and military spine make it less vulnerable to traumatic transitions, this seems to be happening. Mr Mattis is getting high marks for pushing decision-making down to lower levels. But the State Department, having hardly anyone in place to represent it forcefully in the inter-agency process and little clarity on what the government's foreign policy is, is ceding even more power to the NSC. It is an astonishingly careless way to treat an institution that, whatever its weaknesses, America needs. ■

### Donald Trump's first 100 days

## Promises, promises

### Not many pledges kept, but his supporters don't mind

**A**T A rally in Gettysburg, Pennsylvania last October, Donald Trump presented his "100-day action plan", a long list of goals to reform government. Achieving these was always a tall order, and the president has certainly kept busy. He is expected to sign 30 executive orders by the end of his first 100 days in office (see chart), more than any other president since Harry Truman.

True to his word, he has withdrawn America from the Trans-Pacific Partnership, a trade pact, appointed a conservative Supreme Court justice and authorised the building of the Keystone oil pipeline. The president even seems intent on building his border wall with Mexico, although the financing is still hazy. Mexico, he now claims, will pay for the barrier "at a later date...in some form".

But plenty of promises remain unfulfilled. Mr Trump has declined to label China a currency manipulator. His attempt to ban travellers from several Muslim-majority countries has twice been thwarted by the courts. His plan to "repeal and replace Obamacare" never made it to a vote in Congress, though another attempt may be imminent.

According to the Partnership for Public Service, a non-profit, Mr Trump has nominated just 58 key executive-branch officials who require Senate approval. In the first 100 days of his presidency, Barack Obama nominated 190. The State Department is understaffed (see main story); the Council of Economic Advisers sits empty.

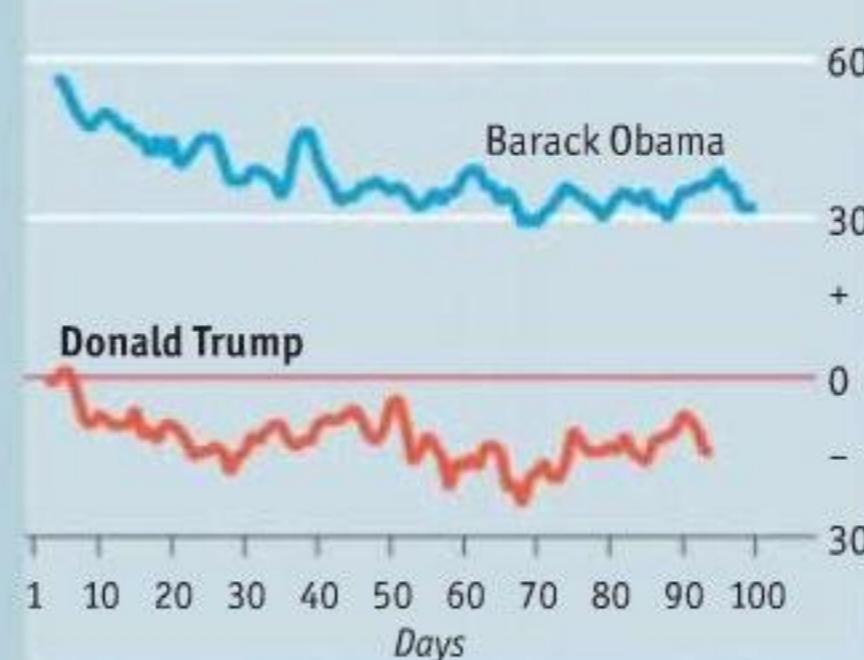
Presidents tend to start their tenures with high approval ratings that tail off over time. Mr Trump's are already in the

dumps, the worst start of any post-war president. But a closer examination of the polls reveals another story: America is now bitterly divided across party lines. Mr Trump's approval among Republicans sits at a Reagan-esque 85%. As long as he can maintain the support of his base, and assuming the economy accelerates as expected, the opinions of his many detractors may not matter.

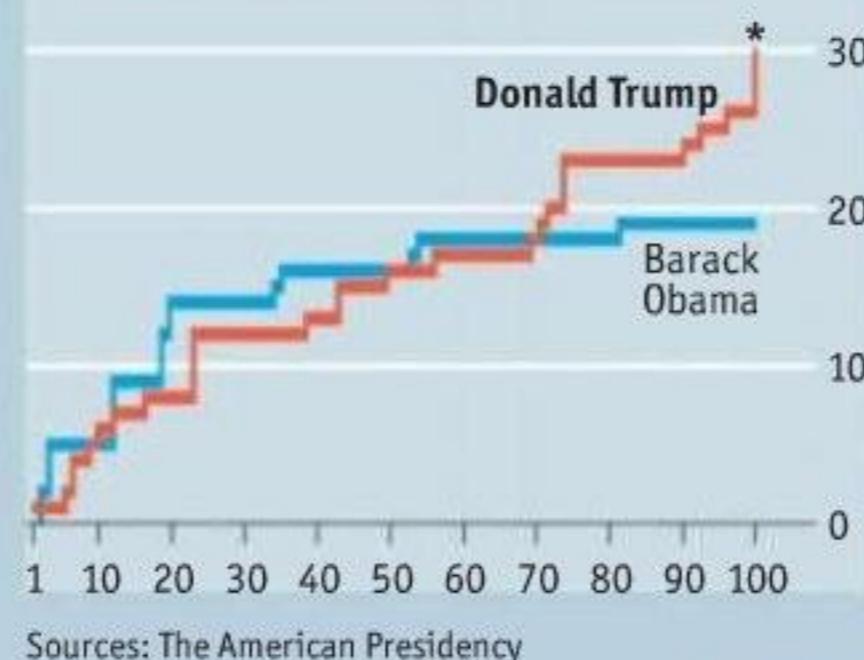
### The lows and highs

United States, presidents' first 100 days

Net approval rating, %



Executive orders issued



Sources: The American Presidency Project; Gallup

\*Anticipated

In pursuit of WikiLeaks

## All change

**Donald Trump adored WikiLeaks when it served his cause. Now, not so much**

**T**HE hypocrisy is breathtaking. But it looks as if the Trump administration really is going after WikiLeaks and Julian Assange, the self-styled transparency campaigner who runs it from the Ecuadorean embassy in London, where he has been holed up for five years evading extradition to Sweden to face a rape allegation.

As a candidate, Donald Trump said he loved WikiLeaks for helping his campaign by publishing embarrassing e-mails from the Democratic National Committee, hacked by the Russians. Now he is in the White House, he views leaks less indulgently. On April 20th the attorney-general, Jeff Sessions, declared that the arrest of Mr Assange had become "a priority". He added: "We are going to step up our efforts, and are already stepping up our efforts, on all leaks." The Department of Justice is said to be preparing charges against Mr Assange.

In a speech made a few days before Mr Sessions's announcement, the director of the CIA, Mike Pompeo, excoriated WikiLeaks as "a non-state hostile intelligence service often abetted by state actors like Russia". Mr Pompeo's wrath had been incurred after the release by Mr Assange's outfit of information about some of the CIA's surveillance tools. Mr Pompeo, like his boss, had previously been a WikiLeaks fan, regularly tweeting its revelations last summer to attack Hillary Clinton.

Even if Mr Pompeo's designation of WikiLeaks is accurate—and Susan Hennessey, managing editor of the Lawfare blog, thinks it may be—it may not provide a path to prosecution. But Ms Hennessey says an indictment might be possible under the Espionage Act, or laws governing theft of government property and computer abuse.

Chelsea Manning, the army intelligence analyst jailed for providing WikiLeaks with a huge dump of classified material in 2010, was indicted under all three laws, though her sentence was commuted by Barack Obama before he left office. It appears that Mr Assange may have both incited Mr Manning (as he then was) to commit his crimes, and helped to facilitate them. If so, says Ms Hennessey, it might be fairly easy in purely legal terms to bring a conspiracy charge against Mr Assange.

This raises the question of why the Obama administration, not known for its tolerance of leaks, decided to stay its hand when it came to Mr Assange. The reason was the difficulty of distinguishing WikiLeaks' activities from investigative journal-

Minimum wages

## Leaving a bad taste

WASHINGTON, DC

**Higher minimum wages may force bad restaurants out of business**

**W**ITH Republicans in charge in Washington, the federal minimum wage is unlikely to alter soon. But debate over the impact of local pay floors is as hot as ever. Little wonder: 18 states and 22 cities and counties raised their minimum wages at the start of 2017, according to the National Employment Law Project, a campaign group. Left-wing activists have for years pushed politicians to guarantee minimum pay of \$15 an hour, more than twice the federal minimum of \$7.25, which last went up in 2009.

A new working paper by Dara Lee Luca of Mathematica Policy Research and Michael Luca of Harvard Business School looks at the impact of higher minimum wages from a new angle. Traditionally, scholars have focused on whether or not minimum wages reduce employment. But the Lucas asked something else: does it force firms out of business? In partic-

ular, they looked at the restaurant industry—about half of minimum-wage workers toil over food—in the San Francisco Bay Area, which contains 15 of the 41 cities and counties that have changed their minimum wages since 2012. Their analysis relies on data from Yelp, a restaurant-review app favoured by millennials.

The Lucas found that a restaurant has, on average, a one-in-250 chance of closing in any given month. Whether or not the odds change when the minimum wage rises seems to depend on the quality of the eatery—or at least, on its Yelp rating. Restaurants with a coveted five-star score are barely affected; but less impressive joints are suddenly more likely to close. Restaurants with a middling rating are about 14% more likely to shut down when the minimum wage goes up by a dollar. (The authors also show that rating is distinct from price—in other words, a glorious but cheap takeaway has less to worry about than sellers of pricey but tasteless fare).

The result can be spun multiple ways. If those scholars who say that overall restaurant employment is unaffected by higher minimum wages are right, the implication of the new paper is that pay floors somehow force up the quality of restaurants. So long as one minimum-wage worker is much like another, a laid-off waiter will be able to find a new job somewhere serving better grub.

If those scholars are wrong, however, then the new paper supports what sceptics have said all along: that higher minimum wages, by threatening the viability of some firms, dent employment opportunities for the low-skilled. That should be food for thought.



To go

ism, which is protected by the bit of the First Amendment covering freedom of the press. Mr Obama was far from convinced that WikiLeaks and Mr Assange did merit such protection, but was troubled about where a prosecution might go politically.

Mr Trump's intense hostility towards the "mainstream media", for what he perceives as its bias against him, means that he is unlikely to feel any such compunction. The overlap between what WikiLeaks and traditional media organisations do has also become increasingly blurred. News outlets such as the *New York Times* and the *Washington Post* have introduced SecureDrop, which describes itself as "an open-source whistleblower submission system that media organisations can use to secure-

ly accept documents from and communicate with anonymous sources."

Given that both newspapers published the best bits of the material WikiLeaks ran from the DNC hack, it must be assumed that if Russian intelligence agents had opted to provide it to them via SecureDrop, they would happily have used it. They know that if they do not publish such material, there are plenty of rivals who will.

Ms Hennessey argues that there is still a vital difference between WikiLeaks and, say, the *New York Times*. The *Times* edits and checks; its motives are different; it is not linked to hostile intelligence agencies. Such distinctions may not trouble Mr Sessions but, as Mr Trump has found, the courts do not always do his bidding. ■

## Pine Ridge's alcohol epidemic

# The wounds of Whiteclay

CHICAGO

### Will revoking liquor licences make a difference?

**T**HE Pine Ridge Indian reservation in South Dakota, the site of the battle of Wounded Knee, contains one of the poorest counties in America; and every one of its residents is affected, in some way, by alcoholism. So says Robert Brave Heart senior, one of the leaders of Red Cloud, a private Catholic school founded in 1888 by Jesuits at the request of Red Cloud, a chief of the Oglala Lakota, the tribe of Crazy Horse. Most of his people, says Mr Brave Heart, cannot drink alcohol in moderation. He thinks he is one of them. After bad experiences with booze as a teenager, he has not touched alcohol for 40 years.

Alcohol has been banned in Pine Ridge since 1889, except for a few months in the 1970s. Yet two-thirds of adults on the reservation are alcoholics; alcohol-fuelled domestic violence is rampant; and one in four babies born on the reservation is irreversibly damaged by fetal-alcohol syndrome, a range of neurological defects caused by mothers drinking alcohol during pregnancy.

One of the main sources of alcohol for the reservation's residents is Whiteclay, a tiny hamlet of 11 residents just a short walk away across the state line in Nebraska. Whiteclay, which has no school and no grocery shop, seems to exist solely to sell booze. On April 19th Nebraska's state liquor board voted to revoke the licences of Whiteclay's four liquor stores, which are due to expire on April 30th. They argued that the town is not well enough policed:

reason enough to revoke a licence. A lawyer for the shops said at once that his clients would appeal.

Activists such as Frank LaMere, a member of the Winnebago tribe, who has fought for 22 years to shut down the shops, are jubilant about the state board's decision. They argue that the shops have been making immoral profits from the misery of vulnerable residents of the reservation. Last year the shops sold an astonishing 3.6m cans of beer, or seven cans per minute, almost all to the Lakota Sioux.

Yet Mr Brave Heart and others are sceptical about the licence revocation. They say those who want to drink will simply drive to get their booze farther afield, which will increase both the already high number of fatal drunk-driving car crashes, and bootlegging. "Alcoholism is a social and spiritual problem," says Mr Brave Heart. It cannot be reversed with the stroke of a pen.

Patty Pansing Brooks, a Democratic state senator from Nebraska, is the author of the bill creating the Whiteclay public health emergency task-force, which unanimously passed the unicameral statehouse on April 24th. She agrees that it will take more than prohibition to help the alcoholics in Pine Ridge. Ms Pansing Brooks wants a substation of the Nebraska state patrol set up in Whiteclay, as well as demolition of abandoned buildings where crime and trafficking are rife. She also wants to create a detox centre with a job-training programme, and promote economic development by giving residents access to wireless broadband. She says she feels a duty to do something because of her state's complicity in destroying the tribe.

Her efforts are backed by Tom Brewer, Nebraska's first Native-American state senator, who grew up on the Pine Ridge reservation. As a staunch Republican, he is at the other end of the political spectrum, but the two senators are united in their outrage

at what is happening in Pine Ridge. More than half—perhaps 80%—of its adults are unemployed. About half live below the federal poverty line. Almost one-third are homeless. Men die, on average, at 47 and women at 55. Almost half the population older than 40 is diabetic. The infant mortality rate is triple the national average, the suicide rate of teenagers is more than double and obesity is an even bigger problem than in the rest of the Midwest.

Students of journalism at the University of Nebraska, Lincoln recently produced a wide-ranging report on the impact of the liquor shops on the reservation. It was called "The Wounds of Whiteclay: Nebraska's Shameful Legacy". Those wounds will take a long time to heal, if they ever do. ■

## Art and history

# Rhett Butler's resting place

ATLANTA

### An old, controversial painting—and a new way to remember the civil war

**B**EFORE there were IMAX cinemas, there were panoramas. Typically around 400 feet long and 50 feet high, the immersive paintings toured America in the last decades of the 19th century, sometimes accompanied by 3-D dioramas. They weren't meant to last, and when ticket sales dwindled, most were discarded like old fair-ground rides. Only two made in their heyday can still be seen in the country. One is at (and of) Gettysburg; the other, known as the Atlanta cyclorama, encapsulates the problems involved in commemorating the civil war—and a possible solution.

The cyclorama was made by a team of German artists in Milwaukee in the mid-1880s: photographs of their workshop reveal a lubricating beer supply and a patriotic pin-up of Kaiser Wilhelm I. The subject was the Battle of Atlanta, a crucial Union victory, specifically the afternoon of July 22nd 1864. Many midwestern soldiers fought there. The picture was intended profitably to celebrate northern heroism.

When the cyclorama made its way south—first to Chattanooga and then, in 1892, to Atlanta itself—its meaning was reversed. An impresario recoloured the uniforms of captured Confederates to make them look like routed Yankees. In line with the region's mythology, which even today can make it seem that the South won every battle but lost on a technicality, advertisements declared it the "Only Confederate Victory ever Painted." In time the behemoth was donated to the city, and from 1921 it was housed in a purpose-built hall next to the zoo. After Clark Gable visited in 1939, for the premiere of "Gone With The Wind", ►



Killing Time at Pine Ridge



**Cyclorama drama**

► a Rhett Butler figurine was added to the diorama, reputedly at his suggestion.

Understandably, the facility's upkeep was not a financial priority for some black politicians, who from the 1970s ran the city administration. Unease about where and how to remember the war and its aftermath has only intensified. On April 24th—marked, in some states, as Confederate Memorial Day—a monument to a post-war insurrection by white supremacists was taken down in New Orleans. The workers wore face-masks and flak jackets because of the risk of reprisals.

Sheffield Hale, a proud, thoughtful white southerner who runs the Atlanta History Centre, advocates a middle way between rejection and misinformed embrace of civil-war memorabilia. His museum has leased the cyclorama from the city, recently winching its rolled-up, six-tonne bulk through a hole in the roof of its old home and installing it in a bespoke rotunda. It will be displayed there, Mr Hale says, "as an artefact, rather than a moonlight-and-magnolias attraction". The exhibition will present it not as a shrine but as a palimpsest, as full of meaning as it is of bloodshed, with explanations not only of the battle but of the painting's own past—including the long stretch in which white and black viewing hours were segregated.

At present the cyclorama is partly obscured by scaffolding. Two lost chunks will be replaced, along with a missing slice of sky. The original, hyperbolic shape will be restored, as will Rhett Butler. When the work is finished next year a therapeutic approach to studying history will be set in train, and a near-extinct art form will be revived. So might a once-popular Atlanta pastime: purporting to recognise people amid the thousands of fighting, writhing, dying figures captured in oils. (Only one, a Union steward, is black.)

Not long ago Mr Hale discovered that an ancestor, Arthur Hale, fought in the battle with an Alabama infantry unit, as did his brother Farish. Standing in front of the canvas, Mr Hale points to a skirmish taking place in what is now a smart part of town. Farish was killed in it; great-great-granddaddy Arthur later married his brother's widow, making that day "my reason for being here". "It's very personal," adds Mr Hale, as southern history tends to be. ■

#### Transport in Los Angeles

## City of cars

LOS ANGELES

**The money for public transport is there, but plenty of barriers remain**

WHEN the Los Angeles transit authority extended a railway to link the city's towering downtown to Santa Monica, a swanky seaside neighbourhood, last May, Angelenos rushed to experience it as if to glimpse a celebrity. For six decades, there had been no rail connection from the centre to the Westside beaches. So exciting was the concept that queues formed at 9.30am to catch the first train at noon.

A year later Los Angeles is gearing up to build a rail link to the traffic-strangled International Airport, introduce new rapid-transit bus routes and extend subway lines, among other things. The ventures will be financed by money from Measure M, a ballot proposal passed handsomely last November to increase the sales tax by half a cent to pay for public transport. Growing congestion and reduced state and federal funding have spurred other cities to do the same: voters in Atlanta and Seattle also

passed transit referendums in November. But they are dwarfed by the Los Angeles measure, which is expected to come into effect in July and collect a whopping \$120bn for transport over the next 40 years.

It is not before time. Los Angeles County's population has grown fast over the past few decades, making awful traffic worse. According to the Texas A&M Transportation Institute, a research group, residents of Los Angeles and nearby Anaheim spent a cruel average of 80 hours in jams in 2014, up from 58 hours in 1985. A study in 2016 by Inrix, a traffic-analytic firm, found that Los Angeles had the worst traffic in the world. One campaign ad for Measure M seductively promised to reduce daily time spent snarled up by 15%.

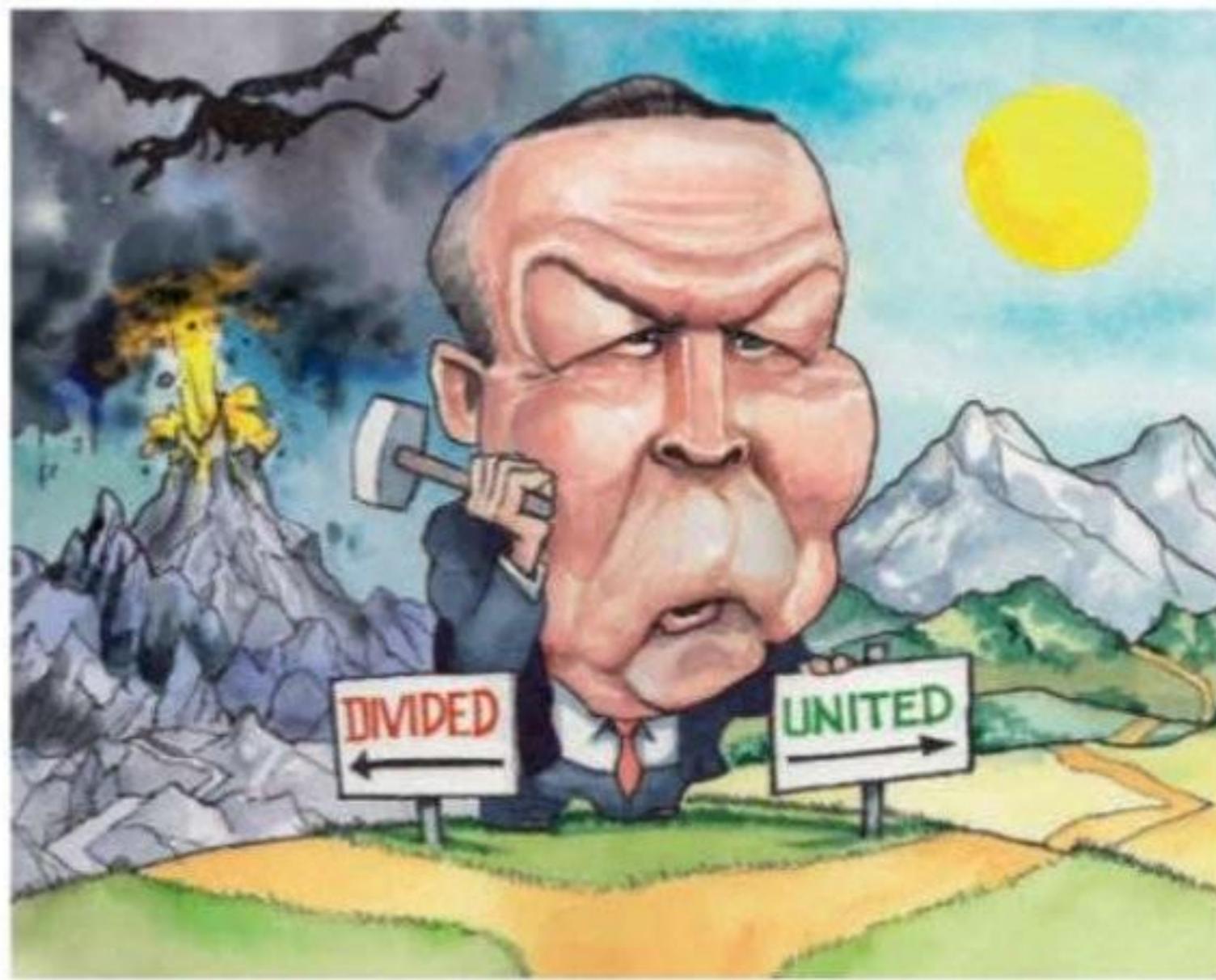
Some experts are sceptical, however. Measure M is the fourth sales-tax increase for financing public transport to be approved by county voters in the past 40 years. Reviews of the previous efforts are mixed. Despite the introduction of eight new railways and bus routes since 1990, passenger numbers on public transport have declined since their peak in 1985, when subsidies expired that kept bus fares artificially low. That year 497m journeys were made on Los Angeles County's bus and rail system. In 2016 the figure was 416m—although, in the intervening years, the county's population had grown by 2m. According to data from the Census Bureau, in 2015 83% of workers in Los Angeles drove to work alone or in carpools, while less than 7% used public transport.

Ethan Elkind, a law professor and author of "Railtown: The Fight for the Los Angeles Metro Rail and the Future of the City", points out that passenger numbers on public transport have been declining nationwide. He adds that some new rail extensions financed by a sales-tax measure passed in 2008 have not yet started operation. But James Moore, who directs the transportation-engineering programme at the University of Southern California, is more pessimistic. He believes politics has inspired the county to invest too much in rail while ignoring buses. Buses, he believes, are a much more cost-effective way to move people around sprawling Los Angeles, which is largely zoned for single-family housing rather than the dense clusters that might encourage rail travel.

On two points there is broad consensus. First, if Measure M is to get results, zoning around transport corridors needs to allow for denser development. Second, the Los Angeles transit authority needs to take the politically risky step of favouring public-transport passengers, who are often poor (71% of them are Latino) over car drivers, who are more numerous and generally wealthier. A good example of the present bias is that the long-awaited railway from downtown to the Pacific stops for red lights, to let cars pass. ■

# Lexington | John Kasich's lament

A vanquished Republican moderate ponders how to make America united again



**W**HEN historians look back at the earthquake that shook American politics in 2016, two books deserve recognition as important early warnings. The first, "Bowling Alone" by Robert Putnam, was published way back in 2000. With the pre-sence of a ranch-hound growling at a far-off tremor, Mr Putnam, a political scientist, reported that Americans were living increasingly solitary lives, slumped in front of televisions or surfing the internet, rather than competing in bowling leagues or volunteering for such civic groups as the Knights of Columbus.

The second book, clanging like a ranch-bell as the first tremors arrived, was "The Big Sort: Why The Clustering of Like-Minded America is Tearing Us Apart" by Bill Bishop. Published in 2008, this reported that when Americans emerge, blinking, from their TV dens they increasingly inhabit communities which share their partisan, religious or cultural views. In the presidential election of 1976, some 27% of Americans lived in "landslide counties" which Jimmy Carter either won or lost by at least 20 percentage points. By 2004, when George Bush narrowly won re-election, 48% of counties saw landslides.

Now comes a third book which seeks, in effect, to synthesise the lessons of the first two. It is written by John Kasich, the Republican governor of Ohio and the last presidential primary contender to concede defeat as Donald Trump seized his party's nomination. The new work, "Two Paths: America Divided or United", reflects Mr Kasich's image as a folksy blue-collar conservative with a conscience. It could be summarised in a single, faith-tinged injunction: "Love your neighbour."

The 24-hour news cycle being what it is, the book has mostly been parsed for clues as to whether Mr Kasich might run for president in 2020, especially if Mr Trump does not seek a second term. Mr Kasich, a former congressman and Fox News TV host, has coyly told interviewers: "You don't close the door on anything." In truth, Mr Kasich has probably had his moment. He won one state in the presidential primaries, his own. Many Republicans cannot abide the way he casts hardline opponents as unChristian—Mr Kasich likes to say that when politicians die, St Peter will ask what they did for the poor, not how they shrank government.

Still, Mr Kasich's book matters, in part as a reassuringly human account of life at the epicentre of a political quake. He de-

scribes taking part in presidential-primary debates in which rivals "wallowed in the mud, lied, called each other liars, and disparaged each other's character." Up under the TV lights, he reports, "It was just nuts." He sounds equally human when watching rivals endorse Mr Trump, a man they had previously called "utterly amoral" and a "cancer" on conservatism. Mr Kasich, normally a gruff sort, tactfully calls this surrender "surprising".

Alas, "Two Paths" matters even more because it fails in its stated aim: to show how America can be united. The son of a postman from small town in Pennsylvania, Mr Kasich frets that Americans have "fallen out of the habit of caring for one another", instead living with their heads down and expecting far-off government leaders to solve such problems as the opiate addictions ravaging Middle America. To explain why democracy feels gridlocked, Mr Kasich points to partisans who now consume political news like a "hobby", and who use primary elections to punish legislators who cross party lines.

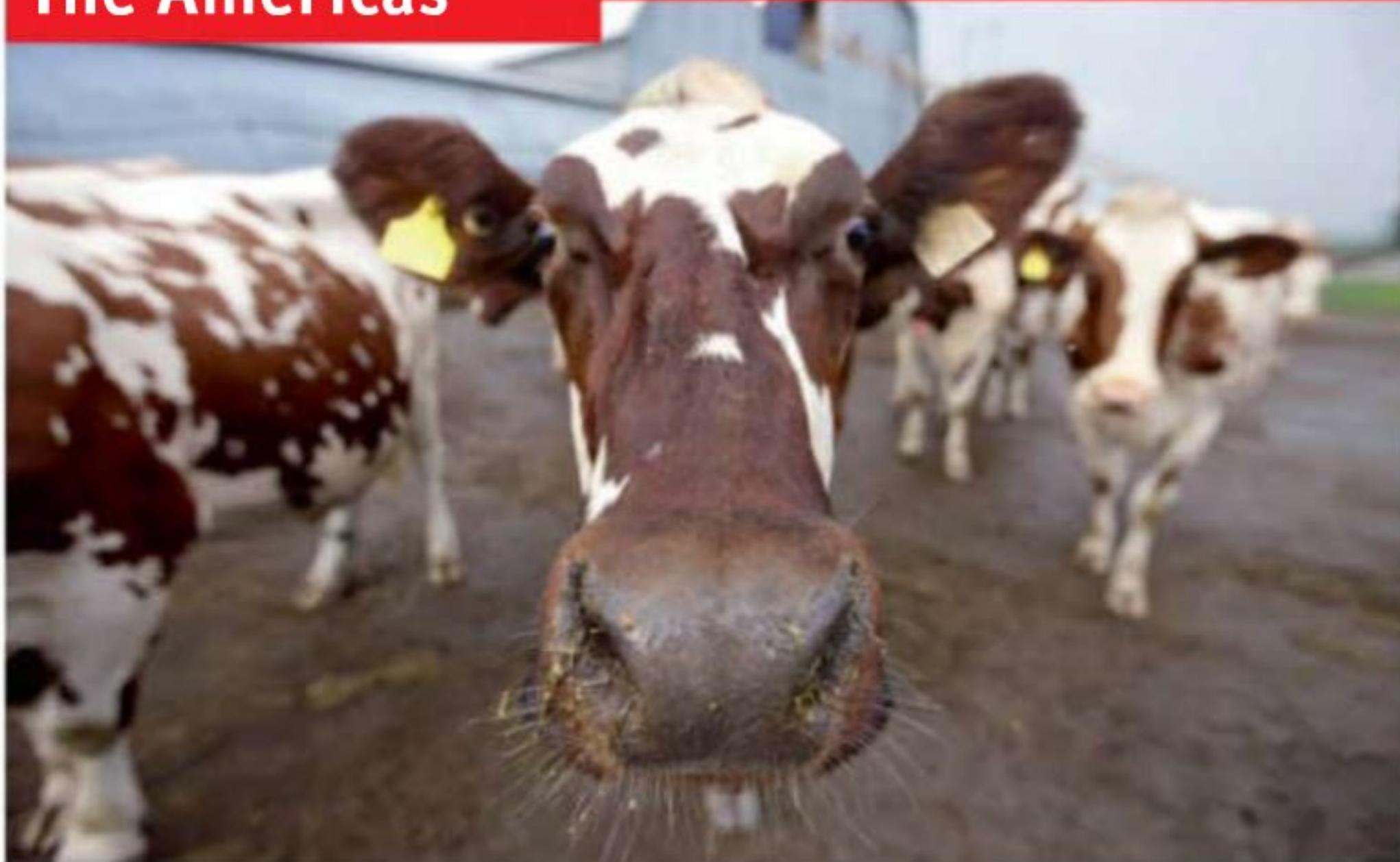
The problem is that solving the "Bowling Alone" crisis, even if it can be done, may not fix the "Big Sort" problem. When Americans debate such issues as government welfare, it is not enough for them to love their neighbours. The larger challenge is to love compatriots who are not their neighbours. When polled on such issues as immigration, gun rights, climate change or welfare for the poor, Trump-voting rural America and Democratic-leaning cities and inner suburbs sound like two different countries. Worse, the two Americas increasingly do not know or like each other—a divide made worse by Mr Trump, who depicts cities as hellholes of dysfunction, stalked by murderous immigrants.

In an interview, Mr Kasich's solution is to talk about questions of "common humanity" that trouble all Americans: he cites children who arrive hungry at school, drug addiction and human trafficking. He wants to see more voluntary civic actions, like mentoring young people, donating to food banks, or shaming employers into keeping jobs in America.

## Civic-minded, but segregated

In the meantime, gulfs grow wider. In 2016, fully 60% of voters lived in landslide counties that went for Mr Trump or Hillary Clinton by a 20-point margin. Damagingly for Mr Kasich's love-conquers-all thesis, any reporter who covered last year's election can also testify that Mr Trump's divisive rhetoric created a powerful sense of community among his followers. It is true that Trump rallies were darkly angry festivals of fear-mongering about The Other. But seen another way, enthusiastic citizens were swept up in a common cause as rarely before. In their "Make America Great Again" hats and "Trump That Bitch" t-shirts, the faithful were not bowling alone. Today the left is seeing a wave of civic activism and energy, inspired by rage and disgust at President Trump.

Pushed on this paradox, Mr Kasich is honest enough to say that America faces a "cultural problem" that will not be solved overnight. Political parties see profit in gerrymandering districts to make them super-safe, he sighs. The media saw profit in covering Mr Trump's worst excesses. He chides religious leaders in the "faith business" for sowing divisions. Remarkably, he criticises the public too, who "want to be reinforced in their beliefs", and so choose to inhabit partisan bubbles and forward fake news items without compunction. Fixing America is "on us", writes Mr Kasich, urging citizens to take more responsibility and shun strongmen vowing to solve all problems. But what happens when there is no American "us" any more? To that, he offers no answer. ■



**Canada and the United States**

## Food fight

OTTAWA

**Donald Trump takes aim at his northern neighbour**

**C**ANADA, what they've done to our dairy-farm workers, it's a disgrace," snapped Donald Trump from the Oval Office on April 20th. Mr Trump had just heard complaints from American producers of ultra-filtered milk, used to make cheese and yogurt, who said they were shut out of the regulated Canadian market after a change in the rules. "We will not stand for this," Mr Trump tweeted a few days later. Ron Versteeg, who along with his brother milks 120 Holstein cows at their farm near Ottawa, does not seem perturbed. "That's the US-Canada relationship," he says affably. "They take a dig, we take a dig."

Canada's prime minister, Justin Trudeau, has tried to sound equally unruffled since the United States elected its protectionist president last November. He had grounds for confidence. While Mr Trump encouraged voters to blame their grievances on Mexico, the third partner in the North American Free-Trade Agreement (NAFTA), he was much gentler towards the United States' northern neighbour. The situation with Canada is "much less severe" than with Mexico, he told Mr Trudeau during a visit to Washington in February. The trade relationship just needs "tweaking".

Mr Trump's tweaks are starting to feel like kicks. Alongside dairy farmers, he put loggers and energy producers on his Canadian enemies list and launched an investigation of imported steel, of which Canada is the biggest single supplier (see page 59). On April 24th the United States' Commerce Department imposed preliminary duties averaging 20% on imports of Cana-

dian softwood lumber, used to build houses. Two days later newspapers reported that Mr Trump was about to sign an order to withdraw from NAFTA. After hurried telephone calls with Mr Trudeau and Mexico's president, Enrique Peña Nieto, he dropped that plan, at least for now.

But the threat remains, and Canada is vulnerable. The United States and Canada traded \$635bn-worth of goods and services last year. Three-quarters of Canada's goods exports went to the United States. Its access to the American market helped attract C\$37bn (\$27bn) of net foreign investment in 2016. The reconstruction of trade barriers would put all that in jeopardy. The Canadian dollar weakened after Mr Trump fired off his salvos. Stephen Poloz, the governor of the central bank, told a committee of the Canadian Senate in April that American protectionism is the biggest threat to the economy.

### Mad cow disease

In fact, some of Mr Trump's targets are well chosen. His swipe at dairy farmers is in part an attack on Canada's absurdly complex system of "supply management", which matches production to demand and limits imports through quotas and tariffs. What hurt American farmers was a deal struck by Canadian farmers and regulators to allow a new lower price for products that compete with ultra-filtered milk. Similar rules protect egg and poultry producers. Mr Trudeau points out that the United States has a surplus of more than \$400m in dairy trade with Canada. That does not

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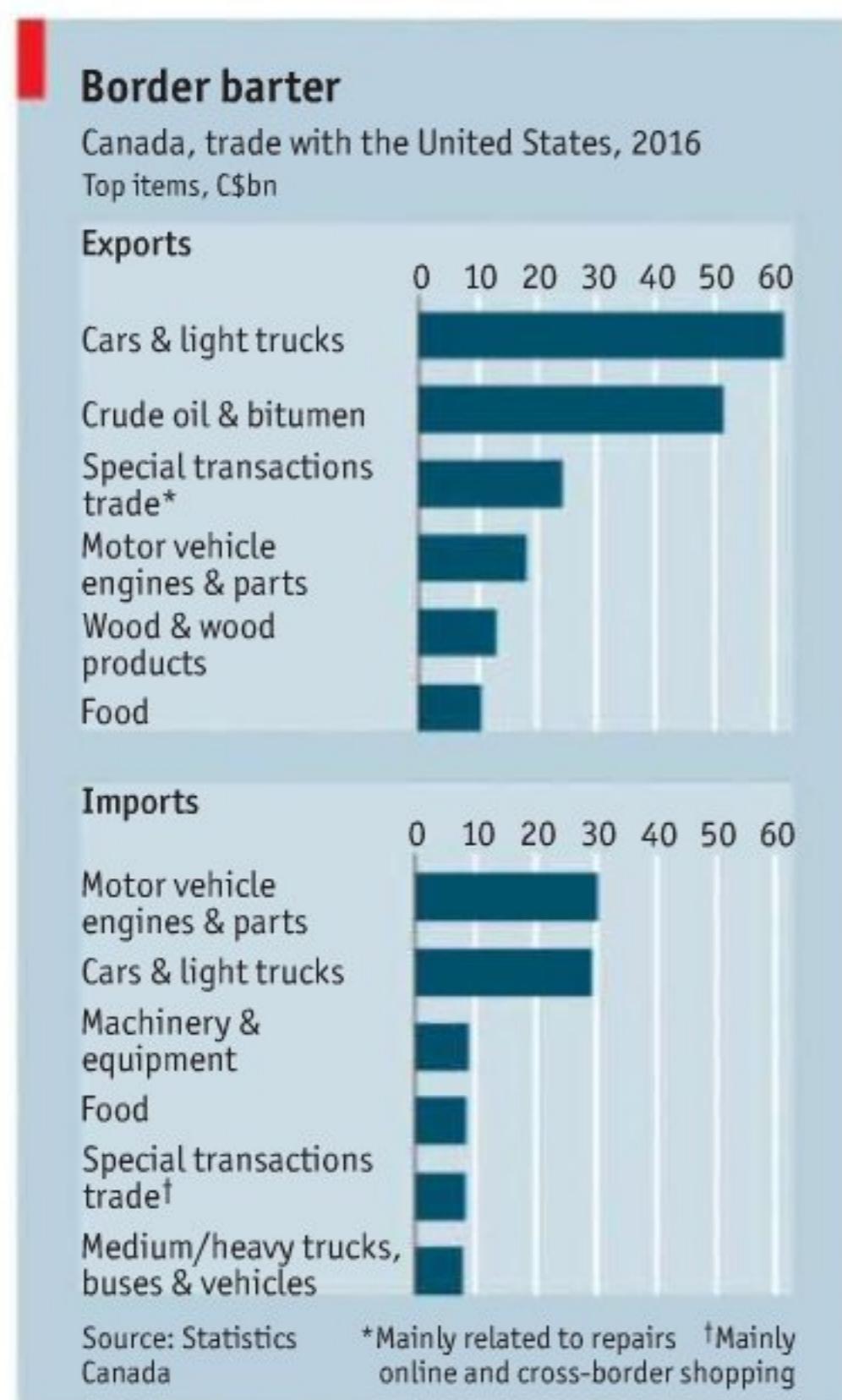
make supply management defensible.

Mr Trump has less justification for attacking foreign steelmakers. The rights and wrongs of the softwood-lumber dispute, which dates back to 1982, are murkier. American loggers have long complained that their Canadian competitors pay too little to harvest trees, which grow mostly on public land. The two countries have struck temporary deals, the last of which expired in October 2015, without resolving the underlying disagreement. The United States has used tariffs before to force Canada to cap exports.

These long-running irritants are now part of the much bigger confrontation triggered by Mr Trump's determination to renegotiate NAFTA. No one in Canada (or Mexico) knows just what the United States will demand. In March the acting United States trade representative sent a vaguely worded draft letter to Congress with 40 ideas for revising the agreement. They include eliminating NAFTA's dispute-settlement mechanism, which has not been as tough on lumber subsidies and other Canadian practices as the United States wants, and making it easier for public agencies in the United States to buy American. Mr Trump's mixed signals on scrapping NAFTA add to the confusion.

Some Canadians yearn for a tougher line from Mr Trudeau. "When you're dealing with a bully, at some point you have to stop backing up," admonished Thomas Mulcair, leader of the opposition New Democratic Party.

Mr Trudeau would rather charm the Trump administration than confront it. Ministerial visits have multiplied since the inauguration. Mr Trudeau has joined Ivanka Trump, the First Daughter, at a Broadway show and at a meeting of a newly created bilateral women's group. He promises "a thoughtful, fact-based conversation" on trade. Millions of American jobs depend on trade with Canada, he notes. Canada was the biggest buyer of



American goods last year. The car industry straddles the border (see chart).

Canada (along with Mexico) will no doubt point out that the United States is no free-market paragon. Though it does not have supply management for dairy products, it subsidises maize and cotton seed, which go into animal feed. "We know all their tricks," says Mr Versteeg.

Canada is bracing for the possibility that Mr Trump may carry out his most aggressive threats. One response is to diversify trade away from the United States, but that will be hard, given that it is the world's largest economy and on Canada's doorstep. Pierre Trudeau, Justin's father, who was prime minister (with a short break) from 1968 to 1984, tried to reduce American economic and cultural influence. But Canada is more dependent on trade with the United States now than it was then.

It hopes that new trade accords will change that. An agreement with the European Union is due to take effect this year; Canada is holding exploratory talks with China and India. It may join a revived Trans-Pacific Partnership, an 11-country pact from which the United States withdrew when Mr Trump took office. But freer trade with far-flung countries cannot make up for bad ties with Canada's neighbour.

Whatever happens, Mr Versteeg is confident that his government will stand up for dairy farmers, a small but influential group in Ontario and Quebec. He likens Mr Trump to a hockey player who repeatedly pokes an injured opponent's sore spot. "They're just going to tap it every chance they get." He thinks Canada will skate through the pain, as it always has. But Mr Trump may have changed the game. ■

## Venezuela

# Rotten tomatoes

CARACAS

### Propaganda isn't what it used to be

IN WEEKS of almost daily protests, opponents of Venezuela's authoritarian regime have found different ways to express their anger. They have held raucous banner-waving marches, a silent demonstration and a sit-in on Caracas's main roads. At least 29 people have died since March in the worst unrest in three years. Many of these were killed by armed gangs that support the government, called *colectivos*. The protests persist because the government has made life intolerable: shortages of food and medicine are acute, the murder rate is probably the world's highest and democracy has been extinguished.

But all is well in the world of Nicolás Maduro, the country's much-loathed president. While chaos engulfs Venezuela's cities, his social-media team has been seeking to humanise the dictator with video vignettes that emphasise his homespun origins and simple wisdom. In one video, posted on his Facebook page, he rhapsodises on the innocence of childhood as he perches awkwardly on a playground swing. In another, he admires a panorama of an apparently tranquil Caracas from the safety of a cable-car gondola. Sometimes he takes to the wheel of his car with his wife, Cilia Flores, sitting glumly beside him; this is an occasion to reminisce about his early career as a bus driver.

The social-media stream is an addition to the information arsenal of *chavismo*, the leftist movement founded by the late Hugo Chávez and carried on with less elan by Mr Maduro. Its main weapon was, and remains, state control of television, which repeats endlessly the risible claim that Venezuela is a victim of an economic war. Broadcasts by the president can last as long as a double-feature. Lacking Chávez's charisma, Mr Maduro hopes to come across as cuddly in his up-close-and-personal videos (and a salsa show on radio).

Venezuelans are not beguiled. The films show a *falta de respeto* (lack of respect), many say. "I think he actually enjoys laughing at us," says Daniel Torres, an engineering student.

Venezuelans are especially annoyed by a video of the president, resplendent in a white tracksuit, playing catch with Diosdado Cabello, the thuggish former president of the national assembly. "A democratic game, a constitutional game," sniggers Mr Cabello. He helped plan many of the government's assaults on democracy, including a botched attempt in

March to transfer the powers of the legislature, now controlled by the opposition, to the supreme court, which takes orders from the government. "We are working," promises Mr Maduro, as he tosses the ball back to his partner in misrule.

For Alberto Barrera Tyszka, an essayist, the video shows the "decadence" of *chavismo*. The images of frolicking well-fed politicians are an insult to the "poverty of Venezuelans", most of whom have lost weight over the past two years, he has written. One of Mr Maduro's clips shows him driving through a poor neighbourhood of Caracas to show off the apparent cheerfulness of the locals. A wall scrawled with the words, "Maduro, murderer of students", is clearly visible as he drives past, but not to the oblivious president. *Chavistas* used to be good at propaganda. Now they cannot even get that right. ■

## Brazil's environment

# Tree-muffled praças

SÃO PAULO

### A mayor tries to make the city greener

THE phrase "concrete jungle" might have been coined for São Paulo. Brazil's megalopolis has 2.6 square metres (28 square feet) of green space for each of its 11m inhabitants, a tenth as much as New York and a fifth of what the World Health Organisation recommends. As with wealth, greenery is unequally distributed. Rich central districts, many with *jardim* (garden) in their names, have more trees than residents. In Itaim Paulista, on the poor eastern periphery, there is one for every 17 people.

João Doria, the mayor since January, wants more foliage. In March he inaugurat-



Looking for places to hang a garden

ed the first section of what will become the world's biggest "green corridor". The "vertical gardens", sprouting from wall-mounted pockets made from felt, will stretch for 3.5km (2.2 miles) down Avenida 23 de Maio, a congested ten-lane road in the city's centre. They are expected to absorb as much carbon dioxide as 3,300 trees.

In elections last year Mr Doria, a marketing tycoon, defeated a left-wing mayor, Fernando Haddad, who was fond of cycle lanes but did little to make the city greener. Under his administration, spending on the environment fell from 1.4% of the budget to 0.3%. Public parks and nurseries fell into

disrepair after Mr Haddad allowed maintenance contracts to expire last August. His mayoralty was "depressing", says Ricardo Cardim, a landscape architect who runs a blog called "São Paulo Trees".

He is optimistic about Mr Doria. The centre-right mayor named Gilberto Natalini, a member of the Green Party, as the city's environment secretary and boosted his budget by a third, to 200m reais (\$62m). Mr Doria revived moribund partnerships with the state government to clean storm drains and line them with vegetation.

With money tight because of Brazil's recession, Mr Doria is enlisting his fellow

businessmen to spread the vegetation. One group promised to give 1m saplings, which would more than double the number of trees on the streets. Mr Doria is badgering two developers to allow a plot they own in a rundown part of the city centre to become a park in return for land elsewhere. He wants private firms to maintain the city's 107 parks, perhaps in exchange for displaying their corporate logos. On April 24th he invited Arnold Schwarzenegger to São Paulo to arm-twist American companies into backing green projects. Mr Doria may be hoping that paulistanos will someday hail him as the Germinator. ■

## Bello | The great re-election debate

### Relaxing term limits has been bad for democracy

**I**F YOU need a pretext for a political climbdown in Latin America, they don't come much better than a plea from the pope. That was the excuse that Horacio Cartes, Paraguay's president, used to drop his plan to run for a second consecutive term in 2018, which required changing the constitution. He was inspired to desist, he wrote to the archbishop of Asunción this month, by Pope Francis's call for peace and dialogue. An attempt to ram the change through congress had provoked a riot in which the parliament building was set on fire.

After ten days of hesitation, during which Mr Cartes's Colorado Party failed to withdraw the amendment, on April 26th congress voted unanimously to reject it. But Paraguay's decision will not quiet debate across Latin America about whether or not to allow presidential re-election.

When in the 1970s and 1980s Latin America emerged from a period of dictatorship, its politicians were keen to place limits on executive power. Most countries either barred presidents from seeking re-election, or allowed them to do so only after waiting out at least one term.

Since then, there has been a gathering trend in the region to relax term limits. Five countries, including Brazil and Argentina, now allow a second consecutive term, while seven allow non-consecutive re-election. In Venezuela Hugo Chávez won a referendum to abolish term limits altogether; Ecuador's congress agreed to do so from 2021. In Nicaragua and in Honduras courts have abolished term limits by ruling that barring re-election violates constitutional freedoms—a questionable route to making such a fundamental change to the rules of democracy.

Those who favour re-election argue that it makes presidents more account-



able, that it offers voters the chance of keeping a president if they so wish and that it offers political and thus economic stability. Yet the costs of relaxing term limits are becoming ever clearer. Most obviously, Venezuela and Nicaragua are now in effect dictatorships. Elsewhere, there are more subtle ill-effects from allowing even one chance to run for re-election.

The first is that in practice incumbents have an unfair advantage. Of the 23 who ran for re-election since the mid-1980s, only two (Daniel Ortega in Nicaragua in 1990 and Hipólito Mejía in the Dominican Republic in 2004) lost. Incumbents may benefit from a preference for the devil you know. But weak checks and balances probably matter more. Presidents may abuse public resources and interfere with electoral authorities.

Javier Corrales and Michael Penfold, two political scientists, looked at 125 elections in 18 Latin American countries between 1953 and 2012. They found that being an incumbent widened the advantage over the nearest rival by an average of 11.2% of the vote. They also found that a 1% increase in public spending in the election

year expanded the margin of victory by 1.3 percentage points. That can make all the difference: Dilma Rousseff raised primary public spending (ie, before interest payments) in Brazil by 6% in real terms in 2014 and won an ill-fated second term by a margin of just 3.3 percentage points.

Former presidents who run again after an interval, as 38 did between 1998 and 2006, are less assured of victory. But they act as bed-blockers, preventing political renewal. That matters. Surveys find increasing voter disillusion with the political establishment in many countries.

Relaxing term limits coincided in part with the commodity boom, which brought faster economic growth to many Latin American countries. Endowed with extra revenues that enabled them to fulfil campaign promises, presidents tended to be popular. That is no longer the case. So Latin America may revert to its historical norm of weak presidents (and move back to tighter term limits). Latin American countries employ the unusual and awkward combination of a directly elected president and a legislature chosen by proportional representation. As a result, the president's supporters often make up a minority in a multiparty congress. That has increased the risk that a president will be impeached—as eight, including Ms Rousseff, have been since 1992.

Yet as democracy takes root in most Latin American countries, presidents and opposition-dominated legislatures have often managed to get along. A bigger risk, as Juan Pablo Luna and Alberto Vergara, two other political scientists, point out, is that political parties become less good at channelling the demands of rapidly changing societies. Allowing re-election is likely to exacerbate that problem. Latin American countries should think long and hard before doing so.



## Indian politics

# Defeats, defections and disorganisation

DELHI

**Dynasticism, personality cults and plain incompetence have reduced the opposition to near irrelevance**

TWO years ago voters in Delhi, the Indian capital, whistled a warning to prime minister Narendra Modi. It was less than a year since he had led his Bharatiya Janata Party (BJP) to power in a sweeping general-election triumph. Yet suddenly, at the very seat of the national government, a puny upstart party running a shoestring anti-corruption campaign had nabbed no fewer than 67 of the 70 seats in the city's main legislature. The BJP had captured a paltry three. Could it be that Mr Modi's vaunted electoral juggernaut was not invincible after all?

This was certainly what the critics of the Hindu-nationalist BJP hoped. Yet in test after test since then, from obscure by-elections to the campaign for the state assembly in Uttar Pradesh, with a population of 220m, the party has surged relentlessly ahead. In addition to the national government, the BJP and its allies now control 17 out of India's 31 state legislatures, together representing more than 60% of the country's people (see chart). At a recent party rally in the eastern state of Odisha, Amit Shah, the BJP's grizzled master strategist, actually evoked the Jagannath Temple, a local landmark that inspired the word *juggernaut*, as he vowed the party would capture every state "from panchayat [village council] to parliament".

Not surprisingly, it is now among the opposition that alarms are sounding. The

latest bell, again in Delhi, rang on April 26th as results emerged of voting at another level of local government, the city's three municipal "corporations". The BJP won more than two-thirds of seats. The feisty upstart of 2015, the Aam Aadmi or "common man" party (AAP), was left sputtering that someone must have tampered with the voting machines.

That is unlikely. The Election Commission of India, which is responsible for the gadgets, enjoys a reputation for probity rare among the country's public institutions. This is not to say that the BJP does not play rough in the contact sport that is Indian politics. On the contrary, Mr Modi's party is tenacious and aggressive. Delhi's

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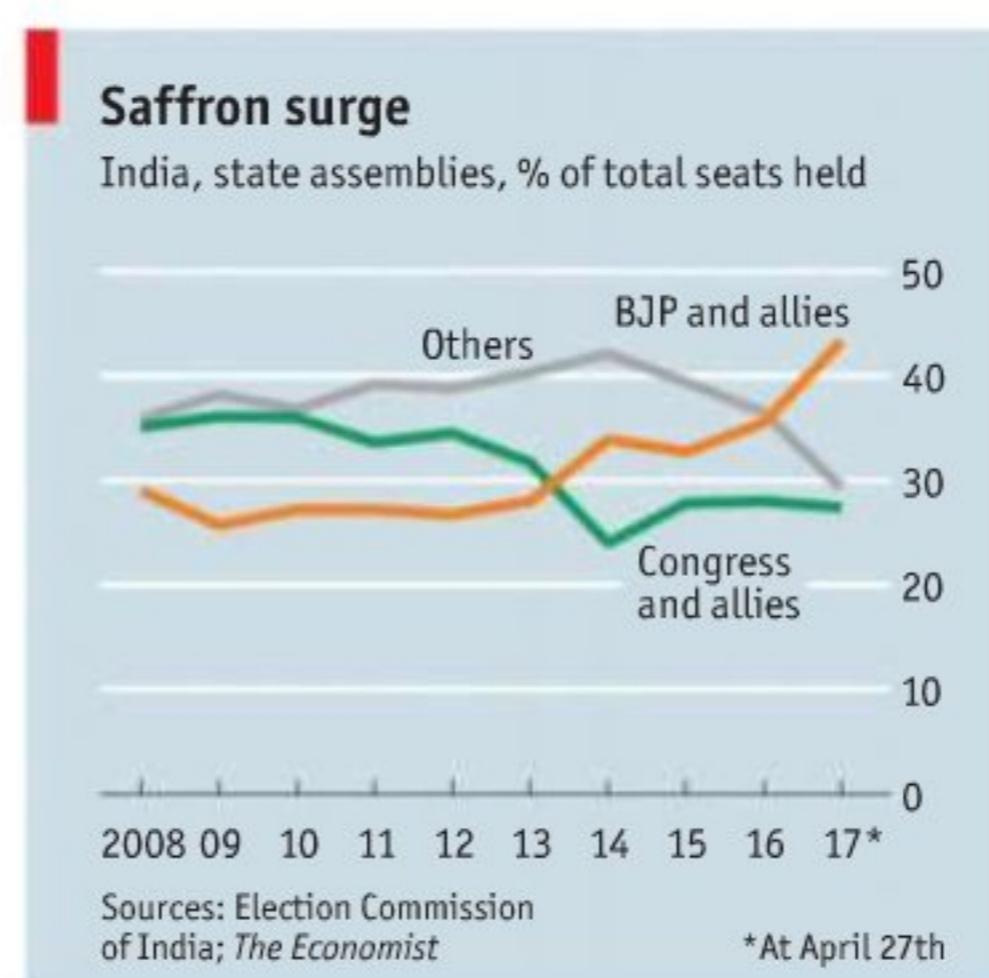
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AAP government, for instance, has found itself hamstrung by varied forms of obstruction from the BJP-led central government, not to mention by scores of spurious lawsuits and repeated police raids and investigations. Many AAP supporters seem to have understood the message: like it or not, the underdog is not a party that can "get stuff done".

Totting up the recent losses of India's opposition, however, it is clear that they themselves must also bear much of the blame. At every turn they have been not just outmuscled, but outwitted by the BJP. Worse, all too often India's opposition parties have scored own-goals, whether by way of corruption scandals, messy defections, internal squabbles or simply the failure to recognise that unless they join forces, the BJP will indeed run them over. "We'd been working on the assumption that Modi will be a shoo-in in 2019," says a foreign diplomat, "Now we're wondering if he won't be in 2024."

Aside from the AAP, the party with the most egg on its face is Congress, the oldest and long the grandest of parties in India. For decades following independence in 1947 Congress, like the BJP today, dominated politics at every level. It remains the only party aside from the BJP with a nationwide presence; the two parties' multiple rivals are all regional or local political forces. But after years of slow slippage, Congress's grasp seems in many parts of the country to have relaxed entirely. It currently controls just six state legislatures, only two of them in sizeable states. In recent elections it has frequently trailed a distant third or worse. With astonishing regularity Indian newspapers report stories of Congress grandes abandon the party, all too often to join the BJP.

Over the past year alone Congress has ►



► lost control of six states, four of them—Arunachal Pradesh, Assam, Goa and Manipur—because local party leaders switched sides. In the last two, they abandoned Congress even though it had just won state elections: the rival BJP simply moved faster to form a government, luring defectors with promises of cabinet posts even as Congress's leadership in Delhi dithered over how to dole out offices. In the mountainous state of Arunachal Pradesh last year, 43 Congress deputies defected en masse to join a new, BJP-allied party. In Assam, rebellious younger Congress leaders helped swing voters to the BJP, which they joined after complaints about the ageing local Congress boss fell on deaf ears.

Many have blamed Congress's woes on the lingering hold of the Gandhi dynasty. Its current figurehead, Rahul Gandhi (pictured on previous page, third from the right, with his mother, Sonia), is the son, grandson and great-grandson of previous prime ministers. Yet semi-feudal family politics afflicts many of India's parties. A nasty spat in the reigning Yadav family weakened the previous ruling party in Uttar Pradesh, paving the way for the BJP's crushing victory in the state assembly elections. The ruling party in the southern state of Tamil Nadu is currently embroiled in succession issues; the leadership of its main local rival is also a family affair.

A related opposition handicap is its emphasis on personality over principle. In some cases this has left parties floundering for relevance once their exalted leader dies. It has also opened some to the charge that they are mere vote-getting machines that do not stand for anything. The Trinamool Congress of West Bengal, a state ruled with an iron fist by the party's founder, Mamata Banerjee, is based on an insubstantial mix of populism and Bengali pride. In the southern states of Kerala and Tamil Nadu, power has for decades alternated between two parties with very similar ideologies.

On all these scales the BJP stands out as different. True, it has built a cult of personality around Mr Modi. Along with other top leaders in the party who spent long apprenticeships as "volunteers" with Hindu nationalist groups before entering politics, however, the prime minister remains a celibate bachelor; there will not be a Modi dynasty. Like it or not, too, his party does stand for something: the BJP believes that for India to be strong it must abandon the elitist secular socialism of the Congress years and embrace a less inclusive, more "authentic" Hindu identity.

But above all, India's ruling party enjoys unmatched discipline and organising power. A disappointed Aam Aadmi supporter in the prosperous Delhi district of Vasant Vihar says they didn't put up a single flag or poster. By contrast neat, polite BJP workers went door-to-door, ringing his bell three times. ■

## Politics in Australia

# The vanishing liberal

SYDNEY

### The prime minister is not the man he used to be

**M**ALCOLM TURNBULL had always seemed to be what Australians call a "small-l liberal". Unlike many in the Liberal Party, which despite its name is Australia's main conservative force, he was a defender of progressive causes. In 1986, as a lawyer, he successfully challenged a bid by the British government to prevent the publication in Australia of the memoir of a former British spy. He led the failed campaign in 1999 for Australia to become a republic. And unlike his fellow Liberal and predecessor as prime minister, Tony Abbott, he has no doubts about global warming.

Yet since becoming prime minister two years ago, Mr Turnbull seems to have jettisoned many of his small-l views. The most obvious reversal concerns immigration. In 2013, when a government led by Labor, now the main opposition party, sought to curb temporary work visas, known as 457s, Mr Turnbull called the visas the "heart of skilled migration"; he dismissed as "chauvinistic rhetoric" claims that they robbed Australians of jobs. Yet Mr Turnbull recently announced sharp restrictions on 457s: most recipients will no longer be able to apply for permanent residency, and the number of eligible professions has been cut by a third (actors, biochemists, detectives, metallurgists and web developers are among those who need no longer apply). To oblige immigrants to learn "Austra-

lian values", the government wants to add questions on topics like child marriage, domestic violence and female circumcision to the test they must take before they become citizens. Mr Turnbull described all this as "standing up for Australian jobs and Australian values". The sudden blast of "Australia First" rhetoric has left many asking what Mr Turnbull really stands for.

When he led a rebellion among Liberal MPs to unseat Mr Abbott, Mr Turnbull promised "ideas that will excite the Australian people". He said he would "attract the world's best innovative talent to Australia". He encouraged Australians to embrace a "national culture" of risk-taking. At first, the government's opinion-poll ratings soared, having tanked under the unpopular Mr Abbott. But after an election in July, Mr Turnbull clings to power with a majority of just one in the lower house of parliament and a minority in the upper house.

Mr Turnbull's straitened circumstances seem to have left him wary of exciting ideas and averse to risk-taking. He depends on the parliamentary support of Mr Abbott (still an MP) and the right wing of the party, which is constantly sniping at him. Perhaps as a result, he has abandoned all sorts of positions that used to distinguish him from Mr Abbott. He used to advocate a market-driven mechanism obliging polluters to cut emissions of greenhouse gases. Now he has embraced Mr Abbott's much criticised alternative: an A\$2.5bn (\$1.8bn) public fund to pay businesses to curb emissions. By the same token, he used to argue that parliament should legalise gay marriage; now he wants to hold a plebiscite first, just as Mr Abbott proposed.

Mr Turnbull's U-turns make some wonder if he ever stood for much besides winning power. Norman Abjorensen, a political historian at the Australian National University, thinks the Liberal Party has a "narrative problem": it appears to be in "steady retreat from the political centre that once looked like Turnbull's home-ground advantage." At any rate, its polls have slipped—it now trails the Labor Party.

Australia's three previous prime ministers—Kevin Rudd and Julia Gillard of the Labor Party, and Mr Abbott—all lost power when their MPs decided to replace them, in the hope of improving their electoral prospects. (Mr Rudd also lost an election, after a second stint in office.) Voters have grown dismayed at such shenanigans, but Mr Abjorensen still wonders if Liberal MPs are disgruntled enough that "time might already have run out for Malcolm Turnbull". Tony Burke, a Labor MP, says Mr Turnbull has become the protagonist of the same sort of "Shakespearean tragedy" that consumed his predecessors: "I watched it unfold and we're watching it unfold again." For now, the main thing keeping Mr Turnbull in office may be the lack of a plausible replacement. ■



Mr Abbott looms over Mr Turnbull



**Human rights in South Korea**

## Forget North Korea

SEOUL

**The real danger is gay soldiers, apparently**

**I**T IS 2017. Moon Jae-in just opposed homosexuality,” thundered the headline of a newspaper following a live television debate among South Korea’s presidential candidates. Gay sex is legal in South Korea, but stigmatised. Mr Moon, a former human-rights lawyer and the liberal candidate, who leads the polling for the election on May 9th, had just confirmed that he disapproved of it.

Mr Moon’s statement caused a stir on social media, but his view is not that unusual. Of the five main presidential candidates, only Shim Sang-jung of the Justice Party, the only woman running, has expressed support for gay rights. A decade ago a bill outlawing discrimination on various grounds foundered because sexual orientation was one of them. MPs have blocked it twice more since then. Last week representatives of Mr Moon and three rivals attended a “Protestant Public Policy Forum”; all made statements against gay rights, in keeping with the stance of many of South Korea’s influential churches.

The denunciations come on the heels of a report from an NGO called the Military Human Rights Centre of Korea, which claims that the army is “hunting down” gay soldiers. The Military Criminal Act bans soldiers, most of whom are conscripts, from engaging in gay sex, which it labels “disgraceful conduct”, punishable

1MDB

## Cleaning up

SINGAPORE

**A mammoth financial scandal is being brushed under the carpet**

**F**OR the past year 1MDB—a Malaysian state investment firm at the heart of one of the world’s biggest financial scandals—has been locked in dispute with IPIC, a sovereign-wealth fund from the oil-rich emirate of Abu Dhabi, with which it was once chummy. Terse statements released on April 24th suggest the pair are finally making up. 1MDB has agreed to pay IPIC \$1.2bn, reportedly to settle a complaint that it reneged on the terms of a bail-out IPIC provided in 2015. The two companies have also agreed to enter into “good-faith discussions” about other disputed payments, which may total as much as \$3.5bn.

Past dealings between 1MDB and IPIC are a focus for investigators hunting huge sums that have gone missing from the Malaysian state-owned company since its founding in 2009. In 2012 IPIC offered to guarantee loans that 1MDB needed to acquire two power firms. But IPIC said last year that it had never received collateral and other monies supposedly due to it under this deal. Instead 1MDB appears to have wired payments to an account held by an unrelated shell company registered in the British Virgin Islands, which had adopted a name similar to that of one of IPIC’s subsidiaries.

Last July investigators at America’s Justice Department said they thought that this ruse had allowed conspirators to liberate more than \$1.3bn from 1MDB’s

by imprisonment of up to two years. At least 32 soldiers are being investigated and one has been charged. That, the report claims, is because the army is actively seeking to weed out gay soldiers. The report alleges that it obliged gay soldiers to reveal the names of gay comrades, combed their mobile phones for leads and even mounted sting operations using gay dating apps—all of which appear to be against the army’s regulations and may also be illegal.

The army protests that the claims are untrue and that it has not broken the law. Its ban on gay sex, it says, is designed to conserve a “wholesome lifestyle” for soldiers. Han Ga-ram, a human-rights lawyer, says the measure is tantamount to criminalising homosexuality. Activists say it violates the constitution’s guarantee of equal treatment for all citizens. They have challenged it in the constitutional court three times since 2002, to no avail. A fourth complaint is on its way through the courts.

Judges, generals and politicians may be unbending, but public opinion is shifting.

coffers (opposition politicians in Malaysia maintain that the sum lost is in fact far greater). America alleges that former officials from both IPIC and 1MDB benefited from the swindle. They also claim that more than \$200m of the missing money went to an account controlled by Riza Aziz—the stepson of Najib Razak, Malaysia’s prime minister—and that \$30m went to Mr Najib himself. (Both deny wrongdoing.)

That 1MDB and IPIC are beginning to bury the hatchet is probably a relief for bigwigs implicated in the affair, even if many humbler Malaysians are wondering how the billion-or-so dollars immediately due to IPIC will be found. Although investigations are continuing in America, Switzerland and Singapore, the authorities in Malaysia itself have charged no one in connection with any of 1MDB’s dubious dealings. Mr Najib fired an attorney-general looking into the scandal; the successor Mr Najib appointed concluded that \$681m paid to Mr Najib in 2013 was a donation from foreign royalty, not in any way related to 1MDB.

Many voters in rural seats either do not understand the affair or do not care about it. It is rumoured that the prime minister will call a general election later this year, in the hope of benefiting from the opposition’s interminable squabbling. As things stand, he will probably clean up.

Between 2010 and 2014, support for same-sex marriage doubled among respondents in their 20s and 30s; almost three-quarters in their 20s saw gay rights as a human-rights issue. Mr Han says that South Koreans are “less afraid of speaking out” since months of protests led to the impeachment in March of Park Geun-hye, the president, prompting the current election.

Posters have appeared on the walls of universities in Seoul, the capital, calling for the release of the gay soldiers, with the slogan: “Take me away too”. Protesters waving rainbow flags and calling for Mr Moon to apologise disrupted one of his campaign events this week (see picture). In the end, he did, but half-heartedly, saying he should not have been judgmental, but standing by his opposition to greater gay rights. Activists have taken to Gwanghwamun Square, in central Seoul, where, only recently, Mr Moon joined the rallies against Ms Park, presenting himself as a figure of change. Angry banners there now demand of him: “Do you oppose me?” ■

# Banyan | THAAD vibes

**North Korea and China are tilting the presidential race in South Korea—to their disadvantage**



**A**NY excuse for a party. On April 25th North Korea celebrated the 85th anniversary of the founding of its glorious army. Ten days before its young despot, Kim Jong Un, had marked the 105th birthday of his grandfather, Kim Il Sung, the country's founder, with a vast military parade. Mr Kim loves fireworks, too. He set off a ballistic missile in honour of his grandpa, though it fizzled on launch. Rumours of a nuclear test still hang in the air. Of North Korea's five underground blasts to date, the young Mr Kim, in power since 2011, is responsible for three.

Mr Kim's growing nuclear ambitions have agitated Donald Trump. This week America's president called both his Chinese counterpart, Xi Jinping, and Japan's prime minister, Shinzo Abe, to discuss them. He also summoned the entire Senate to the White House for a briefing on the subject. And an American aircraft-carrier, the *USS Carl Vinson*, has finally shown up for reassuring annual drills with South Korea, after an embarrassing incident in which American officials claimed it was on its way to the Korean peninsula when in fact it was going in the other direction.

Heaven knows South Korea needs the reassurance. For all the mutual intimidation between North Korea and America, the North is probably still a couple of years away from being able to attack the American mainland; the North's promise to make a "super-mighty pre-emptive strike" against the *Carl Vinson* is bluster. South Korea, in contrast, has long faced an existential threat from North Korea's 20,000 artillery pieces and 1m-strong army. The North's growing nuclear capability compounds the danger. Just because Seoul in spring, with its bustling craft markets and festive air, is a cheerful place does not mean the threat is imaginary. Seoulites have simply learned to live under it.

Among South Korean policymakers, the unease is palpable. It hardly helps that the country is in limbo after the impeachment in March of the president, Park Geun-hye. A presidential election will take place on May 9th. Meanwhile, only part of the unease is generated by the North. Mixed signals from America have unsettled as much as they have reassured.

Yes, the vice-president, Mike Pence, recently glared across the demilitarised zone in solidarity with South Koreans. He also declared that "all options were on the table" in dealing with the North. Yet, in a later interview with the *Washington Post*, he reject-

ed the idea of direct negotiations of the sort that have brought North Korea to the table in the past. Such negotiations were in keeping with South Korea's long attempt at engagement with the North, which for the decade after 1998 was known as the "sunshine policy".

Mr Pence acknowledged that if America will not talk to North Korea, and if the North will not give up its nukes, then American military action in the form of a pre-emptive strike becomes more likely. For South Korea, that carries horrendous implications of a retaliatory attack. It was no comfort when Senator Lindsey Graham, one of the more thoughtful voices in Washington, said that a war in those circumstances "would be terrible", but would at least be "over there" rather than "here". Strategists in Seoul talk of "uncertainty to the East"—meaning America.

They also refer to "uncertainty to the West", meaning China. As they see it, America has not helped there either. Mr Pence describes the Trump approach as "not engagement with North Korea, but renewed and more vigorous engagement with North Korea's principal economic partner"—ie, China. Mr Trump wants Mr Xi to deliver a breakthrough with the North, by applying ever more pressure until it abandons its nukes.

Yet South Koreans point out two problems. First, the American approach misconstrues China's aim, which is not to bring Mr Kim's regime to its knees but just to get America and the North to talk to each other. Second, it fails to acknowledge China's ugly bullying of South Korea in the wake of the country's decision last year to approve an American missile-defence system known as THAAD, which is designed to shoot down incoming North Korean missiles. China claims the system threatens its own security—the radar might see into Chinese territory. To South Koreans, this proves how China elevates its solipsistic and woolly concerns over a threat to the South's very existence.

## Suddenly, it's become a security election

In protest at THAAD, the Chinese authorities have also encouraged a boycott of South Korean consumer goods and discouraged Chinese tour groups from visiting the South. Chinese hackers have been assaulting South Korean government websites.

Such bullying has gone down badly. South Koreans used to admire China. But now, for the first time, opinion polls suggest they hold it in lower esteem than Japan, which colonised Korea and with which Seoul still bickers endlessly about the extent of colonial abuses.

Meanwhile, North Korean and Chinese bullying are helping shape the presidential race. The longtime front-runner, Moon Jae-in, a dovish progressive, promoted the sunshine policy in a former administration. He used to say he was willing to visit Pyongyang before Washington if elected president. Such talk is heard no more. Mr Moon still favours engagement, including re-opening the Kaesong industrial zone, which brings together South Korean capital and North Korean workers. But he has come around to THAAD, to which he sounded hostile at first, and about which many South Koreans still have their doubts.

Indeed, the whole race is becoming more hawkish. Mr Moon remains the front-runner, but Ahn Cheol-soo, a doctor and former software entrepreneur, has gained rapidly in the polls. He has attacked Mr Moon for being soft on the North, including over Kaesong. Whoever wins, it looks as if Mr Xi's and Mr Kim's hostility will earn them the government they deserve in South Korea: one less inclined to humour them. ■



## Poverty

## Stumbling along the last mile

MINGNING

### China is trying a new approach to poverty

MOST of Tian Shuang's relatives are herding goats in the barren hills of Ningxia province, one of the poorest parts of western China. But last year Mr Tian came down to Minning, a small town in the valley, when the local government, as part of an anti-poverty programme, gave him a job growing mushrooms and ornamental plants in a commercial nursery garden. His name, address and income (20,000 yuan a year, or \$2,900—six times the minimum wage) are written on a board by its greenhouse door.

Mr Tian's name is also pinned up on the walls of the town hall, along with those of 409 other people in the area who, without help, would be living below the local poverty line of 3,200 yuan a year (this is about 40% above the national minimum, but still not enough to buy meat more than once a week, or to spend on new clothes). The town lists the problems and requirements of each of its poor people. Thirty-seven are poor because of health problems; 77—including some of Mr Tian's relatives—live in isolated, inhospitable areas; 95 are physically handicapped, and so on. Also listed is the help given by the government to each person, such as the provision of work, a solar generator or a cow.

Mining is a model town. Its poverty-alleviation scheme was set up by Xi Jinping, China's president, between 1999 and 2002 when he was governor of Fujian, a wealthy province in the south. (Fujian is

twinned with Ningxia as part of a national attempt to spread expertise and money from rich to poor areas.) The system that Minning pioneered is now spreading throughout China. It focuses on poor individuals, and on drawing up specific plans for each, rather than merely helping poor places to develop in the hope that wealth will trickle down to the poorest. Other countries are trying this, too, but China is one of the few developing nations with a bureaucracy big enough and bossy enough to do it well.

China has been a hero of the world's poverty-reduction efforts. It has eradicated poverty in cities (by its definition, at least) and reduced the number of rural people below the official poverty line of 2,300

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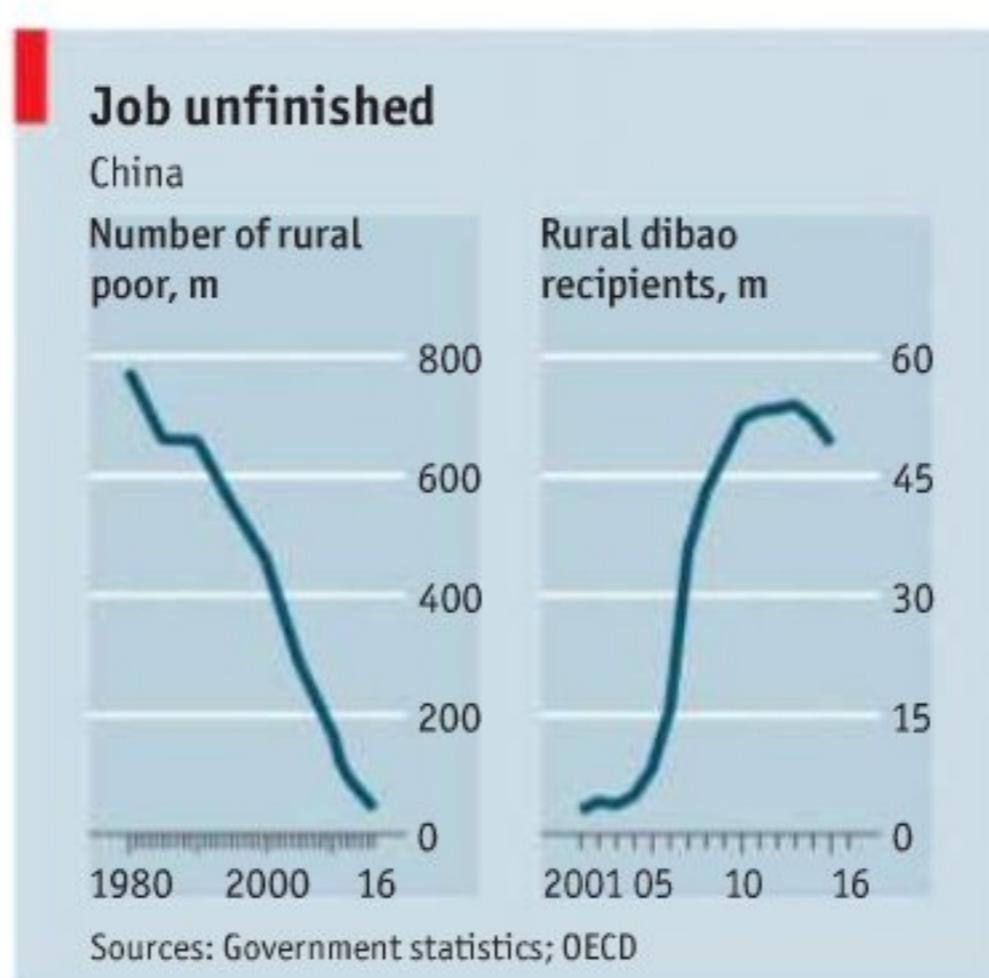
yuan a year at 2010 prices from 775m in 1980 to 43m in 2016 (see chart). Its aim now is to have no one under the line by 2020.

Two years ago Mr Xi set this as one of the main jobs of his presidency. He calls it “the baseline task for building a moderately prosperous society” (which the Communist Party wants to create by its 100th birthday in 2021). Politically, poverty reduction matters because, as one party member says, unless China solves the problem of income inequality, the party's legitimacy will be questioned. The party owes its power to a revolt fuelled by the miseries of the countryside. It does not want to be accused of failing to fulfil its mandate to eliminate them.

But the last stage of poverty reduction will be the most difficult. China's success so far has been based largely on economic growth, which has generated jobs for the able-bodied. The final stage will be costly and complicated because many of the remaining poor are people who, because of physical or mental disabilities, cannot hold down jobs. A recent government survey found that 46% of China's poor were poor because of their health.

Targeting individuals will help. By 2014 the government had compiled a “poverty-household registry” of every person and household below the poverty line. The following year it said a personalised poverty-alleviation plan must be drawn up for everyone included. The Philippines and Mexico also have such registries—they can help with monitoring the status of the poor, identifying their needs and (in theory) preventing waste and corruption.

There are signs that China's is indeed improving its main form of poor relief, which is called “subsistence guarantee”, or dibao. The dibao programme has been notoriously inefficient. Many households that qualify for payments do not receive ►



them because of corruption and bureaucratic failings. A survey by the World Bank found that between 2007 and 2009 just 10% of those that did get the *dibao* had household incomes below the poverty line (ie, 90% did not qualify for the hand-outs they were getting). The system is also corrupt. In 2015 an official in Henan province was found to have 267 bank deposit books in the names of extremely poor people, from which he had misappropriated 500,000 yuan of welfare payments.

But this may be changing. Poor people are getting more job training, as in Mining. There has been a crackdown on corruption. Ben Westmore of the OECD, a club mostly of rich countries, recently trawled through household data from five provinces collected by researchers at Peking University. He found that in 2014 about a third of rural households receiving *dibao* payments were below the poverty line—not good, but better than 10%. In Guangdong province in the south, an early starter in its focus on individual needs, more than half of recipients were below the line.

Still, there is a long way to go: most poor households still do not get *dibao* money. In the sample studied by Mr Westmore, three-quarters of them did not. It hardly helps that the poverty registry and *dibao* data are kept by different government departments; the two are not linked.

The *dibao* programme, though financed largely by the national government, is administered locally. This means local areas may set their own poverty lines and benefits. Some thresholds are far below the national minimum, and payments are barely enough to live on. Total *dibao* spending peaked in 2013 and has been falling since then—partly because governments are getting stingier. China spends a mere 0.2% of GDP on the *dibao* system, far below comparable programmes elsewhere. Indonesia's poverty relief costs 0.5% of GDP.

Worse, some poor people are not even included in the registry. In a village of 100 poor households in Shanxi province, only ten families are in it—friends of the party boss. If the registry is flawed, poverty relief is all the more likely to be flawed too.

All these efforts are aimed only at extreme poverty in the countryside. The government claims the urban kind does not exist, ie, that no one in cities has less than 2,300 yuan a year. But that minimum is too low for cities, where living costs are higher. Using more realistic thresholds, Mr Westmore found that urban poverty was actually higher than rural poverty in four of the five provinces covered by the data he used.

At current rates of reduction (more than 10m fewer people annually in extreme poverty), Mr Xi should be able meet his target by 2020. It will be hailed as a great achievement. But huge government effort will still be needed to help the worse-off. It will not be the end of poverty in China. ■

## Corruption

# Fox and hounds

BEIJING

### A tycoon's allegations are hitting the Communist Party where it hurts

**I**N CHINA, tycoons are often privy to murky secrets. Their dealings inevitably bring them into close contact with officialdom—they know whose palms can be greased, and who the real power-brokers are in the shadowy world of Communist Party politics. They are careful, however, not to speak out: an angry politician can easily destroy a business and have a person jailed. No wonder, then, that many Chinese have been transfixed by the claims made by a self-exiled property magnate, Guo Wengui, in a recent series of tell-all interviews and tweets—and that the party is trying hard to discredit him.

The unproven allegations by Mr Guo, who is also known as Miles Kwok, reach to the pinnacle of the party. He has accused security officials of corruption and claimed that the son of a former leader is hiding his shareholding in a large brokerage firm. Most shockingly, Mr Guo says a relative of a current leader has been “trotting the globe on a plane worth billions of yuan and playing around with women”—in spite of the party’s long-running campaign to curb profligacy among the elite, and to rein in corruption.

Chinese leaders are clearly rattled. The Foreign Ministry said last week that Interpol, an international body for police co-operation, had issued a “red notice” to members that Mr Guo is a wanted man. He has reportedly been accused by China of bribing a spy chief, Ma Jian (who has been dis-

missed and is now in custody). A video, purporting to show Mr Ma admitting to wrongdoing and denouncing Mr Guo, has circulated on the internet in recent days, apparently with official blessing. Mr Guo has denied bribing Mr Ma. He says eight members of his own family have been detained and that 120bn yuan (\$17bn) of his assets have been frozen. Several executives from his property company have been detained by police.

Mr Guo’s outburst comes at a sensitive time for the president, Xi Jinping, who is preparing for a party congress late this year—a hugely important opportunity for him to install his allies into the most important jobs. He does not want his efforts to be impeded by anything that could undermine his authority. This is evident from China’s stepped-up efforts to gag critics and “enemies of the state”. It seems prepared to use any means: in February Xiao Jianhua, a Chinese tycoon who made his fortune through ties to party leaders, was kidnapped in Hong Kong and taken to the mainland, where he is being held by police. Between 2014 and 2016, in an operation called “Fox Hunt”, China secured the repatriation of more than 2,500 “fugitives”. Many were from countries with which it has no formal extradition treaty.

Mr Guo professes to be unfazed by Interpol’s notice (he appears to spend much of his time in America, and likes to tweet pictures of himself looking fit—see below). Many people in China are certainly undeterred by the government’s efforts to block news about him—Mr Guo’s allegations are widely known. FreeWeibo.com, a website that automatically monitors censorship of Weibo, a Twitter-like service, shows that Mr Guo’s name is the most searched-for term on the social-media platform. If he keeps on talking, it will be hard for Mr Xi to knock it down the rankings. ■



Guo Wengui is doubling down



**Saudi Arabia**

## The smell of burnt rubber

### An embarrassing U-turn on economic reform

EVEN at the height of the Arab spring the Saudi regime had few domestic opponents. At their best they mustered a few hundred protesters to gather for a “day of rage” in March 2011 outside the interior ministry demanding a freely elected parliament and a constitutional monarchy. Many of its organisers were later jailed; but fear is only part of the reason for absence of protest. In a kingdom which acts like a (heavily armed) charity doling out cradle-to-coffin welfare, few see a reason to upset the felafel stand. Two-thirds of Saudi Arabia’s 21m citizens are employed by the government and expect annual pay rises whether working or not.

Confronted with vast deficits after the oil price collapsed in 2014, the king’s favoured son, Muhammad bin Salman (pictured centre), set out to change all that. The 31-year-old, who serves as deputy crown prince, defence minister and head of the committee that runs the economy, is widely considered to be Saudi Arabia’s *de facto* ruler, given the great age (81) of his father. His ministers called civil servants lazy and not only unveiled a transformation plan with austerity measures, but actually began implementing them. The slashing of housing, vacation and sickness allowances last September reduced some salaries by a third. Utility bills rose as subsidies fell.

This was not popular. If they had to tighten their belts, many muttered, why shouldn’t the prince himself, who report-

edly paid half a billion dollars for a yacht in 2015? Activists on social media compared him to Gamal Mubarak, the ravenous son of the deposed Egyptian president. The prince’s primacy, already dented by the bloody mess that his intervention in next-door Yemen’s war has become, seemed in danger of being weakened.

On April 22nd the government performed a screeching U-turn, restoring most of the perks and bonuses enjoyed by all those government employees. By reducing the grumbling, Prince Muhammad may hope to regain the middle-class support he needs to bolster his position against opposition from senior princes who would rather that the king’s nephew and crown prince, Muhammad bin Nayef, succeeds

### Also in this section

35 Disintegrating Yemen

36 Birth control in Nigeria

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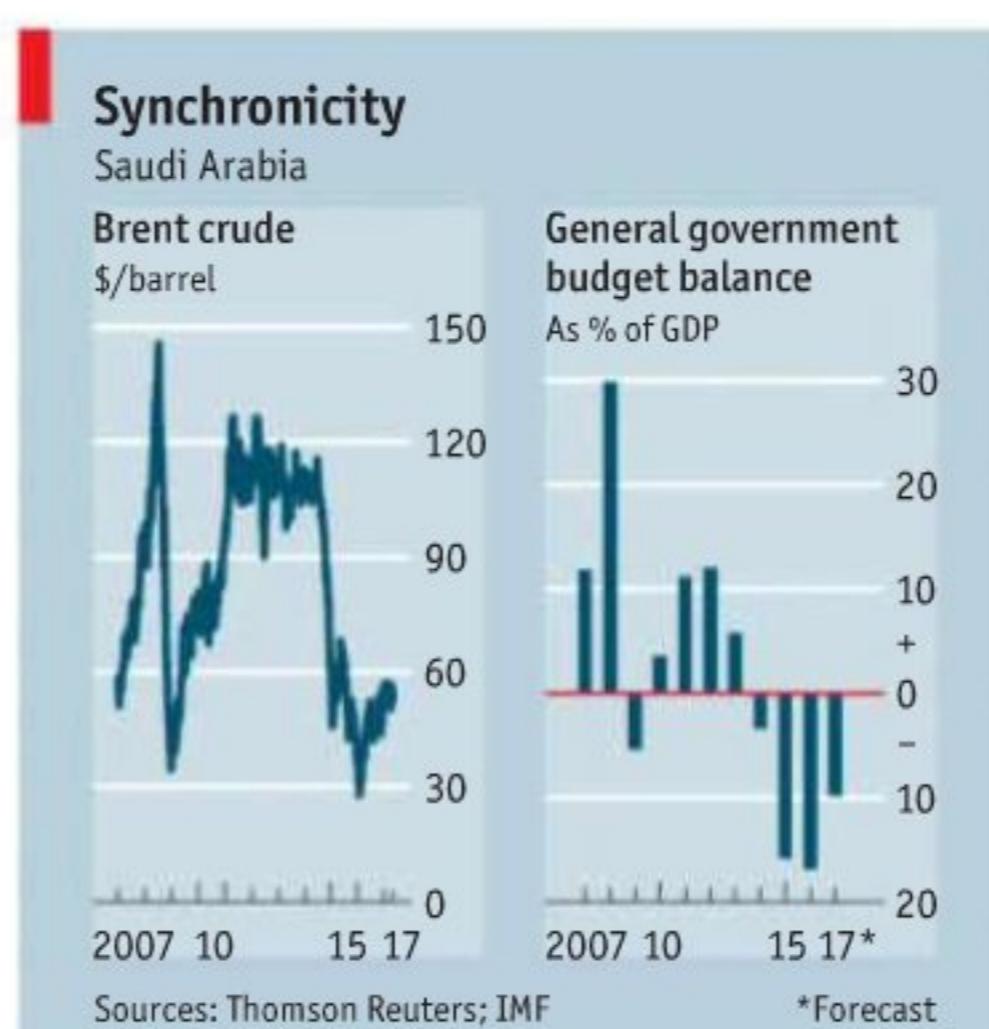
Salman when the time comes.

A wave of royal appointments, decreed the same day as the restoration of perks, further shifts the balance in the young prince’s favour. His younger full brother, Prince Khalid, becomes ambassador to America, the kingdom’s most important diplomatic post, helping cement Muhammad bin Salman’s ties to the Trump administration. Muhammad bin Nayef enjoys the confidence of America’s spooks, but under Mr Trump they have been losing influence to the Pentagon. Critics might bemoan Prince Khalid’s youth (28) and inexperience; but at least he is a fighter pilot.

Formally, the crown prince retains control of internal security, but by creating a new National Security Centre that answers directly to him, King Salman appears to be reducing his powers. So too does the promotion of Major-General Ahmed Asiri, the defence ministry spokesman, who becomes deputy head of intelligence. Some Saudi watchers speculate that King Salman might soon formally proclaim Muhammad bin Salman crown prince, and pension off Muhammad bin Nayef.

Might anyone stop him? In 1964 the Al Sauseds deposed King Saud because of personal excesses and poor management. But the family took almost seven years to agree to do it, and is far larger and less wieldy now. Backbiting could grow, not least over the young prince’s readiness to cash in the family silver. Claims by analysts that he personally overvalued the Saudi oil company, Aramco, a fraction of which he intends to float next year, by at least \$500bn, may be aimed at undermining confidence in his economic competence. But ultimately the family remains loth to do anything that might compromise the absolute monarchy, on which all their perks depend.

More concerning is the possibility that necessary reforms are being sacrificed for the prince’s personal ambition. A host of fi-



►nicians, led by the IMF, had cheered his Vision 2030, announced last year and aimed at cutting the public sector and preparing the kingdom for an age after oil. "The Gulf can't do austerity measures," fumed a veteran investment banker, after the kingdom announced the reversal. Despite a rise in the oil price to above \$50, the budget remains deeply in deficit. Restoring the allowances will add a further \$13bn to a

shortfall already projected at \$86bn, 12% of GDP. The government insists its finances are improving, but bankers say that capital is leaving the kingdom. The search for second passports by those who are fed up and want to leave is increasing. Growth is less than 1%, the lowest for almost four years. Admirers who once praised the prince now wonder whether his vision is to change the kingdom, or just his title. ■

nor—like his al-Qaeda predecessors—levies duties at Mukalla port. Surcharges on fuel imports for distribution countrywide, including to Sana'a where the rebels hold sway, he says, raise \$16m a month. He threatens to declare independence if Mr Hadi refuses to grant him devolved powers by September.

For Mr Hadi, Aden, 550km (350 miles) west, is an even more urgent challenge. In the early summer of 2015, the Emirati presidential guard and their Yemeni protégés drove out northern rebels who had taken most of the city four months earlier. But the turf wars unleashed by liberation have dampened the celebrations. Mr Hadi's son now inhabits the presidential palace in Aden (Mr Hadi himself spends most of his time in Saudi Arabia), but in the rest of the city the governor, Aidarus al-Zoubaidi, has asserted control. Much of the police force he has raised comes from his home province of Dali, north of Aden, whose tribesmen massacred Mr Hadi's Abayan tribe in 1986. "I override the president for the benefit of the city," Mr Zoubaidi explains.

#### Back to the bad days

Amid the ruins, old vendettas have resurfaced. Over 3,700 people have been killed in the battles for Aden since 2015, say local doctors. In contrast to Mukalla's well-swept streets and whitewashed walls, rubbish and graffiti abound. Marginalised under northern rule since 1990, Aden had long found solace in nostalgia. It recalled colonial times when it was the Arab world's premier port, with its first refinery; or the Soviet era when it had beach parties, and northern practices like qat-chewing, the veil and polygamy were banned.

The Emiratis have attempted to give the city a facelift, but while schoolgirls welcome their new computers and freshly painted classrooms, they worry about getting to school safely: kidnappings, night-time gunfire and explosions cause their trepidation. The presidential palace ►

#### Yemen

## Atomised

ADEN AND MUKALLA

### War is making Yemen fall apart

FROM the balcony of his hilltop palace, the governor, Major-General Ahmad bin Bourek, surveys Mukalla, the port and capital of Yemen's largest province, Hadramawt. It is not yet his kingdom. But to mark the first anniversary of the expulsion of al-Qaeda, the jihadist group that seized the city in 2015, he declared a public holiday and hosted thousands of grandees at a conference at which he pushed his demand for autonomy. Flunkeys distribute badges with his portrait, hang banners proclaiming him leader along the city's highways and organise military parades. Backed by the United Arab Emirates (UAE), which last April wrested back control of the port in an assault by land and sea, he sees a new political map of Yemen emerging from two years of war. "We can't wait for them to liberate the rest of the country," he says. "If the conflict lasts much longer, Yemen will split into duwailat (principalities)."

If so, it would be reverting to type. For 139 years, the British avoided the north and nannied 14 bickering sheikhdoms across southern Yemen. When the British Empire withdrew, socialists in the south formed their own republic, and proceeded to make it a crime even to communicate with northerners. South Yemen united with the more populous, tribal and rugged North Yemen only when the Soviet Union collapsed, leaving the south bereft of an external backer. After 27 years of forced but tempestuous marriage, its politicians have now latched onto the UAE, looking for separation again.

Taking on responsibility for the south as part of the Saudi-led coalition to take Yemen from northern Houthi rebel forces, the UAE has established at least six operating bases across southern Yemen. While the Saudis bombed from the air, the Emiratis put thousands of troops on the ground, trained perhaps 30,000 Yemeni fighters in and out of the country to fight the Houthis and al-Qaeda and pumped \$2bn into pro-

jects designed to revive a battered and neglected land. "Southerners will never again be governed by Sana'a [Yemen's capital in the north]," says Reyad Yassin, a former foreign minister and Yemen's ambassador to Paris, on a visit to the UAE. Even the bottled water is called "South".

United in resentment of the north, southerners agree on little else. Formally, President Abd Rabbo Mansour Hadi, a general from the southern province of Abyan, rules over all the territories the coalition has recovered. Yet signs of his power are almost as hard to find in the south as in the rebel-held north. The odd poster bearing his image is strung from lampposts too high to tear down. Checkpoints fly the former South Yemen flag, not that of a united Yemen Mr Hadi professes to govern.

Mr Hadi still controls the country's central bank, and hoards some 400bn Yemeni riyals (about \$1.6bn) he recently had printed in Russia. But local governors find ways to diversify. Frustrated at Mr Hadi's reluctance to hand over Hadramawt's share of Yemen's oil revenues, its gover-



Welcome to Aden



► should be Aden's safest place, not its most frightening, says Kholoud Mousa, a 19-year-old whose school lies below.

Southern secessionists maintain what order there is. Young men bristling with guns careen in pickups along pavements. Some officials now feel confident enough to move around Aden without bodyguards. But although the South Yemen flag is more common, al-Qaeda's ensign also appears on alley walls. Soon after the Emiratis restored Aden's national library, extremists blew it up. The previous governor was assassinated. The current one has survived multiple attempts.

Yemen's riyal has slumped against the dollar. Prices continue to rise. Mothers from poorer suburbs nurse shrivelled bundles in hospitals. Malnourishment was a fact of life before the war, but eight children have starved to death in Aden's hospitals so far this year, against 11 all of last. Despite over \$100m worth of Emirati investment in generators, blackouts have increased. Power cuts last most of the day because Mr Hadi refuses to pay for the fuel.

"He wants to stymie my efforts to deliver," says the governor, who accuses the president of recruiting al-Qaeda fighters lest their cold war heat up. At the airport, the governor's and the president's men have already come to blows.

The Emiratis are beginning to tire of their bickering wards. Officials who hoped that Aden would be a model for the rest of Yemen now fear that leaving the south on autopilot might only condemn the country to instability. And that might engulf the whole Arabian peninsula. Thousands of fighters they have trained have gone AWOL (after collecting their pay). Motivating recruits to push north is an uphill task even with the payment of bonuses. Those who were happy to fight for their own homes seem unenthused about fighting for somebody else's.

"Why should we stand up another failed South Sudan?" asks an Emirati analyst. "If you want to stabilise an area, the first thing you put right is the governance," says a former British diplomat in Yemen. That, clearly, has yet to happen. ■

## Birth control in Nigeria

# Condoms v conservatives

KADUNA

**Faith and tradition favour high fertility. Education pulls the other way**

NOT everyone thinks birth control is a blessing. Boko Haram, a jihadist group that terrorises north-eastern Nigeria, deems artificial contraception to be a product of infidel learning, and therefore forbidden. Its ideologues also believe that females should avoid school, marry early (sometimes while still children) and have lots of babies. In the dwindling areas the jihadists control, women have no choice.

Even outside those areas, contraception is controversial. Boko Haram's ideology didn't spring from nowhere. Many Nigerian Muslims believe that pills and condoms are part of a Western plot to stop Muslims from multiplying. And in poor, rural areas centuries of experience have taught people that having lots of children makes economic sense. They can be put to work in the fields, they will provide for their parents in old age and, given high rates of infant mortality, if you don't have several you may end up with none.

So the government in Kaduna, a majority-Muslim state north of the capital, Abuja, does not encourage people to have fewer children. That would be politically toxic. But it does offer free contraception, and suggest that women might wish to pause between pregnancies. It also promotes girls' education—something that has caused fertility rates to fall more or less everywhere it has been tried. As recently as 2008, women in Kaduna expected to have 6.3 babies each over a lifetime. By 2013 this had fallen to 4.1, well below the nation-

al average of 5.7 that year.

When Alheri Yusuf first heard about family planning from a relative, she hesitated. "I thought she didn't want me to give my husband more children," says the 33-year-old mother of four, as she waits for a contraceptive hormonal injection at a hospital in Kaduna. Then she realised that spacing her children would give her time to recover from childbirth.

No one knows how many Nigerians there are. The World Bank says there were 182m in 2015, but this estimate is based on the 2006 census, which was probably inflated (politicians typically exaggerate the count to grab more parliamentary seats and government money for their regions). Most observers agree, though, that Nigeria's population is growing at a cracking 3% a year. Many Nigerians see this as a source of national pride and strength. But the economy ought to grow faster than the population, and last year it actually shrank, thanks to cheap oil.

To be prosperous as well as populous, Nigeria needs to educate its people better. This would also curb population growth, since well-schooled women tend to have fewer babies. In a sparse classroom in the city of Zaria, 15 adolescent girls swathed in white hijabs learn about reproduction, financial literacy and how to say no. The course is run by a local NGO and paid for by the UN Population Fund. The girls say they want fewer children than when they started the sessions in September, so that they can educate them well.

Most girls in the programme will finish secondary school and delay childbirth (previous cohorts wed an average of 2.5 years later than peers). In places where female literacy has improved, child marriage and maternal mortality have duly fallen.

Within Nigerian Islam, a debate rages between modernisers and obscurantists. The former may be winning. Lamido Sanusi, the Emir of Kano and a senior Muslim leader, has spoken out against child marriage, and proposes a legal minimum age (there is currently none) of 18. Yusuf Ali, a cleric who joined a debate convened by the emir, married his first wife when she was 14 and he was 26. But Mr Ali, who has four wives and 38 children, now thinks girls should marry "above the age of 15". He also favours family planning, so long as couples use withdrawal rather than modern contraception. He even agrees that girls should go to school. ■



Not a plot



## France's presidential election

## The happy gambler

PARIS

### Win or lose, Emmanuel Macron has revolutionised French politics

THREE years ago, he was largely unknown to the public. Today he is a step away from becoming France's president. Emmanuel Macron's remarkable rise from obscurity to favourite for the presidential election on May 7th carries symbolic value well beyond his homeland. If he defeats Marine Le Pen of the National Front (FN), as polls suggest he will, the country will have shown the rest of the world not only that it can favour youth over seniority, and optimism over fear, but that pro-European liberalism can still triumph over populism and nationalism.

A former Socialist economy minister and one-time investment banker, the 39-year-old Mr Macron topped first-round voting on April 23rd with 24%. Ms Le Pen came a close second, with 21%. The pair, neither of whom comes from an established mainstream party, knocked out candidates from both of the two political groupings that have held the French presidency for the past 60 years. François Fillon, a former prime minister who ran for the Gaullist Republican party, came third on 20%. Benoît Hamon, the Socialists' candidate and a former backbench rebel, sank to a dismal fifth place, on 6%. Despite a late surge, the Communist-backed Jean-Luc Mélenchon was narrowly held to fourth place, on 19.6%.

Mr Macron's achievement defied all the rules. His tone on results night looked prematurely victorious. But those who joined

him when he set up his political movement, En Marche!, a year ago appeared almost stunned this week. For months, his campaign has been low-cost, and sometimes chaotic. His headquarters, filled with young people in sweatshirts and take-away food boxes, has felt more like a start-up than a slick political machine. Nevertheless, in the end he secured nearly as many votes as the Socialists and Republicans put together.

Yet Mr Macron's score was also the lowest for a leading first-round candidate since 2002. The results revealed a deeply fractured country. Mr Macron won over voters in thriving big cities, where warehouses

### Voting by degrees

France, presidential election 2017, share of vote  
By education level, polled April 19th-22nd 2017, %

Macron (En Marche!) Le Pen (National Front)

Fillon (Republicans) Hamon (Socialist Party)

Mélenchon (Unsubmissive France) Others

No high-school diploma

High-school diploma

Two-year further education diploma

Undergraduate degree or higher

Actual first round result\*

Sources: Ipsos; French Interior Ministry

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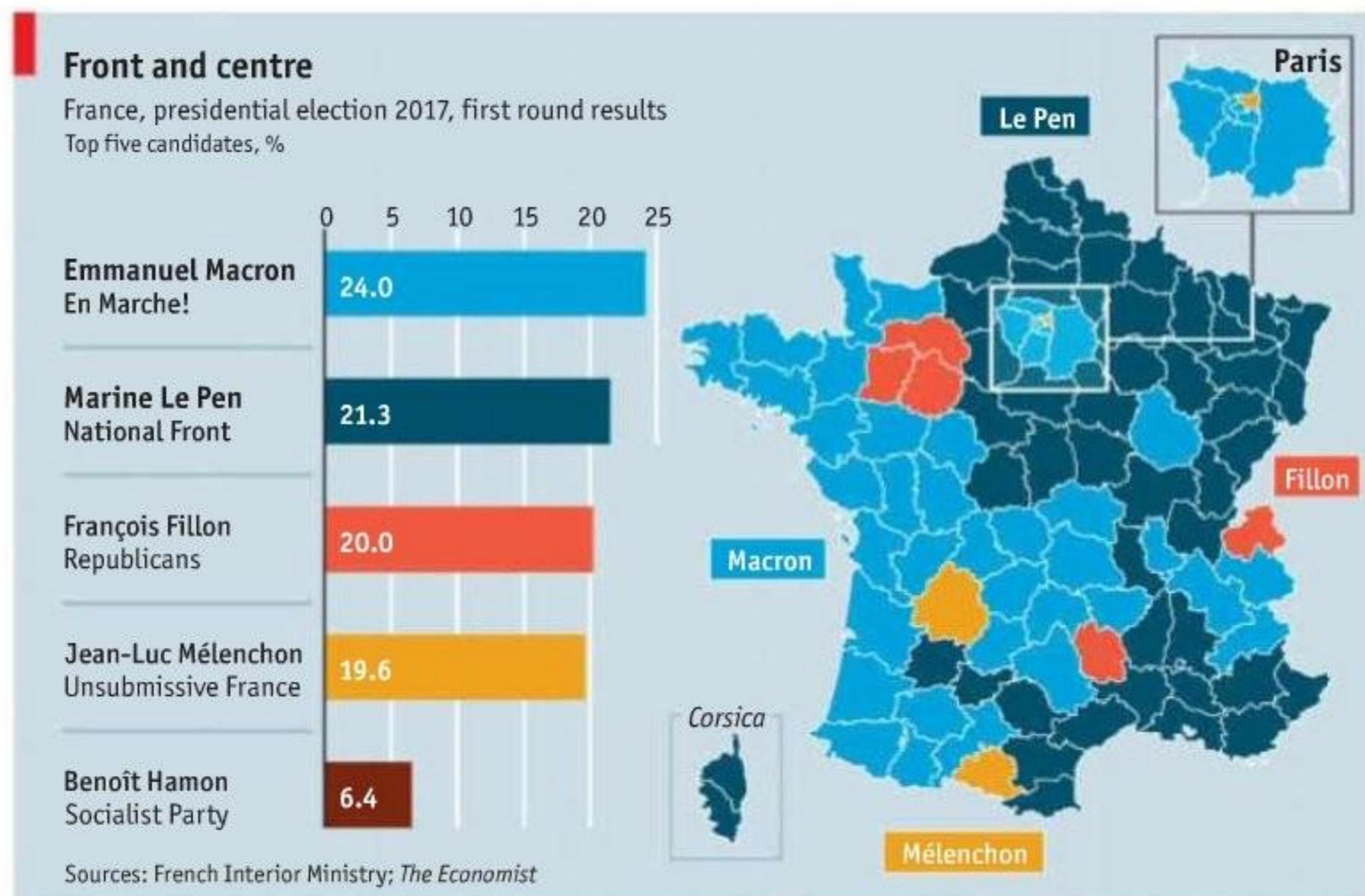
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have been converted into tech hubs and cars are viewed as a menace. He came top in Paris (with 35%, against 5% for Ms Le Pen), Rennes (32% to 7%), Bordeaux (31% to 7%) and Lyon (30% to 9%). His support was evenly spread across all age groups. It correlated with greater income, optimism and education (see chart). This is the France that feels at ease with Mr Macron, a zealous pro-European who wants to reinforce ties with Germany, keep France part of the global trading system, support the transatlantic alliance and build cross-party support between left and right to "unblock" the economy.

By contrast, nearly half of all voters backed one of the anti-system candidates: Ms Le Pen, Mr Mélenchon or one of several mostly far-left contenders. Ms Le Pen topped voting in both the FN's southern strongholds and a broad swathe of the French rust belt, in the north and east, as well as in rural and semi-rural areas that have lost jobs, shops and services. Her support encircles big cities, often in villages and suburbs as yet untouched by immigration. Ms Le Pen lost her hold on the under-25-year-olds, who preferred Mr Mélenchon, but remains the favourite candidate for working-class voters, capturing 37% of their support, next to 16% for Mr Macron.

This is the France des oubliés ("of the forgotten"), as Ms Le Pen puts it. Campaigning under the slogan "In the name of the people", she vows to hold a referendum on taking France out of the European Union, and thus the euro. She wants to introduce protectionist trade barriers, tax firms that hire foreigners, strengthen ties with Vladimir Putin's Russia, close the borders to immigration and strip jihadist suspects with

**Award:** Tom Nuttall, our Brussels correspondent, has won the 2017 Evens Prize for European Journalism, awarded for making the European project easier to understand.



dual citizenship of their French nationality. In many ways, Mr Macron is her ideal opponent. She calls him a “globalist”, a rootless citizen, the candidate of banks and finance and “the system”, supported by the *beau monde* of Paris.

Early polling suggests that Mr Macron will beat Ms Le Pen by about 60% to 40%, as voters come together to keep the FN out. Mr Fillon and Mr Hamon both said that they will vote for Mr Macron to defeat Ms Le Pen. So did Nicolas Sarkozy, a Republican ex-president; Alain Juppé, a Republican ex-prime minister; and François Hollande, the Socialist president—though Mr Mélenchon left his intentions ambiguous. Yet the polling gap is likely to narrow. This week, Ms Le Pen stepped aside temporarily as head of the FN to try to reach out beyond her party base. Nearly a third of Mr Fillon’s voters and 9% of Mr Mélenchon’s say they will back her. On the far left, Mr Macron is considered toxic. The choice, claim some, is between a banker and a fascist. An anti-Macron campaign, in favour of abstention, was circulating this week on social media, under the hashtag #Sans-MoiLe7Mai (“without me on May 7th”).

To bridge such divides, Mr Macron needs to find a way of speaking to those who do not share his optimism about the benign nature of globalisation. His manifesto contains strong ideas on reforming lifelong learning and retraining, for example, and on shrinking class sizes in weak schools. But such promises will not bring back jobs and factories in the short run. Mr Macron also argues that technological innovation—including “gig economy” firms such as Uber—can reduce ethnic discrimination in the banlieues. The most common business registered in 2015-16 in such areas north of Paris was taxi-driving. But many voters fear robots will put them out of a job. At a campaign stop this week in his home town of Amiens, in northern France,

Mr Macron was greeted with jeering and whistling by factory workers angry at its threatened closure. “Macron is just the continuation of Hollande,” said one, who said he would vote for Ms Le Pen.

The election could presage a break-up of the old party system. “You reap what you sow,” said Manuel Valls, a Socialist former prime minister, who rejected his own party’s candidate as too left-wing. One estimate suggests that the Socialists could lose 75% of their seats at legislative elections in June. He and fellow Socialist moderates have to decide whether to try to claim back the party’s leadership, or to campaign for En Marche!. Mr Macron, who thinks he can get a majority, promises to put up candidates in each of France’s 577 constituencies, half of them political novices. But this

involves complex calculations. Will Mr Valls, for instance, really stand as an En Marche! candidate? If not, will En Marche! really field a candidate against him?

On the centre-right, there is consternation, too. After five years of Socialist government, many conservatives thought this election theirs by right. En Marche! claims some are ready to defect to Mr Macron. But many still hope that they can score well at the parliamentary vote before negotiating with him. Bruno Le Maire, a Republican former Europe minister, said he would be prepared to work in a Macron government if no party secured a majority. Others are hostile. Laurent Wauquiez, a regional Republican president, ruled out backing Mr Macron, arguing that he did not “want the FN to be the only opposition in France”.

As the two candidates enter the final lap, each can reasonably claim a part in changing the face of French politics. Ms Le Pen secured 7.7m votes, 1.3m more than at the first round in 2012, and a big jump from the 4.8m her father got in 2002. When he made it into the run-off, he scored only 18%. That she might well more than double that on May 7th is a reflection of her success in turning the FN into a fixed feature of the French party system. Even if she loses, Ms Le Pen has had an outsized influence over this campaign.

As for Mr Macron, he has already pulled off a historic feat. Last summer, he was a rank outsider, whose hopes of running defied all French rules about the way presidential candidacies are slow-cooked over the years. Now, the man with a dream, a gamble and a heavy dose of luck appears well placed to become the youngest-ever president of France’s Fifth Republic. After that, the hard part begins. ■

### If France were America

Marine Le Pen’s second-place finish behind Emmanuel Macron has been hailed as a sign that the global wave of populist nationalism which Donald Trump rode to victory is receding. But if France used America’s system for electing presidents, Ms Le Pen might have won. In America’s electoral college, every state gets one vote for each of its senators and members of the House of Representatives. Imagine that France’s 18 regions were treated as states. Each would have two senators, and they would divide 157 House members according to population (with each region guaranteed at least one). Like Hillary Clinton, the cosmopolitan Mr Macron won the most-populous urban regions, such as the one around Paris. But like Mr Trump, Ms Le Pen won more of the rural regions, which an electoral college would favour. Mr Macron and Ms Le Pen would have ended up with 90 electoral votes each. Under the American system, if no candidate gets a majority, the House of Representatives picks the president, with each state getting one vote. Ms Le Pen won eight regions to Mr Macron’s six, and came higher in three of the other four, so she could well have triumphed. The difference between a populist tide and a centrist resurgence may come down to the electoral system.

#### How France’s presidential election might have looked under America’s rules





### Religious repression in Russia

## Badgering the Witnesses

MOSCOW

**A pacifist sect banned by the Soviets is banned again**

WHEN the KGB men came to his family flat, they split up Yaroslav Sivulsky and his parents into separate rooms. Mr Sivulsky, then a young boy in the Soviet Union, watched as agents searched their belongings for "banned literature". His grandparents had been exiled to Siberia for belonging to the Jehovah's Witnesses, a Christian denomination founded in America in the 19th century; his parents had kept the faith alive in their home.

Now Mr Sivulsky and the 175,000 other Jehovah's Witnesses in Russia face the prospect of returning to an underground existence. On April 20th, the Russian Supreme Court outlawed the group's activities, declaring it an "extremist" organisation. "It's all happening again," says Mr Sivulsky. "Back then they came after us for ideological reasons, and now because our faith is not of the 'right kind'."

The ruling puts the group, whose members preach non-violence and refuse to serve in the military, on the same legal footing as several neo-Nazi groups. Lawyers from the Russian Ministry of Justice argued that they pose a threat to "public order and public security". The group's property and assets are set to be seized. Any organised religious activity will be considered illegal, with violators facing steep fines and even potential prison sentences. If implemented, the decision would be "by far the most severe blow to religious freedom in Russia since the end of the Soviet Union", argues Geraldine Fagan, author of "Believing in Russia: Reli-

### Millennial viniculture

## The natural front

### The craze for "raw" pinot noir

AT "Rawduck", a restaurant in London's trendy Hackney neighbourhood, clients crowd around communal tables under dim lights, inspecting a menu of delights such as charred purple sprouting broccoli, shaved yellow courgette and goat's curd. Along with food, the venue offers classes in pickling vegetables and making kombucha (a Japanese fermented tea). The greatest emphasis is on the wine list, all of it billed as "natural" or organic. But on this front, though the venue strives for eccentricity, it is part of a much larger trend.

The craze for "natural" wine started in France in the 1990s, recalls Bertrand Celce, a wine blogger. A small group of bacchanalians started opening offbeat organic wine bars across Paris. Now the city boasts hundreds, with many others elsewhere in France. Since the mid-2000s they have spread across Europe and to parts of America. "Raw", a London-based wine fair which started in 2012, has now opened in Berlin, Vienna and New York; this November, it will have its first show in Los Angeles. Well-heeled restaurants such as Claridge's in London have also started to stock the stuff, which is made not just in France but also in Italy, Austria, Slovakia and elsewhere.

Wines labelled "organic" must abide by European Union standards to be certified. "Natural" wines are even fussier: they are grown and harvested organically, but have no additives at all. ("Organic" wine can have up to 50, such as dry yeast or tannins, sniff natural oenophiles.) The "natural" designation, however, is completely unregulated. Some natural winemakers claim that herbal tea protects their vines against diseases. Most crush their grapes with their bare feet, because that is how it was done in the good old days; others keep wine in amphorae. A few are influenced by the "biodynamic" teachings of Rudolf Steiner, an Austrian who thought that astrological forces influence crops. Others simply like the taste, which ranges

gious Policy after Communism".

The ruling is a testament to the growing influence of the Russian Orthodox church, especially of a radical wing who see the Jehovah's Witnesses as a dangerous sect that deviates from the official version of Christianity. The court's decision marks the culmination of a long and concerted campaign. Experts trace the latest wave of troubles back to 2009, when Orthodox ac-

from cider-like juice to something resembling conventional wine, but with a trendier label and a bigger price tag.

Some of this mirrors the fads for craft beer and new kinds of gin, says Jancis Robinson, a wine writer. Young people, especially hip urban types who tend to prefer gluten-free and organic food, are particularly keen. According to a survey in 2015 from Nielsen, a research firm, nearly two-thirds of those aged between 21 and 34 who drink wine several times a year said they were interested in natural wine, compared with only a minority of those over 44. "The young French want to be surprised," says Sylvie Augereau, a writer and winemaker in the Loire Valley. "Old people want to have the same taste every year," she sighs.

An anti-establishment mood has taken root in Europe's vineyards. The rebels may be a small minority, but they are affecting the rest of the industry: older winemakers are playing around with the "natural" techniques, says Ms Robinson, blurring the boundary between establishment and upstart. As with insurgent politics, so too with plonk.



The secret ingredient is: nothing

tivists and local authorities began aggressively pursuing members and congregations. Regional courts steadily added Jehovah's Witnesses literature to lists of banned extremist works, often on absurd premises. (One pamphlet was flagged for a line criticising the Russian Orthodox church. It was a citation from Tolstoy, whose works are not exactly banned in Russia.) The group's refusal to participate ►

in militaristic state rituals further fuelled suspicion. "The campaign dovetails with the drive for greater security, unity and patriotism," says Ms Fagan. "Otherness and dissent are seen as threats."

The Orthodox church's complaints found support among Russia's security services, which see the Brooklyn-headquartered Jehovah's Witnesses as a nest of pernicious foreign influence. Valery Malevany, the vice president of a security service veterans' group, suggested that Jehovah's Witnesses and other Christian groups were "financed by Western special services" in order to carry out "sabotage" and "intelligence work". Vitaly Milonov, an ultra-conservative MP, said Western governments were using the group to further their goal of "destroying our country through spiritual and moral decay". Roman Lunkin of the Centre for the Study of

Religion and Society at the Russian Academy of Sciences sees the crusade as part of "a wave of suspicion and fear regarding the West". In recent years, Russia's courts have declared more than 140 non-governmental organisations "foreign agents" for receiving money from abroad. "Now it has come to religion," says Mr Lunkin.

It is not clear whether the decision portends a wider crackdown or will remain an isolated incident. The Jehovah's Witnesses came under attack in part because they presented an easy target, argues Mr Lunkin. Members do not vote, are staunchly pacifist, and enjoy little support among a population that bristles at their door-to-door proselytising and unfamiliar theology. But the ruling is unlikely to cause believers to lose faith. "Who are we supposed to listen to now?" Mr Sivulsky muses. "The unjust decision of the court, or God?" ■

to move people," explained Mr Meuthen half-apologetically after his own tub-thumping speech in Cologne.

Third are the True Believers: André Poggenburg and Björn Höcke, the AfD's ultranationalist leaders in the states of Saxony-Anhalt and Thuringia. They are backed by the party's large hardline base in the poorer, formerly communist east of Germany, and hence by the vast majority of its elected representatives. Both the Power-Seekers and the Populists find the True Believers' views ugly or even racist; but they are politically indispensable.

In 2015 the three gangs collaborated to defeat Mr Lucke. But they fractured in Cologne, after months of infighting over Ms Petry's attempted expulsion of Mr Höcke. (He had criticised Germany's culture of Holocaust remembrance.) The Populists co-opted the True Believers to oust the Power-Seekers, whose plan to detoxify the party they see as centralist and heavy-handed. Delegates threw out Ms Petry's strategy and her bid to write anti-racism into the party's charter. They cheered the Populists' old tunes about feckless foreigners to the rafters. It would be easy to see this as the beginning of the end for the party, a suicidal rejection of respectability in favour of fringe zealotry.

But that diagnosis may be premature. "The party's poll performance is not closely linked with its actual behaviour," observes Timo Lochocki, an expert on the AfD at the German Marshall Fund of the United States. He argues that voters have priced in its excesses and dodgy characters, and that it will very probably clear the 5% hurdle needed to enter the Bundestag, Germany's lower house. Its MPs there may be inexperienced and unruly, he adds; but if Germany's centre-right and centre-left parties form another Grand Coalition government like the current one, yet more right-wing voters fed up with Mrs Merkel may move towards the AfD. Chaotic, divided and beyond the pale to most voters, the party may yet find a permanent, if peripheral, place in German politics. ■

### Which Alternative for Germany?

## Mutinies within mutinies

COLOGNE

### Germany's right-wing party abandons its bid for respectability

HISTORY has a way of repeating itself. In 2013 a group of anti-euro intellectuals led by Bernd Lucke, an economist, formed the right-wing Alternative for Germany (AfD) party. Two years later he was ousted by Frauke Petry, an erstwhile ally, who led the party to a series of sensational results in state elections by angrily opposing Angela Merkel's refugee policies. But in recent months, as the refugee crisis has moved off the headlines, the AfD's poll numbers have slumped into single digits. On April 22nd it was Ms Petry's turn to be shunted aside, at the party's conference in Cologne. Her nemesis: Alexander Gauland, a traditionalist with the grand air of a British aristocrat, who had helped her defenestrate the moderate Mr Lucke.

This was more complicated than a rightward lurch. Three groups have dominated the AfD since Mr Lucke's fall, each led by two main figures. The events of Cologne saw control of the party shift decisively within this sextet.

One could call the first group the Power-Seekers: Ms Petry and Marcus Pretzell, her husband and one of the AfD's members of the European Parliament. Impressed by Marine Le Pen, France's nationalist presidential candidate, they want to combine shrill politics (Ms Petry has said border guards should use arms against illegal immigrants) with a sharper, more disciplined image, a rejection of overt racism and eventual participation in government coalitions in Germany's states.

Second are the Populists: Mr Gauland, for decades a doyen of the centre-right CDU, and Jörg Meuthen, a Thatcherite economist who has shared the chairmanship of the party with Ms Petry since her coup in 2015. They have been joined by Alice Weidel, a former Goldman Sachs banker selected alongside Mr Gauland to lead the AfD's campaign for the general election in September. Few in this group really rate Ms Le Pen; Mr Meuthen told this newspaper he might even prefer Emmanuel Macron, her liberal rival. Yet in order to whip up the cheers of the AfD's grassroots, they merrily bluster about Muslims (the party's electoral programme declares Islam un-German) and evil elites. "You have

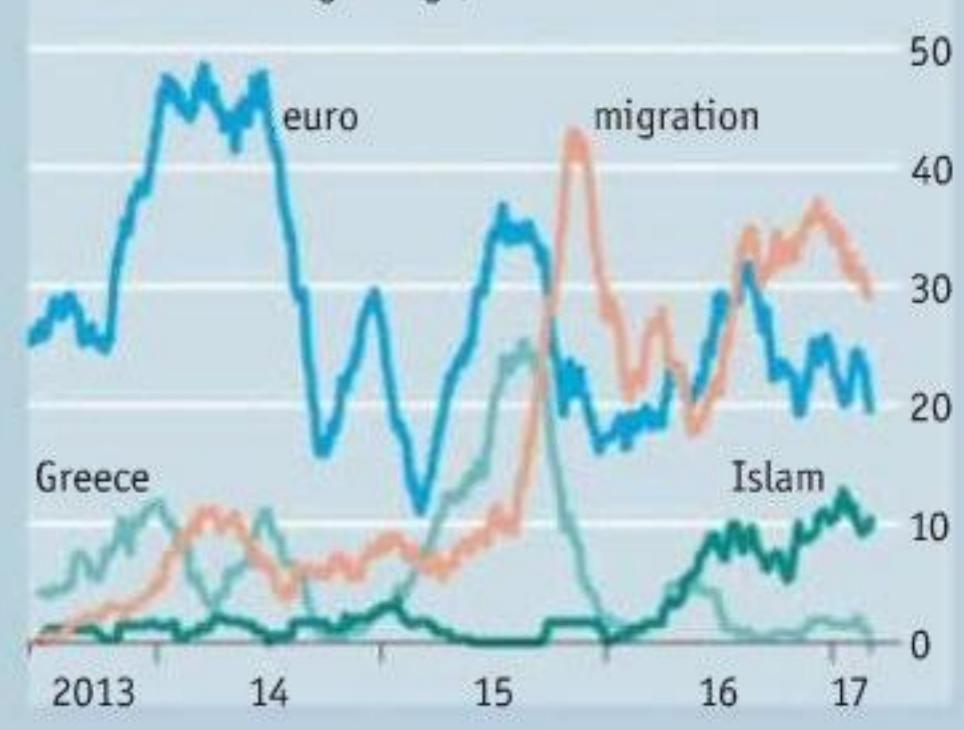
### Peaked too early?

Alternative for Germany (AfD)

Support for the party  
% polled



Share of AfD's Facebook posts that mention:  
Three-month moving average, %



# Charlemagne | Illiberalism lives

France has comforted Europhiles, but they should worry about Poland



IT IS crucial to keep Siemiatycze pretty, says Piotr Siniakowicz, the mayor, himself resplendent in bright-blue suit and silk pocket-square. The border with Belarus is a hop and a skip away, so this small town in eastern Poland may mark visitors' first encounter with the European Union. Siemiatycze brims with well-maintained nursery schools and a gleaming sports centre, thanks to EU funds lavished on the region since Poland joined in 2004. Remittances from thousands of émigrés in Belgium have poured into handsome houses, and businesses depend on those who return for holidays: Siemiatycze, beams Mr Siniakowicz, boasts 50 hair salons. Not bad for a town of 15,000.

Yet despite all this, the nationalist-conservative Law and Justice (PiS) party took 38% of the vote here in 2015. A similar score nationwide won it a majority in parliament. Since then, PiS has set about dismantling Poland's institutional checks and balances, alarming Polish liberals and startling the rest of the EU.

So amid Europe's relief at Emmanuel Macron's win in the first round of France's presidential election on April 23rd, spare a thought for places like Siemiatycze. The unashamedly pro-European Mr Macron will almost certainly defeat Marine Le Pen in their May 7th run-off. But though the threat of populist nationalism may be receding in France, further east it is a daily reality.

## East is east

The EU's most pressing clash with illiberalism among its members is not in Poland but in Hungary, whose prime minister, Viktor Orban, has been testing the club's tolerance for years. This week the European Commission took his government to task for a law that could shut down the Central European University, a prestigious institute founded in Budapest in 1991 by George Soros, an investor and philanthropist. Hungary's grim treatment of asylum-seekers, a clear violation of EU law, is also in Brussels's sights.

Mr Orban, at least, engages with Europe; this week he sparred with the European Parliament over the higher-education law. But his Polish counterpart, Jaroslaw Kaczynski, broods in Warsaw, rarely meeting other leaders. Mr Kaczynski holds no public office, but as head of PiS he micromanages the government. In March he directed the prime minister, Beata Szydlo, to block the reappointment of his nemesis Donald Tusk, Poland's prime minister until

2014, as president of the European Council. It was a humiliating failure: all 27 other leaders, including Mr Orban, backed Mr Tusk.

The episode was of a piece with Poland's growing diplomatic drift. Some in Brussels want to strip Poland of its EU voting rights (the so-called nuclear option). That may never happen, but this week governments agreed for the first time to discuss Poland's trespasses. The Poles have alienated Germany and France; an alliance of interests with Britain has been rendered moot by Brexit. Even the Czech Republic and Slovakia would rather hug Germany close than join Messrs Kaczynski and Orban, their supposed allies in the "Visegrad" group, on the naughty step.

There are halting signs that the government is reining in its diplomatic excesses, perhaps because Mr Tusk's Civic Platform party has begun troubling PiS in polls. But the domestic agenda is more aggressive than ever. Mr Kaczynski wants to subordinate judges to parliament, weaken local government, "repolonise" local media owned by German investors, reinvent the school system and possibly purge the diplomatic service. State agencies have lost expertise as senior civil servants are canned. Public media outlets, never a paragon of objectivity, have been reduced to propaganda organs. PiS's supporters say its critics employ double standards: Mr Tusk was no angel, and other countries have politicians appoint judges, too. But Poland is tumbling down independent global indices of political and press freedom.

This presents a test for the EU's claim to be more than a glorified free-trade club. Optimists say they can ride it out until voters turf PiS from office at the next election, in late 2019. But Mr Kaczynski's assaults on Poland's institutions will take years for any successor to fix. Nor will there be an immediate end to the culture wars stoked by PiS, which have seen opposition politicians denounced as traitors and religious fanatics picket a liberal newspaper to exorcise it of demonic influence. A recent paper for the Batory Foundation, a Polish think-tank, argues that Poles' strong support for EU membership may disguise a deep well of potential scepticism about its direction. Poland's government follows God, says Elzbieta, a retiree strolling on Siemiatycze's central square. So why is the EU fighting it?

One casualty of the scrap may be those juicy European subsidies. During Ms Szydlo's attempt to unseat Mr Tusk, François Hollande, France's outgoing president, snapped that Poland might have the principles, but the EU held the structural funds. You often hear such threats in Brussels and Berlin these days, notably over the refusal of Hungary and Poland to accept refugees. Talks on the EU's next budget begin next year. As Mr Siniakowicz notes, "The worsening of relations with the EU is bad for people here."

But punishment can take quieter forms. A win by Mr Macron will strengthen the EU's resolve, and may revive the Franco-German co-operation that has often powered it. Fresh energy might be devoted to further integration of the euro zone (which includes neither Hungary or Poland), and spread to areas such as defence and asylum. Already Brussels is siding with France in imposing rules that reduce eastern Europeans' wage advantages when they work in the west.

All this threatens to harden the divide between "core" and "peripheral" Europe, and turn Poland's isolation into an ever-greater handicap. Germany, and Angela Merkel in particular, will be reluctant to abandon the Poles. But Mr Macron will have less patience, and the escapades of the illiberal easterners could push others to his side of the debate. Poland will not leave the EU. But some in the EU are increasingly eager to leave Poland behind. ■



### The battleground

## In search of lost issues

### Theresa May and most of her opponents say the election is about Brexit. Is it really?

A GENERAL election, it is said, must be about issues. The 1964 election was about 13 wasted Tory years and Harold Wilson's promised "white heat of technology". Edward Heath's first 1974 election was over who ruled: the government or the unions (the answer was the unions, it turned out). In 1979 Margaret Thatcher promised to restore Britain's lost economic clout. Eighteen years on, Tony Blair touted "cool Britannia" and social modernity.

Theresa May claims that Brexit is the main issue in her snap election on June 8th. Most opposition parties seem to agree. Although Labour's leader, Jeremy Corbyn, wants to talk about almost anything else, his Brexit spokesman, Sir Keir Starmer, declared this week that the election offered "a choice of two visions of Brexit". The Liberal Democrats under Tim Farron hope to win 20-30 more seats mainly by promising the 48% who voted Remain the chance of a second referendum.

In a way the claim that Brexit should be central is a truism, for it is bound to be the biggest task for the next government. Yet in a broader sense, the idea that this election is about Brexit must be false. Last June voters decided, by a 52-48% margin, to leave the European Union. Pollsters find little sign that they have changed their mind, nor much demand for a second referendum. A survey by BritainThinks, a Labour-leaning think-tank, finds 67% of Britons actively favour or reluctantly accept Brexit.

If not Brexit, what is the election really about? Plenty of issues are emerging, with the agenda often, perhaps surprisingly, being set by Labour, not the Tories. Labour wants to focus on the economy, inequality, austerity and public-spending cuts to education and the National Health Service. This week, for instance, the party proposed large pay rises for NHS workers. One instinctive Tory response was to make security an issue, on the grounds that an anti-nuclear Mr Corbyn can never be trusted on defence. The UK Independence Party, having won the Brexit vote but not yet found a role, seems obsessed with banning the burqa and sharia law.

### The strong, silent type

Mrs May ought to be vulnerable on at least some of these issues. The economy has held up well since last June, but it is starting to slow. Public services are under extreme pressure. Education cuts are biting. The social-care system is fraying. And the NHS seems in dire straits, with waiting times for hospital beds and doctors' appointments rising. Yet the reply of the Tories to all such concerns is becoming wearily pat: that what really matters is having the strongest leader to negotiate the best Brexit deal in Brussels, protect the economy and thereby make public services more affordable.

Indeed, it sometimes seems as if Mrs May's response to any policy concern, including Brexit, has reverted to a single an-

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Our new election blog can be found at:  
[Economist.com/blogs/speakerscorner](http://Economist.com/blogs/speakerscorner)

swer: strong leadership. That is partly because, as Tim Bale, a politics professor at Queen Mary, University of London, and historian of the Tory party, puts it: "Leadership has become increasingly important in political contests, particularly in this election." But it is also because the polls show that voters trust Mrs May more than any of her rivals.

As well as applying to the Tories' traditionally strong areas of security and the economy, this is clearly the case with Brexit. One reason is that, although Mrs May has been tight-lipped, the Tory position on the EU is more united and less complicated than that of other parties.

Mrs May is pursuing a hard Brexit that prioritises control of migration and escaping the European Court of Justice, implying departure from the single market and, almost certainly, the customs union. The Lib Dems say they respect the referendum result and would negotiate a soft Brexit—before offering a second referendum on whether to take it or leave it. As for Labour, despite Sir Keir's promise to tear up Mrs May's plans and put more emphasis on economics, the party's version of Brexit remains obscure, not least because Mr Corbyn is ambivalent over migration.

Even on the public services, long an area of relative Tory weakness, Mrs May does well with voters. Labour has historically nearly always been ahead of the Tories on the NHS, which is why the party tried once again to make it a central issue this week. But a recent YouGov poll finds that, when voters are asked whom they most trust actually to run the NHS, Mrs May again outranks Mr Corbyn.

In effect, Mrs May's election pitch so far is not about policies at all. She is instead asking voters whom they would rather have running Brexit talks and everything else. And she knows that on this question ►

► she beats the Labour, Lib Dem and UKIP leaders hands down. Partly for this reason, she is likely to continue to be vague not just over her Brexit goals but over such issues as tax, national-insurance contributions and the “triple lock” that supports state pensions. It seems likely that the Tory manifesto will strip away firm commitments from the 2015 version, replacing them with abstract pledges of strength and stability.

If she wins a big enough majority with this approach, Mrs May will find it easier to

face down both soft Remainers and hard-line Brexiteers in her party. It is less clear that her negotiating position will be stronger in Brussels, where it is domestic vulnerability that often allows leaders to extract concessions from their colleagues.

At home, a shortage of meaningful election promises to which she can later be held would put Mrs May in a freer position than any recent predecessor to do whatever she chooses when it comes to policy—for good or ill. ■

cies to help the Democratic Unionists defeat republican challengers. The SDLP, a moderate nationalist party, is considering a pact with Sinn Fein, whose past links to violence once made it untouchable. The SDLP’s leader, Colum Eastwood, says he wants a non-sectarian deal between anti-Brexit parties.

None of these tactical efforts is likely to change the election’s outcome. “This is a Tory juggernaut,” says David Cowling of King’s College London. “The idea that any of these alliances can change that is pure fantasy.” Of the 330 seats won by the Conservatives in 2015, even a perfectly co-ordinated combination of Labour, Lib Dem and Green votes would have defeated the Tories in only 41 of them, he says. And with polls showing a swing of up to 9% from Labour to the Tories since 2015, some of the seats on the alliances’ target lists may no longer be marginal.

Mr Blair says that the question of Brexit should be foremost. It will undoubtedly sway some voters and swing a few seats. But Mr Cowling believes the former prime minister is just the kind of urban liberal who did not see Brexit coming and mistakenly thinks this election is a re-run of the referendum. The various alliances’ proposals are “a requiem for losers”, Mr Cowling says. “The British people have moved on.” Three middle-aged ladies out shopping in Enfield agree. “Even my kids, who voted Remain, are voting Tory,” says one. Brexit is seen as a done deal. “What even is a hard Brexit?” asks her friend. ■

### Tactical voting

## Requiem for losers?

### Despite the efforts of Remainers, organised tactical voting is unlikely to get very far

**I**N THE general election of 1997 the Conservatives in Enfield Southgate, a north London seat, suffered what became known as the Portillo moment. A young, unknown Labour candidate, Stephen Twigg, overturned the 15,000 majority of Michael Portillo, a Tory cabinet minister. Tactical voting played a big part, as Liberal Democrats supported Mr Twigg while Labour voters elsewhere backed Lib Dems.

The constituency has been back in Tory hands since 2005. With a majority of 4,750, it is not a knife-edge marginal seat. But the fact that its MP, David Burrowes, voted to leave the EU while nearly two-thirds of his constituents voted to remain means it is seen by some as ripe for another upset. Remainers want to unseat pro-Brexit MPs like Mr Burrowes in order to argue for a softer version of Brexit, or even its reversal. Tony Blair, a former Labour prime minister, said on April 24th that voters should forget party allegiances and back Remainer candidates. Will voters take his lead?

Tactical voters have consistently made up around 8% of the electorate in British elections since 1992, according to Stephen Fisher of Oxford University. Several groups have recently formed with the aim of increasing that proportion. Mr Blair is part of one of the new alliances, Open Britain, the successor organisation to the Remain campaign. Gina Miller, whose Supreme Court challenge forced the government to hold a parliamentary vote on triggering Brexit, has launched Best for Britain, which has a similar goal. Another group, the Progressive Alliance, is aiming to unite left-leaning parties to topple Tories.

The parties themselves are reluctant to make formal pacts. But they may pedal softly in seats where a like-minded candidate from another party is the clear front-runner. The Lib Dems will not field a candidate in Brighton Pavilion, to give the

Greens a clear run. The UK Independence Party will not run in some seats held by Brexiteer Tories.

In Scotland the Conservatives are courting tactical votes from those who do not want a second independence referendum, as proposed by the dominant Scottish National Party. A recent poll suggested the Scottish Tories could win as many as a dozen of the 59 seats in Scotland, where they currently have only one.

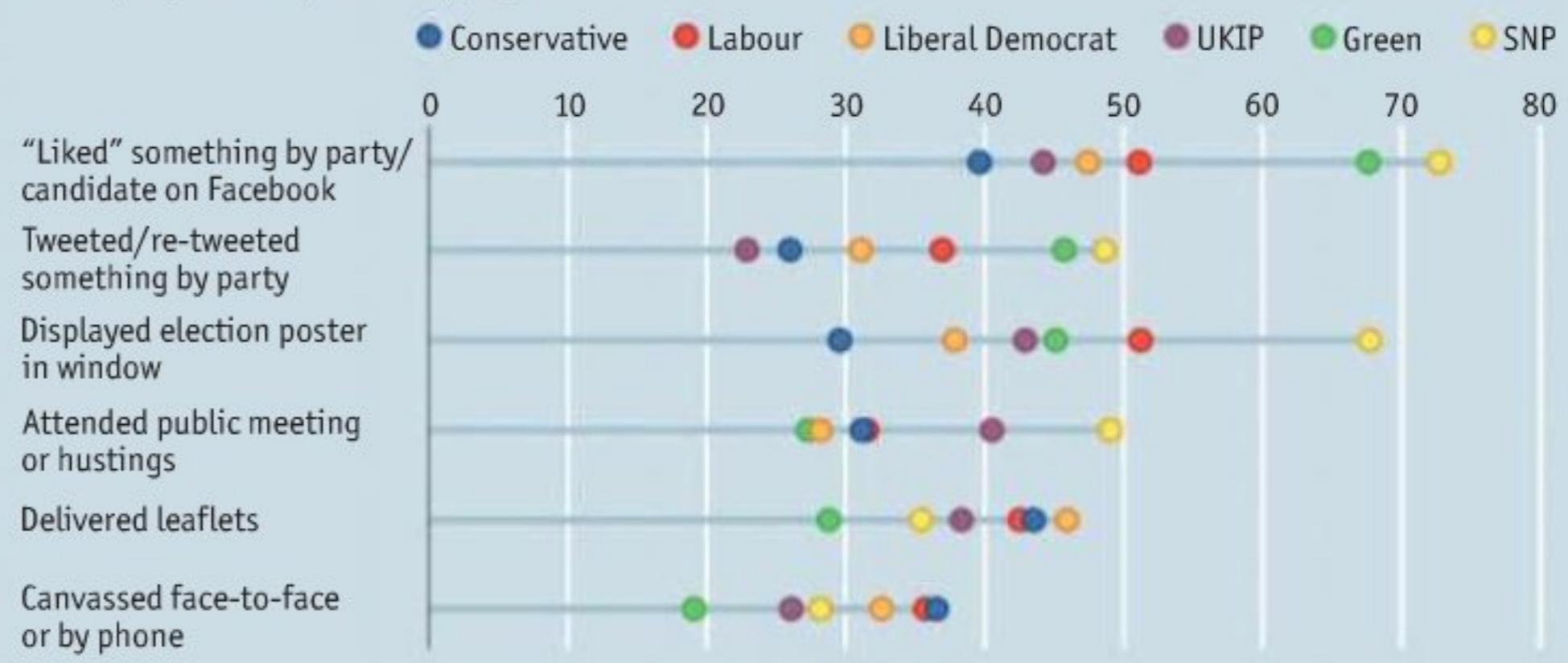
In Northern Ireland the Ulster Unionists are standing aside in three constituencies

### Activists and not-so-activists

As party leaders fight for the airwaves, armies of activists are pounding the ground. Whose are the most energetic? Research from the 2015 election suggests left-wingers are the loudest and proudest. Members of the leftist Scottish National Party and Greens are the most likely to share party material online. Lefties also like displaying posters, which Conservatives seem sheepish about. But when it comes to hard graft, the right-wingers come out in force. Tories are the most willing to canvass voters on their doorsteps and like delivering leaflets. (Greens, true to their beliefs, don’t seem to print many.) Members of the right-wing UK Independence Party are big on public rallies. The differences may be down to age: the web-savvy Greens and Scottish Nationalists are, on average, a good decade younger than the Tories and UKIPers who campaign the old-fashioned way.

#### Which of the following did you do for the party during the 2015 election campaign?

Britain, party members polled, % replying



## Bagehot | The other election

A cohort of powerful new mayors will do more to change Britain than most MPs



**I**N PREPARING to take over as Bagehot, your columnist immersed himself in Anthony Trollope's novels. He was particularly struck by a passage in "Can You Forgive Her?". As he walks for the first time through the gate reserved for members of Parliament, one of Trollope's characters is overawed by the majesty of the place. The passageways echo with the glory of centuries. The House of Commons is the "fullest fountain of advancing civilisation". There is no greater honour available to an Englishman than to put the letters "MP" after his name.

There are few people today who share that view. Yet the British are still obsessed by general elections. On May 4th millions of Britons will engage in one of the most important political innovations in recent decades, electing six powerful new regional mayors. The regions up for grabs include Britain's second- and third-biggest cities, Birmingham and Manchester. But Theresa May's decision to announce a general election the following month has fixated the nation's attention on Westminster.

This is understandable. Britain is the most centralised rich country in the world after tiny New Zealand. London is the world's most outsized capital city, sucking life out of the rest of the country. But Westminster is beginning to lose its monopoly of political talent and political innovation. The mayors' elections on May 4th may say as much about the future of British politics as the general election on June 8th.

A career in Westminster is no longer as attractive as it used to be. Salaries have stagnated compared with other top-flight jobs. And the career structure is odd. British political life is characterised by long political cycles: the Tories were in power for four terms after 1979 and Labour for three terms after 1997. It will take a long time for Labour to dig itself out of its current hole. This means that MPs on the "wrong" side might spend more than a decade twiddling their thumbs in opposition. Even those who pick the winning team can have a bumpy time: they might be lucky in their early years, taken up by a patron and dropped into a big job, only to fizzle in mid-career. Ed Balls, a shadow chancellor, lost his seat aged 48 and was reduced to competing (with some success) on "Strictly Come Dancing", a televised dance competition.

The job of running a big city-region now provides an appealing alternative to staying in Westminster, for established MPs, or

starting off there, for outsiders. Andy Burnham, a long-standing Manchester MP, is a safe bet to become Labour mayor of the city. Andy Street, a former head of the John Lewis retail chain, is hoping to create an upset as the Tories' candidate for mayor of the West Midlands (which includes several Black Country towns as well as Birmingham). Haltingly, Britain is becoming more like America, with several different centres of power and several greasy poles to the top.

Britain has previously gone through the motions of handing power to the provinces only for central government to grab it back. Most dramatically Margaret Thatcher presided over a decade of centralisation after the decentralisation of the 1970s. There are some worrying auguries. The biggest champion of elected mayors, George Osborne, is retiring from British politics. For a while Mrs May, no fan of Mr Osborne, banned officials from even mentioning the "Northern Powerhouse" that he had talked up. The new mayors will control only about 5% of their local tax base, compared with 50% in New York, say.

There are nevertheless reasons for thinking that it will be different this time. The new mayors will run entire regions rather than just local authorities. This means that they are more than glorified city councillors. They will be directly elected, making them accountable to voters and giving them the soft power that comes from having far larger constituencies than any MP—including the prime minister, who is chosen only by his or her party. London's mayor was elected with more than a million votes.

The experience of London has been positive. The capital's mayors have expanded their powers while remaining broadly popular. The proportion of Londoners voting in mayoral elections has increased from 34% in 2000, when the first one was held, to 46% in 2016. Far from ending your Westminster career, being mayor of London can boost it. Boris Johnson is now foreign secretary. Sadiq Khan, his successor, is burnishing his chances of becoming Labour leader by running one of the world's great cities rather than marching to disaster next to Jeremy Corbyn. The new crop of mayors is part of a global movement which boasts such figures as Michael Bloomberg, a former mayor of New York, and Park Won-soon, the mayor of Seoul. There is even talk of establishing a worldwide parliament of mayors.

### The centre cannot hold

This is all to the good. Britain is the prisoner of a cult of centralised government that was created in the age of mass production but is increasingly irrelevant in the age of tailoring and customisation. This cult is killing innovation. A striking proportion of the most interesting policy experiments, in everything from giving schools more freedom to using smartphones to co-ordinate ride-sharing, have come from American mayors. Centralisation is also alienating people from their government.

Mr Burnham expresses some regrets about leaving the House of Commons. Life there can be thrilling. But he also waxes lyrical about the prospect of running Manchester if he is elected: while Parliament is overwhelmed by Brexit he will be able to try out new ideas (for example, about developing "property banks" to end rough sleeping) and also reconnect politics with the people. The Brexit vote was an expression of anger about a political establishment that had lost touch. Britain should respond by cutting the House of Commons down to size and handing power back to the regions. A country needs more than one fountain of advancing civilisation. ■



End-of-life care

## Mending mortality

TOKYO

**Doctors are slowly realising that there is a better way to care for the dying**

A STROLL from Todoroki station, at the kink of a path lined with cherry trees, lies a small wooden temple. A baby Buddha sits on the sill. The residents of the Tokyo suburb ask the infant for *pin pin korori*. It is a wish for two things. The first is a long, spry life. The second is a quick and painless death.

Just part of this wish is likely to be granted. The paradox of modern medicine is that people are living longer, and yet doing so with more disease. Death is rarely either quick or painless. Often it is traumatic. As the end nears, people tend to have goals that matter more than eking out every last second. But too few are asked what matters most to them. In the rich world most people die in a hospital or nursing home, often after pointless, aggressive treatment. Many die alone, confused and in pain.

The distress is largely unnecessary. Fortunately medicine is beginning to take a more thoughtful approach to people with terminal illness. Reformers are overhauling how end-of-life care is delivered and improving communication between doctors and patients. The changes mean that patients will experience less pain and suffering. And they will have more control over their lives, right up until the end.

Many aspects of death changed during the 20th century. One was when it hap-

pens. The average lifespan increased by more over the past four generations than over the previous 8,000. In 1900 global life expectancy at birth was about 32 years, little more than at the dawn of agriculture. It is now 71.8 years. In large part that is a result of lower infant and child mortality; a century ago about a third of children died before their fifth birthday. But it is also because adults live longer. Today a 50-year-old Englishman can expect to live for another 33 years, 13 more than in 1900.

The chance of an adult dying was once largely unrelated to age; infections were indiscriminate. Michel de Montaigne, a French essayist who died in 1592, wrote that death in old age was "rare, singular and extraordinary". Now, says Katherine Sleeman of King's College London, death mostly comes by stealth. She estimates that in Britain only a fifth of deaths are sudden, for example in a car crash. Another fifth follow a swift decline, as with some cancer patients, who stay fairly active until their final few weeks. But three-fifths come after years of relapse and recovery. They involve a "slow, progressive deterioration of function", Dr Sleeman says.

People in rich countries can spend eight to ten years seriously ill at the end of life. Chronic illness is rising in poorer countries, too. In 2015 it accounted for more than

three-quarters of premature mortality in China, according to the Global Burden of Disease, a survey. In 1990 the share was just a half. The World Health Organisation (WHO) predicts that rates of cancer and heart disease in Sub-Saharan Africa will more than double by 2030.

A side-effect of progress, however, has been what Atul Gawande, a surgeon and author, calls "the experiment of making mortality a medical experience". A century ago most deaths were at home. Now, according to a survey of 45 rich countries by the WHO, fewer than a third are. Death also used to be egalitarian, says Haider Warraich of Duke University Medical Centre and the author of "Modern Death". Income did not much affect when or where people died. Today poor people in rich countries are more likely than their better-off compatriots to die in hospital.

### No dying fall

Many deaths are preceded by a surge of treatment, often pointless. A survey of doctors in Japan found that 90% expected that patients with tubes inserted into their windpipes would never recover. Yet a fifth of patients who die in the country's hospitals have been intubated. An eighth of Americans with terminal cancer receive chemotherapy in their final fortnight, de-

► spite it offering no benefit at such a late stage. Nearly a third of elderly Americans undergo surgery during their final year; 8% do so in their last week.

The way health care is funded encourages over-treatment. Hospitals are paid for doing things to people, not for preventing pain. And not only patients, but those who love them, suffer. Many people who may need intubation or artificial ventilation are not in a condition to indicate consent. An American study found that in about half of cases involving decisions about the withdrawal of treatment there is conflict between family and doctors. A third of relatives of patients in intensive-care units (ICUs) report symptoms of post-traumatic stress disorder.

Many people will want to "rage, rage against the dying of the light", as the poet Dylan Thomas put it. Others will have particular events they want to attend: a grandchild's graduation, say. But the medical crescendo often occurs by default, not as a result of personal choice based on a clearly understood prognosis.

The huge gap between what people want from end-of-life care and what they are likely to get is visible in a survey conducted by *The Economist* in partnership with the Kaiser Family Foundation, an American health-care think-tank. Representative samples of people in four large countries with differing demographics, religious traditions and levels of development (America, Brazil, Italy and Japan) were asked a set of questions about dying and end-of-life care. Most had lost close friends or family in the previous five years.

In all four countries the majority of

people said they hoped to die at home (see chart 1). But fewer said they expected to do so—and even fewer said that their deceased loved ones had. Apart from in Brazil, only small shares said that extending life as long as possible was more important than dying without pain, discomfort and stress (see next article). Other research suggests that wish, too, is increasingly unlikely to be granted. One study found that between 1998 and 2010 the shares of Americans experiencing confusion, depression and pain in their final year all increased.

What healthy people think they will want when they are mortally ill may well change when that moment comes. "Life becomes mighty precious when there is not a lot left," says Diane Meier, a geriatrician at Mount Sinai Hospital in New York. It is common, for example, to hate the idea of a feeding tube but grudgingly accept one when the alternative is death.

### Words I never thought to speak

Yet the gap between what people hope for and what they get cannot be explained away so easily. Dying people's wishes are often unknown or ignored. Among those involved in making decisions about a loved one's end-of-life care, more than a third in Italy, Japan and Brazil said they did not know what their friend or family member wanted. Either they never asked, or only thought to do so too late. A Japanese woman who cared for her mother, an Alzheimer's patient, says she regrets that "once the door closed there was no way of knowing what she wanted."

And sometimes, even when relatives know a loved one's wishes, they cannot

make sure they are granted. Between 12% and 24% of those who had lost someone close to them said that the patient's wishes had not been carried out. Between 25% and 38% said that friends or family had experienced needless pain. Across the whole survey most people rated the quality of end-of-life care as "fair" or "poor".

End-of-life care can resemble a "conspiracy of silence", says Robert Fine of Baylor Scott & White Health, a Texan health-care provider. In our survey majorities in all four countries said that death is a subject which is generally avoided. An obvious reason is that death is feared. "In every calm and reasonable person there is a hidden second person scared witless about death," says the narrator of a Philip Roth novel. One school of psychology—"terror management theory"—holds that fear of death is the source of everything distinctively human, from phobias to religion.

But death was once what Philippe Ariès, a French historian, called a "public ceremony", where friends and family gathered. Now, changing family structures mean the elderly and dying are more isolated from younger people, who are therefore less likely to witness death up close, or to find a suitable moment to talk about its approach. Just 10% of Europeans aged over 80 live with their families; half live alone. By 2020, 40% of Americans are expected to die alone in nursing homes.

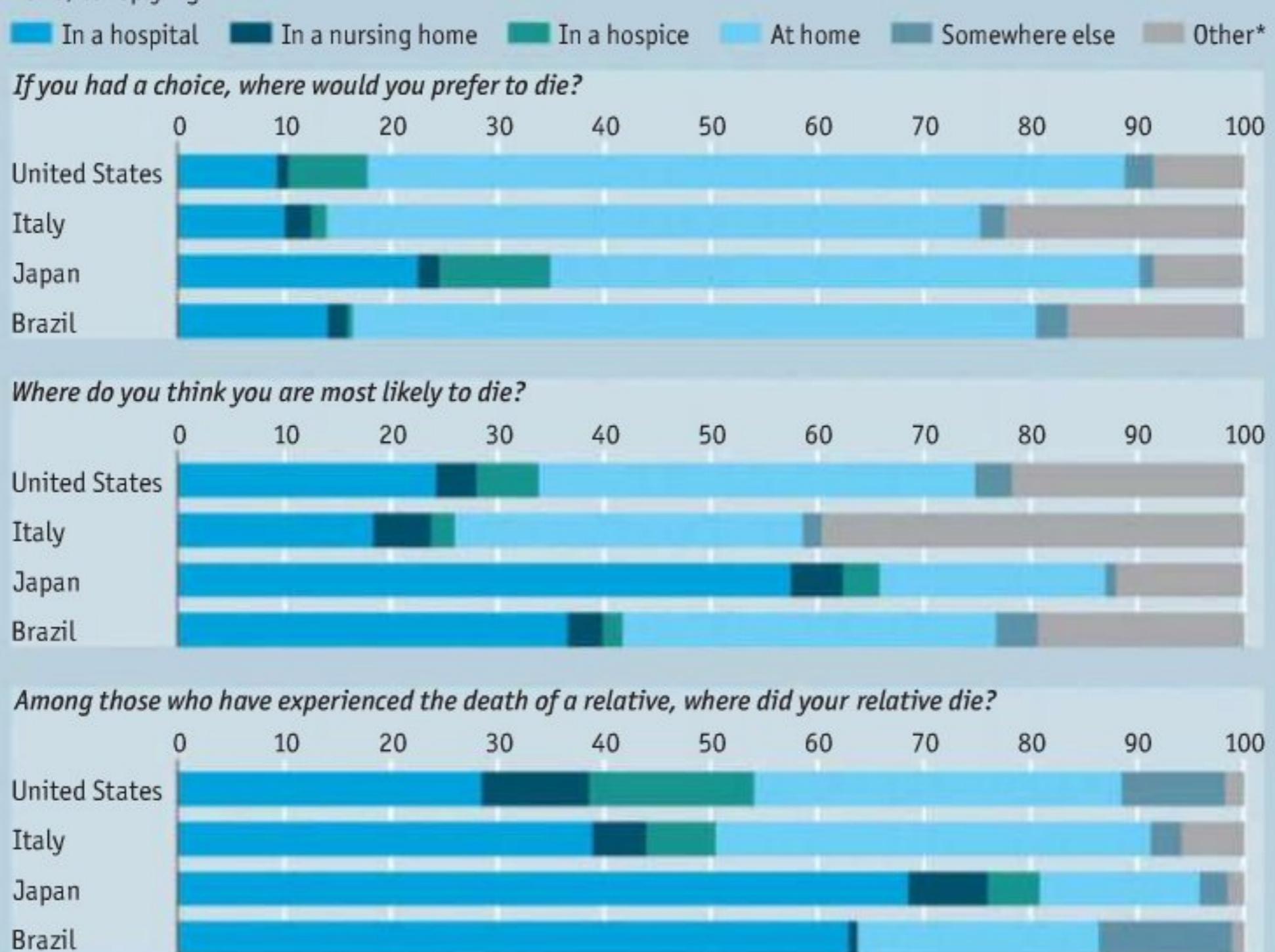
In Japan, where survey respondents were most likely to say that not being a financial burden was a primary consideration, daughters are abandoning their traditional caring role. That has given rise to institutions such as the House of Hope, a hospice in east Tokyo that looks after people who are too poor for hospital care and too alone to die at home. A decade ago Hisako Yanagida, 88, lost her husband, with whom she had sung in a traditional Japanese troupe. Now her sight is going but she can still make out the faded pictures of the two of them on her wall. She tries not to think about death: "There is no point."

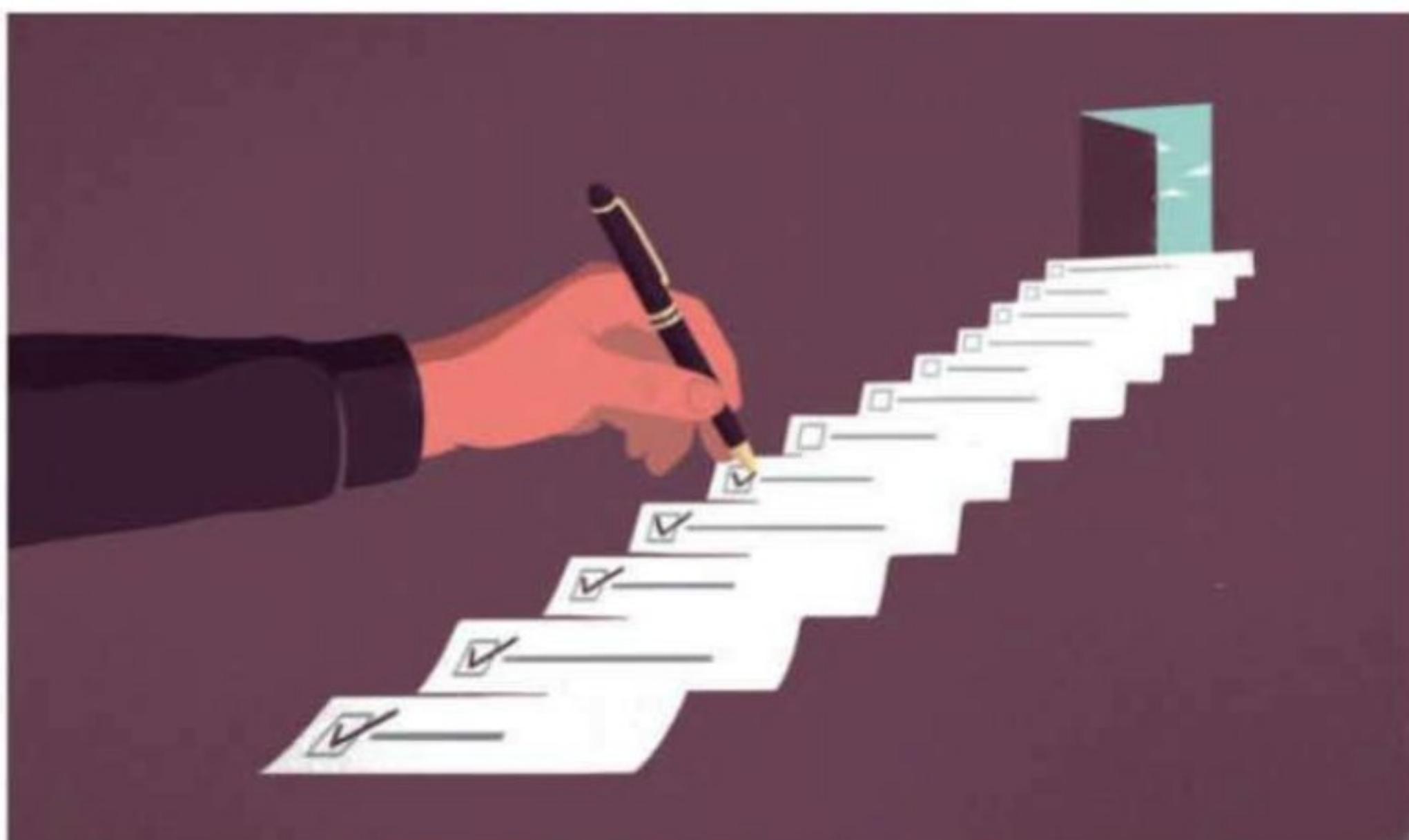
But the chief responsibility for the failures of end-of-life care lies with medicine. The relationship between doctors and seriously ill patients is one of "mutual suspicion", says Naoki Ikegami of St Luke's International University, in Tokyo. A decade ago it was common for Japanese doctors to withhold cancer diagnoses. Today they are more honest, but still insensitive. One Japanese woman recalls her oncologist saying that if her chemotherapy made her bald, it would not be a big deal.

And doctors commonly overestimate how long the terminally ill will live, making it more likely that they will duck frank conversations, or recommend drastic treatments that have little chance of success. One international review of prognoses of patients who die within two months suggests that seriously ill people live on aver-

### Homesick

2016, % replying





age little more than half as long as their doctors suggested they would. Another study found that, for patients who died within four weeks of receiving a prognosis, doctors had predicted the date to within a week in just a quarter of cases. Mostly, they had erred on the side of optimism.

Doctors often neglect palliative care, which involves giving opioids for pain, treating breathlessness and counselling patients. (The name comes from the Latin *palliare*, as in “to cloak” pain.) A typical question is “What is important to you now?” It does not seek to cure. As a result, “it is seen as what you do when you give up on a patient,” sighs Dr Ikegami. It receives just 0.2% of the funding for cancer research in Britain and 1% in America.

### Breaking the taboo

What studies there have been show the cost of this neglect. Since 2009 several randomised controlled trials have looked at what happens when patients with advanced cancer are given palliative care alongside standard treatment, such as chemotherapy. In each, the group receiving palliative care had lower rates of depression; and in all but one study, patients in that group were less likely to report pain.

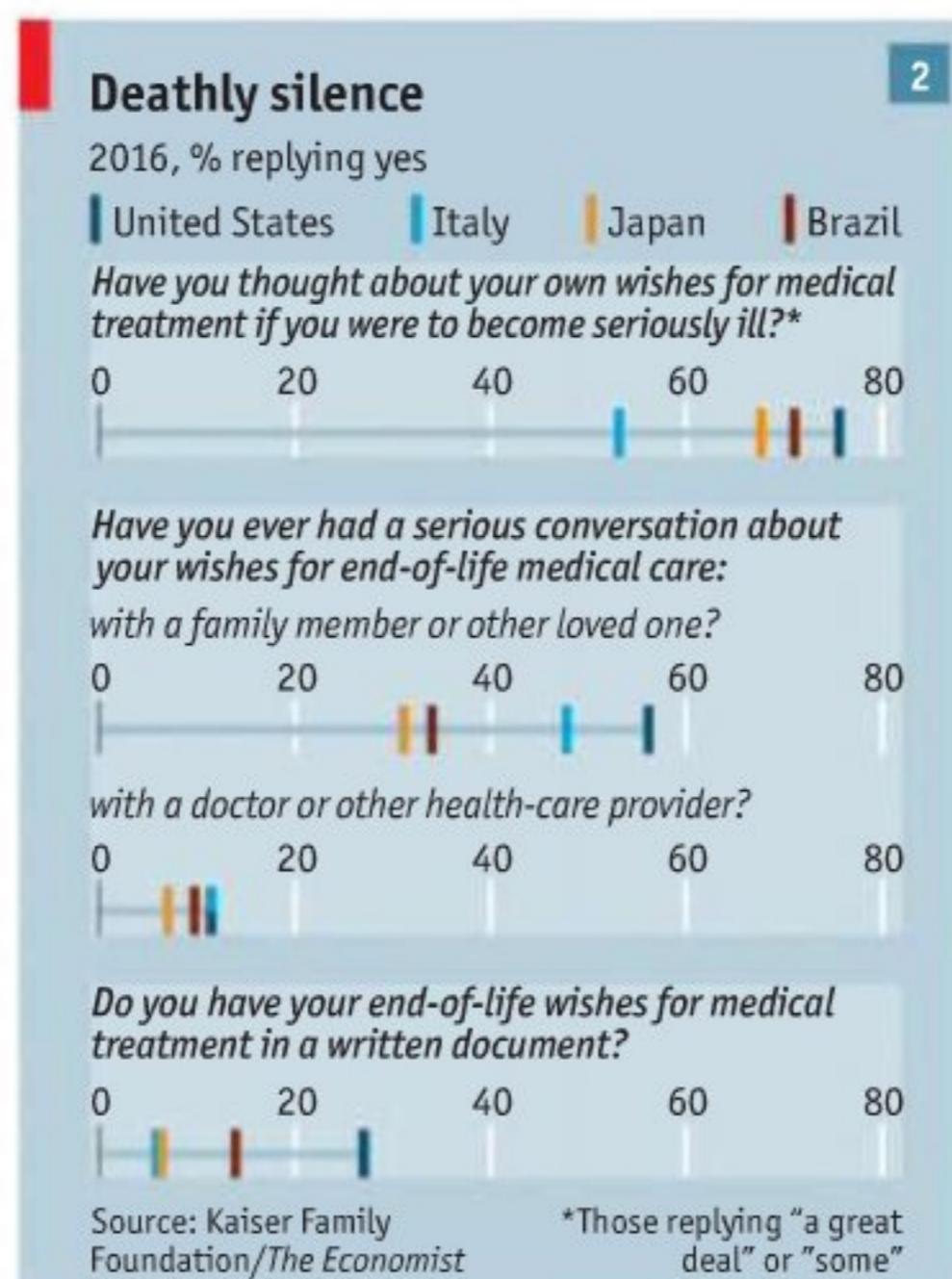
Remarkably, in three trials the patients receiving palliative care lived longer, even though the quantity of conventional treatment they opted to receive was lower. (The other two trials showed no difference.) In one study their median survival was a year, compared with nine months for the group receiving only ordinary treatment. A review in 2016 of cases where palliative care was used instead of standard treatment found that even when it was the only care given, it did not seem to shorten life.

The reason for the results is unclear, and the research has mostly been on cancer patients. Those receiving palliative care spend less time in hospital, so may contract fewer infections. But some researchers think that the explanation is psychological:

that through counselling they reduce depression, which is linked to earlier death. “A conversation can be more powerful than technology,” says Dr Sleeman.

At St Luke’s hospital in Tokyo, Yuki Asano supports the argument. Ever the executive, the 76-year-old slides his business card across the tray of his bed. The former boss of a brewery company (and 7th *dan* in *kendo*, a Japanese martial art) is riddled with cancer. He stopped chemotherapy last year. The care at one of Japan’s few dedicated palliative centres has helped him feel ready for death. “I achieved everything I wanted in life,” he says. “Now I am waiting for the awards ceremony.”

But few of the 56m or so people who die each year receive good end-of-life care. A report published in 2015 by the Economist Intelligence Unit, our sister company, assessed the “quality of death” in 80 countries. Only Austria and America, the EIU found, had the capacity to ensure that at least half the patients for whom palliative care was suitable received it.



Many countries promise public access to palliative care but do not pay for it. Spain has passed two laws to ensure palliative care is available but in reality, just a quarter of patients can get it. Though the hospice movement, dedicated to providing high-quality care to dying patients, started in Britain in the 1960s, only about a fifth of the country’s hospitals provide access to palliative care every day of the week.

The way health-care providers are funded often sidelines palliative care. In Japan hospital doctors receive no payment from insurers for talking to patients about end-of-life options. In America hospitals suck up a big share of spending, even though the seriously ill are often better treated elsewhere. Nine in ten emergency visits are because of escalations in symptoms, such as breathlessness; most of these patients could be treated better, faster and more cheaply at home. Medicare, the public-health scheme for the elderly, does not generally cover spells in nursing homes.

Slowly, however, countries are reforming. In 2014 the WHO recommended integrating palliative care with health systems. Some developing countries, including Ecuador, Mongolia and Sri Lanka, are beginning to do so. In America some insurers are realising that what would be better for patients would be better for them, too. In 2015 Medicare announced that it would pay for conversations about end-of-life care between doctors and patients.

“Talking almost always helps and yet we don’t talk,” says Susan Block of Harvard Medical School. To improve end-of-life care, she says, “every doctor needs to be an expert in communicating.” American oncologists, for example, need to have an average of 35 conversations per month about end-of-life care. In a study of patients with congestive heart failure, doctors rarely followed up after a patient expressed a fear of death. Nearly three-quarters of nephrologists were never taught how to tell patients they are dying. A common cause of burnout among doctors is an inability to talk with patients about death.

To fill this gap Ariadne Labs, a research group founded by Dr Gawande, has launched the “Serious Illness Conversation Guide”. It is a straightforward checklist of the topics doctors should be sure to talk about with their terminally ill patients. They should start by asking what patients understand about their conditions, check how much each wants to know, offer an honest prognosis, and ask about their goals and the trade-offs each is willing to make.

Early results from a trial of the guide at the Dana-Farber Cancer Institute in Boston suggest it led to doctors having more and earlier conversations. Patients reported less anxiety. Tension between doctors and families was eased. The scheme is being expanded; in February Baylor Scott & White became the first big provider to use it for all ►

its staff. England's National Health Service is trying it out in Clatterbridge, near Liverpool. Japan is retraining its oncologists in how to talk about death.

In America advance directives and living wills, documents that spell out the treatment people want if they become incapacitated, have become more popular over the past few decades. In our survey 51% of Americans over 65 had written down their end-of-life wishes. Yet such documents cannot cover all the possibilities that may arise as the end nears. Doctors worry that patients may have changed their minds. In one study just 43% of people who had written living wills wanted the same treatment course two years later.

Living wills are rare outside America (see chart 2). But there is a broader cultural shift. More than 4,400 "death cafés", where people eat cake and talk about mortality, have sprung up. They discuss books such as "When Breath Becomes Air", by the late Paul Kalanithi, a neurosurgeon, and the documentary "Extremis", which is set in an intensive-care unit and offers a more honest account of hospital care than in popular TV shows. In Japan "ending notebooks" are now available, to record messages and instructions for relatives.

### Here at the end of all things

In 2010 Ellen Goodman, an American author, founded the Conversation Project, which started with people gathering to share stories of the "good deaths" and "bad deaths" experienced by their loved ones. It publishes guides like those from Ariadne Labs, but for use by people without medical training. Laurie Kay, an 80-something from Boston, recently told her husband and daughter that what mattered to her was dignity. She wants to look good: her nails should be painted. Her views may change, she says, but "having opened the conversation now we can reopen it later."

Experiences of death are being shared online. Dying Matters is a popular forum. In 2013 Scott Simon, a journalist, tweeted from his mother's bedside as she died ("Heart rate dropping. Heart dropping", read one tweet). Kate Granger, an English geriatrician who died of cancer last year, planned to tweet during her final days using the tag #deathbedlive. She did not quite manage it, but a tweet she prepared was sent posthumously: "TY all for being part of my life. Pls look after my amazing hubby @PointonChris (Ps - Don't let him spend all his money on a Range Rover) xx".

Bringing death "within the pale of conversation" is needed to overhaul end-of-life care, argues Dr Warraich. Yet the "death positive" movement is not an excuse for medicine to remain stuck in its ways. Death will remain terrifying for many people. Unless the way health care is organised changes, most people will continue to suffer unnecessarily at the end. ■

### End-of-life care

## Death wishes

SÃO PAULO

### Living as long as possible is not people's main concern

AFTER his stroke Maria's father could no longer speak. But with his daughter reciting the words next to him, he could still pray. His final days brought a lot of pain but Maria believes that at the end, as he clasped her hand, he was at peace. When she thinks about her own priorities for her death, "being at peace spiritually" is top of the list.

It is a sentiment shared by fellow Brazilians, according to a survey conducted jointly by *The Economist* and the Kaiser Family Foundation, an American non-profit focused on health. Fully 88% thought that being at peace spiritually at the end was "extremely" or "very important" (see chart). In America and Japan not burdening families with the costs of care was the highest-ranked priority, cited as extremely important by 54% and 59% respectively. (The Japanese may be worrying about the cost of funerals, which can easily reach ¥3m, or \$27,000.) A third of Italians emphasised having loved ones around them. Brazil was the only country where more people said they would put extending life ahead of reducing pain and stress than the other way around.

Religion accounts for some of these differences. There are more Catholics in Brazil than any other country. Many have presumably been influenced by their church's long insistence that life should be extended whenever possible, even by heroic measures. In court battles in America and elsewhere, when families have sought to have feeding tubes removed from relatives who are in a persistent vegetative state, the church has often been opposed (though it now condemns only active measures to hasten death, rather than patients' decisions to reject treatment, or death that is hastened by pain relief). Eighty-three per cent of Brazilians said that religion played a "major role" in their thinking about end-of-life

care, against 50% of people in America and 46% in Italy.

In Japan, just 13% said that religion played a major role in their thinking. In other surveys most Japanese report that they are atheists or have no formal religious affiliation. But the idea of "spiritual peace" is nonetheless important in Japan—it is ranked second for what matters close to death.

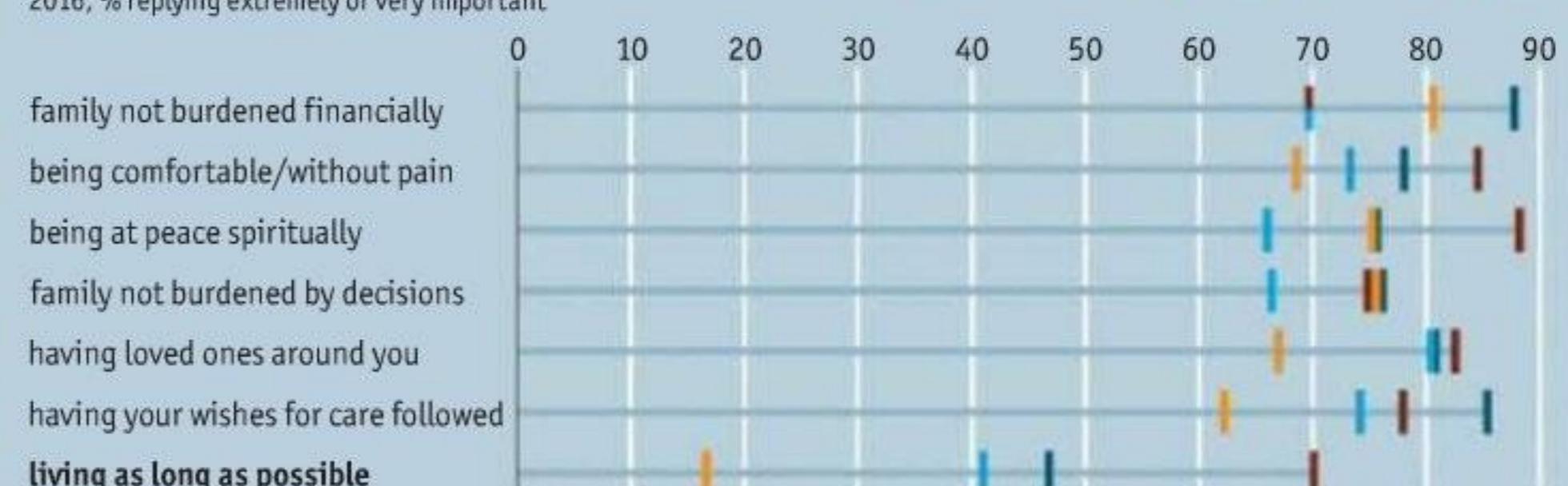
The relative weights people place on extending life, and easing death, are also shaped by the quality of care available, and perceptions of what they will personally receive. Ninety per cent of Brazilians rated their health-care system as "fair/poor", compared with 54-61% in the other three countries. Though their constitution guarantees comprehensive, free health care for all, it falls far short of that ideal. Even before a crippling recession that has already lasted three years, care was often precarious. More recently, cash-strapped hospitals in big cities, including Rio de Janeiro, have seen patients die in corridors.

In America, Italy and Japan people with degrees were most likely to say that too much emphasis is placed on extending life towards its end, as opposed to alleviating suffering. Better-educated people were also more likely to say patients and families should play a bigger role in decisions about end-of-life care.

Almost half of black Americans, and nearly as many Latinos, said that health care placed too little emphasis on preventing death, compared with just 28% of white Americans. Other research has found that minorities are more likely to die in hospital than white Americans. Richer Americans are more likely to die at home or in a hospice than those on lower incomes. All of which suggests a bitter irony: those who most need hospital care may receive it only when it is too late.

### Last orders

*Thinking about your own death, how important is:*  
2016, % replying extremely or very important



Source: Kaiser Family Foundation/The Economist



**The office of tomorrow**

## Sofas and surveillance

SAN FRANCISCO

**Tech firms are on a building spree. Their offices provide clues to the future of work**

FROM the 62nd floor of Salesforce Tower, 920 feet above the ground, San Francisco's monuments look piddling. The Bay Bridge, Coit Tower and Palace of Fine Arts are dwarfed by the steel-and-glass headquarters that will house the software company when it is completed later this year. Subtle it is not. Salesforce plans to put on a light show every night; its new building will be visible from up to 30 miles away.

It is not the only technology company erecting a shrine to itself. Apple's employees have just begun moving into their new headquarters in Cupertino, some 70 kilometres away, which was conceived by the firm's late founder, Steve Jobs. The four-storey, circular building looks like the dial of an iPod (or a doughnut) and is the same size as the Pentagon. At a price tag of around \$5bn, it will be the most expensive corporate headquarters ever constructed. Apple applied all its product perfectionism to it: the guidelines for the wood used inside it reportedly ran to 30 pages.

Throughout San Francisco and Silicon Valley, cash-rich technology firms have built or are erecting bold, futuristic headquarters that convey their brands to employees and customers. Another example is Uber, a ride-hailing company, which is hoping to recast its reputation for secrecy and rugged competitiveness by designing an entirely see-through head office. It is expected to have some interior areas, as well

as a park, that will be open to the public.

The exteriors of the new buildings will attract most attention, but it is their interiors that should be watched more closely. The very newest buildings, such as Apple's, are mostly still under wraps, but they are expected to be highly innovative in their internal layout. Some of that is because of fierce competition within the tech industry for the best engineering and other talent: firms are particularly keen to come up with attractive, productive environments. But these new office spaces will also signal how work is likely to evolve. Technology companies have already changed the way people behave in offices beyond their own industry, as a result of e-mail, online search and collaboration tools such as Slack. They are doing the same for physical spaces.

The big idea championed by the industry is the concept of working in various spaces around an office rather than at a fixed workstation. Other industries have experimented with "activity-based working", but tech is ahead. Employees may still have an assigned desk but they are not expected to be there, and they routinely go to different places to do various tasks. There are "libraries" where they can work quietly, as well as coffee shops, cafés and outdoor spaces for meetings and phone calls. The top two floors of Salesforce Tower, for example, will be used not as corner offices

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for executives but as an airy lounge for employees, where they can work communally and gaze out at the views over a latte.

A fluid working environment is meant to allow for more chance encounters, which could spur new ideas and spark unexpected collaborations. Facebook's central building is the world's largest open-plan office, designed to encourage employees to bump into one another in its common spaces and in a nine-acre rooftop garden. Communal areas are meant to be casual and alluring. John Schoettler, head of real estate at Amazon, says he aims to make them into "living-room-like spaces". For offices to feel like home, it helps to hire a designer with expertise in residential real-estate, says Elizabeth Pinkham of Salesforce. In common areas at the firm's offices, there are TVs, couches and bookshelves. Framed photos of a few employees add to the effect.

### The new "working at home"

For those who scoff at the creative benefits of being surrounded by pictures of Colin from accounts, there are more tangible payoffs. The lack of fixed workstations shrinks the amount of expensive real estate given to employees without leaving them feeling too squeezed. Tech firms devote around 14 square metres to each employee, around a quarter less than other industries, according to Randy Howder at Gensler, a design firm. Young workers are thought to be more productive in these varied environments, which are reminiscent of the way people study and live at university. One drawback, however, is that finding colleagues can be difficult. Employees need to locate each other through text messages and messaging apps.

Collaborative spaces can also expose generational tensions, says Louise Moz-

ingo, an architecture professor at the University of California, Berkeley. Tech firms' elderly employees (otherwise known as the over-40s) can struggle to adjust to moving around during the day and to the frequent disruptions that come from large, open-plan offices. Many of Facebook's employees do not like their office because it is noisy, and some Apple employees are hesitant to move into their new building for the same reason. Plenty also balk at the massive distances they will need to walk.

That may not be the only thing to cause employees concern. Tech firms are increasingly keen to use their own products in their headquarters. Jensen Huang, the chief executive of Nvidia, a chipmaking firm whose graphics processing units are widely used in artificial-intelligence programmes, says his firm plans to introduce facial recognition for entry into its new headquarters, due to open later this year.

Nvidia will also install cameras to recognise what food people are taking from the cafeteria and charge them accordingly, eliminating the need for a queue and cashier. A self-driving shuttle will eventually zip between its various buildings. And Nvidia's own AI will monitor when employees arrive and leave, with the ostensible aim of adjusting the building's heating and cooling systems.

The data that firms can collect on their employees' whereabouts and activities are bound to become ever more detailed. Another way of keeping tabs on people is through company-issued mobile phones. "Every employee has their own tracking device," observes Mr Howder at Gensler. "Technology firms will sooner or later take advantage of that."

Few of them are willing to share details of their future plans because of concerns about employees' privacy. However, some

of their contractors signal what sort of innovations may be in the pipeline. Office-furniture makers, for example, are experimenting with putting sensors in desks and chairs, so that firms will be better able to monitor when workers are there.

Such data could be anonymised to allay privacy concerns. They could also save electricity or help people find an empty room to hold a meeting. But it is not hard to imagine how such data could create a culture of surveillance, where employees feel constantly monitored. "Technology firms could be an indicator of what will happen with privacy in offices more generally," says David Benjamin of Autodesk, a company that sells software to architects, among other clients.

#### Silent discos and Bedouin tents

A less controversial trend is for unusual office interiors. These can distinguish companies in the minds of their employees, act as a recruiting tool and also give staff a reason to come into the office rather than work from home. For companies that do not ship a physical product, such offices can serve as important daily reminders of culture and purpose.

Last year LinkedIn, a professional social network, for example, opened a new building in San Francisco that is full of space set aside for networking, and that includes a "silent disco", where people can dance to music with headphones on. Instead of offering generic meeting rooms with portentous names, Airbnb, a tech firm that lets people rent out their homes, has designed each of its meeting spaces after one of its rental listings, such as a Bedouin tent from Morocco. It also has a meeting room (pictured on previous page) that is an exact replica of the rental apartment where the founders lived when they came up with the idea for Airbnb. Every detail, including the statue of Jesus in red velvet on top of the fireplace, is accurate, says Joe Gebbia, one of the company's founders.

Nvidia is obsessed with triangles, the basic element of computer graphics used to create lifelike scenes in video games and movies. Its new headquarters, which cost \$370m, is shaped like one (see picture), and its interior is full of them. Everything, from the skylights to the benches in the lobby, is triangular. "At this point I'm kind of over the triangle shape, because we took that theme and beat it to death," admits John O'Brien, the company's head of real estate, who pointedly vetoed a colleague's recent suggestion to offer triangle-shaped water bottles in the cafeteria.

Such workspaces remind staff that they are choosing not just an employer but a way of life. In the tech bubble of the late 1990s companies disrupted the workplace by offering foosball tables, nap pods, blow-up castles and free lunches. Now the emphasis is on amenities that help em-

ployees save time. Larger firms, including Facebook, Alphabet and LinkedIn, offer their staff something akin to the services used by the extremely wealthy, helping employees to find places to live, adopt pets and the like. Some large tech groups offer on-site health care.

The effect of all this is that the typical office at a technology firm is becoming a prosperous, self-contained village. Employees have fewer reasons than ever to leave. With the spare cash they can throw at their employees, tech giants have vastly raised the bar for other kinds of company, which also want to recruit clever engineers and techies for their projects.

Other industries would be wise to take time to watch how tech firms are structuring their work environments. There is certainly a chance of a backlash against those that use their products to watch employees too closely. Workers may like free lunches and other perks associated with the tech business, but probably not enough to surrender their privacy entirely. ■

#### Corporate tax reform in America

## Cutting the tangle

NEW YORK

**Steven Mnuchin makes a start on tax reform but there is more to do**

OF THE things that investors and bosses have come to like about Donald Trump, the most important is his promise to redraw America's knackered corporate-tax system. On April 26th Steven Mnuchin, the treasury secretary, laid out a guide for reform. After weeks of anticipation, Wall Street will be relieved. The thrust of the plan is just what business folk want—a simpler system, with lower bills. But whether it helps the wider economy and ordinary citizens remains to be seen. And Mr Trump will have to push the reforms through a bitterly divided Congress.

The actual tax rate America's businesses pay in aggregate, of 20-25%, is much lower than the high, headline federal tax rate, of 35%. But in the home of free enterprise the taxman's treatment of business is a muddle. There are three distortions. First, the treatment of overseas profits. Unlike most countries America taxes them when they are remitted back home, at high rates. The result is that American firms refuse to repatriate all their earnings, and collectively stash some \$1trn of cash abroad.

The second distortion is that loopholes encourage firms to change their legal status from ordinary "C-Corporations" into more exotic legal forms, including S-Corps (private firms with under 100 shareholders), partnerships, real-estate investment trusts ►



Three sides to every storey



► and sole-proprietorships. Usually these hybrid forms do not pay tax at the corporate level. Instead the recipients of their profits—individuals or other legal entities—pay income tax. The number of these “distorporations” has become astonishingly large. They make up 31m of America’s 33m businesses and range from mom-and-pop firms to plutocrats’ hedge funds. They account for half of all profits, up from a fifth in 1980.

Third, as in many countries, the tax code encourages firms to borrow rather than raise equity, as interest is tax-deductible. That led some to pile on debt before the financial crisis, and means some industries, including private equity and property, are addicted to borrowing. This month the IMF warned about corporate debt.

Mr Mnuchin’s tax plan touches on two of the three problems. America will move to a “territorial” tax system, in which profits are taxed by the country they are earned in. It will also allow firms to bring home their stash of profits at a rate well below the statutory 35%. Most of the profits hoarded abroad are owned by technology and pharmaceutical giants that are unlikely to start an investment binge at home. Still, the plan will raise some revenue and make running global firms simpler.

Next, the treasury secretary wants to cut the rate of tax paid by all firms to 15%—regardless of their legal status and size. This will cut tax bills, boosting overall corporate profits by, perhaps, \$230bn, or 10%. And it should reduce the incentive for ordinary c-corps (which in aggregate pay an actual rate of about 30%) to metamorphose into more complex and opaque legal forms.

Mr Mnuchin did not say anything about limiting the amount of interest that companies can deduct against their profits.

### Flying cars

## High in the sky

DALLAS

**Firms such as e-volo, Lilium and Uber are reimaging the daily commute**

“YOU may smile, but it will come,” said Henry Ford in 1940, predicting the arrival of a machine that was part-automobile and part-aeroplane. For decades flying cars have obsessed technologists but eluded their mastery. Finally there is reason to believe. Several firms have offered hope that flying people in small pods for short trips might become a reality in the next decade. These are not cars, as most are not fit to drive on land, but rather small vehicles, which can rise and land vertically, like quiet helicopters.

A prototype of a small electric plane that is capable of flying up to 300 kilometres per hour, made by Lilium, a German startup, completed a successful test over Bavaria on April 20th. Lilium is starting work on a five-seat vehicle and hopes to offer a ride-hailing service. Another German company, e-volo, has been testing a flying vehicle for several years. It recently showed off the second version of its electric Volocopter (pictured), which could be certified for flight as soon as next year.

There are at least a dozen firms experimenting with making small flying vehicles in different guises, including Airbus, an aerospace giant, in partnership with Italdesign Giugiaro, a division of Volkswagen, a carmaker. Many plan to have a certified pilot in command at the beginning and then move on to an autonomous set-up when regulations allow. Motorcycle-type vehicles, which you sit astride, are also in the works.

No matter which manufacturer is quickest to gain velocity, Uber, a ride-hailing firm, aims to be at the centre of things. On April 25th it held an event in Dallas to announce its plan to offer a service where people can hail an electric “vertical takeoff and landing” vehicle and ride it quickly to destinations that would otherwise take hours in heavy traffic. Uber does not want to build these aircraft or landing pads itself, just as it does not own its own cars. Instead, it plans to collaborate with other compa-

nies. But Jeff Holden, Uber’s chief product officer, does not exclude the possibility that the firm may at the outset own some aircraft, which he estimates will cost around \$1m each.

The firm plans to have a prototype of its service ready by 2020. It will launch it first in Dallas and in Dubai, both cities where the authorities have deep aviation expertise and where people commute long distances. The firm rather optimistically promises that the cost per aerial mile for passengers will be roughly that of its low-cost car service, UberX.

There is plenty for manufacturers and services like Uber to overcome beyond gravity. For battery-powered models, range is limited and the charging rate remains slow. Manufacturers will need to ensure that vehicles can take off and land quietly, if this new form of transport is to stand a chance in cities. How to oversee and license the new aircraft, which are subject to much tougher rules than cars, will be a subject of intense debate among rule-makers, who tend to move slowly and are just getting to grips with drones. Drivers of flying vehicles are also likely to require a pilot’s licence, albeit perhaps a simplified “sports” licence. The journey ahead will be a long one.



Beats 140 characters

Still it is possible that the administration will pursue this since it increases the base of profits that is taxed, raising revenue to pay for the headline tax-rate cut.

Will the plan fly? One problem is the cost of the business tax cuts: a rough estimate is 1% of GDP a year, offset partly by a one-off gain from the repatriation of offshore cash. The other difficulty is whether it favours the wealthy too much. There are

24m sole-proprietorships, many of them small family firms. But they already pay a low rate of about 15%. Instead, tax cuts could help distorporations owned by tycoons, including Mr Trump’s own firm. Mr Mnuchin’s plan is a decent start. But if he wants support from Congress and from the public, he must do more to show that it is about unleashing the energy of America Inc, not borrowing to help the rich. ■

## LafargeHolcim and Syria

# In a fix

PARIS

### The boss of the world's largest cement-maker resigns

**K**EPPING cool in the heat of war is not easy. That might help explain why LafargeHolcim, a French-Swiss cement-maker, blundered so badly while running operations in Syria as fighting raged. On April 24th the firm said that its chief executive, Eric Olsen, will go, a casualty of a growing scandal over its activities in the country.

The board of the world's biggest cement producer stated only last month that Mr Olsen was not responsible for, nor aware of, wrongdoing by the firm in Syria. But public pressure has been increasing, notably after Jean-Luc Mélenchon, a left-wing candidate in France's presidential election, attacked the firm and its "damned cement" in a television debate on April 4th. François Fillon, a pro-business rival, agreed the firm should be punished if allegations against it proved to be true.

At issue is the activity of Lafarge before the firm's merger with its Swiss rival, Holcim, in 2015. In 2010 Lafarge had built a cement factory of 240 workers for \$680m near Kobane, a north Syrian town. Operations there continued until 2014, long after the violence began in 2011. The firm evacuated foreigners in 2012; local workers fled in September 2014 as Islamic State (IS) fighters seized the plant.

It looks extraordinary that managers hung on for so long after other foreign firms fled Syria—most did so soon after violence flared. Lafarge is accused of paying, via third parties, local armed groups, including some designated as terrorists, to keep the plant open and its staff secure. A report last year in *Le Monde*, a French paper, said the firm might unwittingly have funded IS.

LafargeHolcim said then that it "completely rejects the concept of financing of designated terrorist groups". But in March this year, after an internal independent inquiry into possible dealings with armed groups, its board said the investigation had found that measures taken by staff had been "unacceptable" and described "significant errors of judgment" which contravened the firm's code of conduct. Senior managers, not only local staff, knew "violations of Lafarge's established standards" were likely. In March the firm said that Bruno Lafont, CEO of Lafarge before the merger and now co-chairman of the merged firm, will not seek re-election.

Evidence of exactly what happened in Syria is piling up. A Norwegian security officer at the plant for two years to 2013 has

given details in a book of how he visited local militants to exchange information, "creating alliances" to cope with a power vacuum. France's economy ministry filed a complaint with prosecutors in September 2016 and legal proceedings are ongoing.

LafargeHolcim's troubles do not end there. The company has also attracted criticism from Emmanuel Macron, one of the two candidates in the second round of the election (see next story), and from other French politicians for saying it was ready to supply cement for Donald Trump's planned wall along America's border with Mexico. The giant firm's market value is stuck at 15% below its level in July 2015, when it began trading, as it struggles to cut costs and generate earnings. The company doubtless hopes that Mr Olsen's resignation will help to put at least one of its headaches behind it. ■

### French business

## A spring in their step

PARIS

### Business relishes the prospect of Emmanuel Macron as president

**T**HE likely election of Emmanuel Macron as France's president, in a run-off vote on May 7th, has corporate leaders in a state of high anticipation. French politicians with business experience rarely prosper. It is nearly half a century since Georges Pompidou won office in 1969 on the back of a private-sector career partly at Rothschild, an investment bank. The sitting president, François Hollande, roused voters in 2012 by declaring that his "true enemy" was the world of finance. Mr Macron's own stint at Rothschild, advising on mergers from 2008 to 2012, included handling a \$12bn acquisition of a unit of Pfizer, a pharma firm, by Nestlé, a consumer-goods giant.

Markets rose and bond yields fell after Mr Macron won the first round on April



23rd. His second-round opponent, Marine Le Pen of the far right, dismays business—one investor admits re-registering his firm as European rather than French, the better to shift headquarters were she to win. But Mr Macron is favourite.

A chief of a big firm headquartered in Paris speaks of new optimism for France's economy if Mr Macron wins. Business indicators are improving; measures of corporate confidence in particular have been ticking up for a while (see chart). A survey by IHS Markit, on April 21st, showed the tenth consecutive monthly increase in private firms' activity. French purchasing managers clock in as markedly more bullish than German ones. The economy has been showing modest vim: GDP figures for the first quarter, out on April 28th, are expected to register year-on-year growth of 1.3%, up from 1.1% in the previous quarter.

Mr Macron would cut corporation tax and public spending (though less than one rival, François Fillon, promised) and simplify a messy, expensive pensions system. Just as important for business, he promises to build on his previous efforts during a stint as economy minister to ease rigid labour markets that keep unemployment high. Caps on severance pay to fired employees and limits to legal processes that can reverse lay-offs are a priority for firms. Though Mr Macron has said he would not touch France's 35-hour working week, brought in by the Socialists in 2000-02, he wants a German-style approach to labour relations, letting individual companies negotiate directly with unions, rather than accept national bargains. That would lessen the influence of national, often militant, unions on more moderate local ones.

Beyond that, his plans to cut France's high tax burden (the state spends 57% of GDP, more than any other big rich country) also cheers businesspeople and investors. Changes could be designed to send capital to smaller firms, such as the tech startups Mr Macron has championed in the past. Though he would not scrap France's wealth tax, he would exclude financial assets from it. By also capping taxes on capital gains, he would make it more attractive to invest in local firms, reckons Ross McInnes, chairman of Safran, a big aeronautical and defence firm. "Family-owned and startup businesses can really benefit."

A worry for business as well as for Mr Macron's supporters is that as a political outsider he may find it hard to get things done in office. His movement, En Marche! ("On the Move!"), may not secure a majority at the parliamentary elections to be held in June. Yet he is a vastly happier prospect than Ms Le Pen. Her populist wishlist includes talk of getting France out of the euro and imposing import taxes to discourage trade. The greatest service that Mr Macron can provide to corporate France, in other words, would be keeping her out. ■

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Patanjali

## Bend it like Baba

MUMBAI

**How an Indian yogi came to lead a billion-dollar consumer-goods juggernaut**

EXECUTIVES at firms selling consumer staples like to think of themselves as “marketing gurus”. But how many could actually contort themselves into the lotus position, let alone attempt a headstand? Such feats are nothing for the top brass at Patanjali, an Indian purveyor of toothpaste, cooking oil, herbal concoctions and much else. Fronted by a bona fide guru, the firm’s marketing strategy—play up the benefits of natural products, then paint foreign multinationals as latter-day imperialists—delivers over \$1bn in annual sales, up tenfold in four years. Having dismissed the firm as a fad, the likes of Colgate-Palmolive and Unilever are emulating it.

Baba Ramdev (pictured), an ascetic yogi who is the public face of the brand, makes for an unconventional capitalist symbol. But with Acharya Balkrishna, a devotee of his who serves as the firm’s boss and majority-owner, he has built a consumer-goods powerhouse that is vying with the business-school graduates at the multinationals. Starting out two decades ago as an apothecary of traditional Ayurvedic potions, Patanjali has expanded into personal care, home products, packaged food and more. Mr Ramdev’s beard and saffron robes are among India’s most widely seen corporate emblems.

Marketing textbooks suggest the firm should have stumbled a while back. Whereas multinationals such as Procter & Gamble spend heavily to advertise dozens of sub-brands, Patanjali grew by word of mouth and sells everything from detergent to cornflakes and hair oil under its own name. Established players outsource their manufacturing and sell through shops owned by third parties; Patanjali has its own plants and has built a network of thousands of exclusive, franchised stores across India. Its head office in Haridwar, in the foothills of the Himalayas, is not in a place consultants would recommend.

Nor would they have predicted the success of its formula—good quality and value plus indignant nationalism. Newspaper ads beseech customers to shake off the yoke of multinational firms in the way their forebears resisted Britain’s East India Company. A dash of cow urine in a handful of products, including soap and floor cleaner, burnishes its Hindu credentials.

Patanjali’s rise coincides with the arrival in office of Narendra Modi, India’s yoga-loving prime minister, in 2014 (Mr Ramdev appeared at his political rallies). Its rhetoric

Multinational and local rivals at first behaved as if Patanjali did not exist. But after its herbal toothpaste won a dedicated following, in 2015 Colgate launched an offering aimed at Patanjali, the first time in its nearly eight decades in India that it had marketed an explicitly local product. Unilever has a range of Ayurvedic shampoos. Nestlé added 25 products across food categories to ward off the beaming guru, but Patanjali is still coming close to matching its sales (see chart).

Patanjali’s latest push is into food staples such as cooking oil and flour. There it will take market share from unbranded small-scale rivals rather than multinationals, which steer clear of such low-margin business. More products look likely to get the bearded yogi’s seal of approval. A line of purposely frumpy jeans for women is in the works; restaurants may be, too.

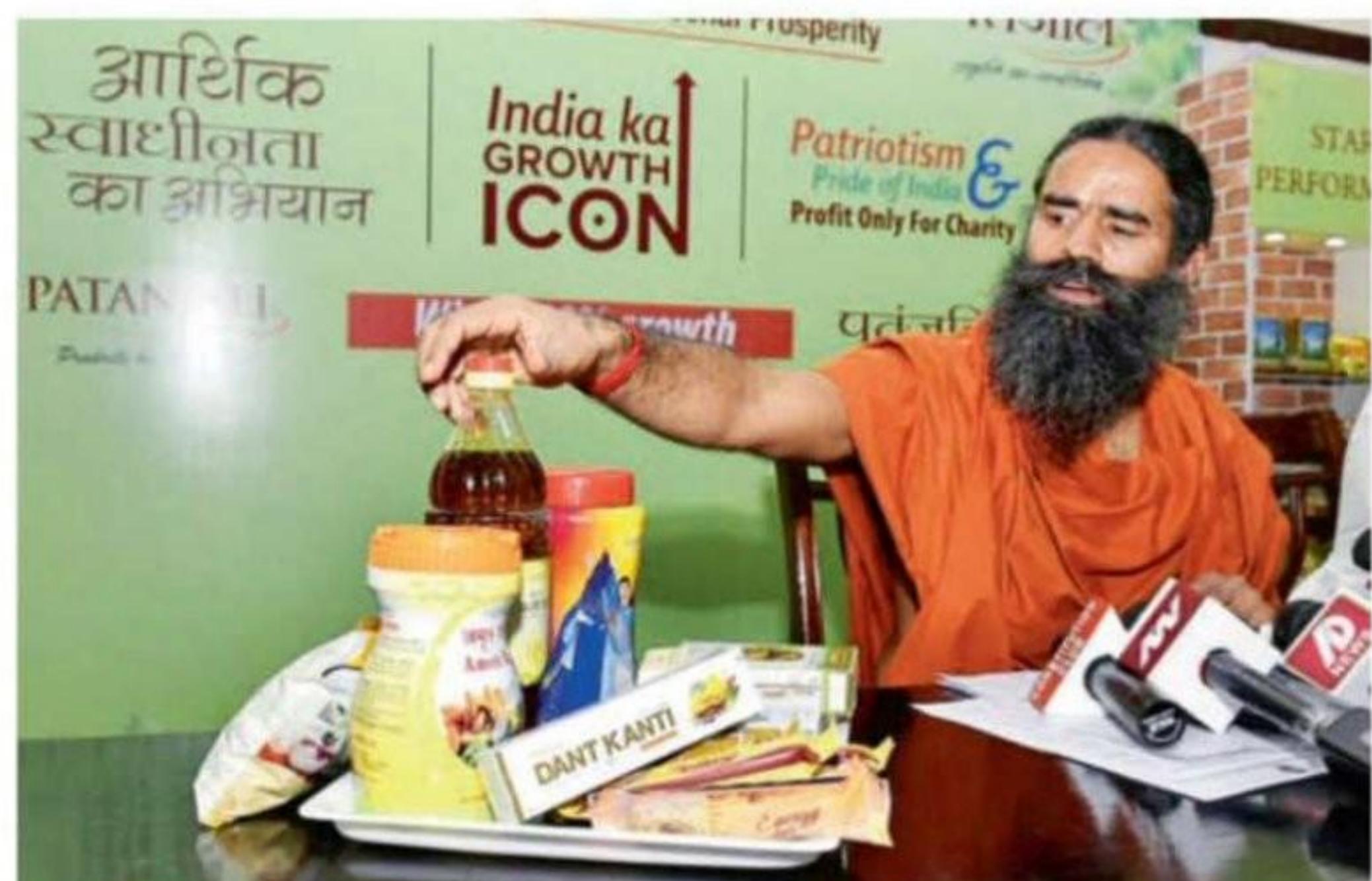
Sceptics think the company is as big as it can get without becoming more like the multinationals it decries. It is starting to use some of their methods. Patanjali is distributing more of its products outside its own shop network. It is reportedly outsourcing more of its manufacturing, too. It is increasing its spending on advertising. Mr Balkrishna has considered expanding abroad.

The firm may also face fiercer domestic competition in future. Other spiritual leaders have noted Patanjali’s success. Sri Sri Ravi Shankar, a guru with a big following among the urban middle classes who rivals Mr Ramdev for Mr Modi’s affections, is branching out from Ayurveda into food and personal care. Gurmeet Ram Rahim Singh, a self-proclaimed saint who packs out huge stadiums singing his techno hit “Love Charger”, is now in business too, selling more than 400 products. Others will follow. It does not take a marketing guru to figure out how easily followers can be turned into shoppers. ■



is the business counterpart to the Modi government’s Hindu-first chauvinism. Opposition politicians have complained that Patanjali has enjoyed low prices for land in deals with state governments that are run by politicians allied to Mr Modi.

The company is able to offer customers good value partly because it spends only 2-3% of revenues on advertising (consumer firms typically spend 12-18%). For many of its products, its modern plants use much the same machinery and inputs as its rivals, but cheaper staff. Lower costs mean operating margins of over 20% in its last published accounts (the firm is unlisted, and says it plans to stay that way), beating global firms.



Soul trader

# Schumpeter | Government Inc

**Microsoft's former boss wants Americans to think about their \$5trn state like a company**



WHEN he was running Microsoft, Steve Ballmer was famous for his energy. In a legendary clip of a company meeting that has received almost a million hits on YouTube, he charges onto the stage and launches into his “monkey dance”, before roaring into a microphone: “I love this company!” Mr Ballmer stood down from the software giant in 2014 and has new outlets for his drive. One is the LA Clippers, a basketball team he bought for \$2bn. The other could not be more different: a project to create a Form 10-K, a type of corporate report, for America’s dysfunctional government. That is more revolutionary than it sounds.

In most walks of life, 10-K denotes a long-distance run or a sum of money. In the investment world it refers to the report that American regulators force all listed companies to publish once a year. Investors have a near-religious reverence for 10-Ks. They are the global gold standard of corporate disclosure: 300 or so warts-and-all pages that contain a firm’s financial accounts and describe its objectives, conflicts of interests, governance, risks and flaws. Fund managers scour the documents to ensure that firms’ executives are not fibbing. Bosses study their competitors’ forms.

Mr Ballmer’s aim is for his 10-K on the government to contain everything citizens need to know “without hyperbole and without omission”, as he puts it. This may appear an eccentric ambition, but in an era of fake news and partisan division many Americans have shown themselves to be hungry for objective information. Mr Ballmer published the nation’s first 10-K on a new website, USAfacts.org, that was launched on April 18th. It is already wildly popular, receiving 2.6m page views on its first day.

Treating the government like a company has obvious limitations. Firms exist to maximise profits within the law. The job of governments is to maximise the overall welfare of citizens within financial constraints. Governments can tax, and print money, so they can borrow far more. Companies’ governance is child’s play compared with running a nation. The government faces many more risks than firms do. Pages 51-54 of the new national 10-K list as dangers riots, war with a powerful adversary and also the fact that “human behaviour cannot be fully regulated or controlled”.

Yet there are benefits to looking at Leviathan as you would a firm. A 10-K requires that all activities are “consolidated” together in one place, whereas the government issues millions of docu-

ments—GDP accounts, budget documents, crime reports—that rarely cohere and are often gibberish to voters. Mr Ballmer’s 10-K aggregates every branch of the state, from Alaska’s local governments to the Federal Reserve. It splits the total into four operating divisions, based on the constitution. Each division has its own finances and key performance indicators, as at a company.

The numbers show that, as you might expect, the government is hugely complex, with about 100,000 bodies. Its \$5trn of revenues are 11 times greater than Walmart’s, the world’s biggest firm by sales. The state’s main costs are transfer payments, such as welfare and wages for government employees. Viewed as a firm it has a profit margin of minus 3%, compared with 8% for the aggregate of firms in the S&P 500 index. Even leaving aside education, it invests more in the future than firms. R&D and capital expenditures together take up 12% of revenue, compared with 8% for the S&P 500. But its debts are a whopping 289% of sales (tax revenues) versus 77% for the S&P 500.

An investor considering Leviathan Inc would certainly look askance at its record. Performance over the past decade has been “a mixture of stagnation, progression towards, and retreat from, achievement of our constitutional objectives”, says the 10-K. And its prospects are dim. As Social Security and health-care costs rise, the deficit and debt levels will deteriorate, even threatening the government’s status as a going concern by around 2046.

Governance is poor. The country is not managed using a coherent taxonomy. So, for example, the House of Representatives, the Senate and the White House each split the job of running America into roughly 20 operating divisions. But their categories are different, meaning crossed wires and insufficient accountability. Investors detest firms with “related-party transactions”, in which executives receive money from customers, the firm or counterparties on top of their compensation package. Page 152 of Leviathan Inc’s 10-K reveals a troublingly high level of such related-party transactions in the form of political funding (much from cash-rich companies as well as from individual donors).

## I love this country

The idea that charismatic businesspeople can save the government from itself is a recurring theme in American politics. In 1909 Franklin MacVeagh, the treasury secretary, promised to run the government on a business basis. Ross Perot, a businessman, ran for president twice using the same logic. Donald Trump is the latest adherent to this view. He has filled his cabinet with swaggering tycoons, such as Wilbur Ross, the commerce secretary, hoping they can knock heads together harder than career politicians can.

Economists and policy wonks tend to dismiss the idea that government can learn much from business. That seems odd. Certainly, boardroom bravado is not the answer to America’s problems. But Mr Ballmer draws on a business tradition different from that of Mr Trump—its habit of clever, rational analysis.

A curious fact about America is that, while its government has gradually slid into gridlock and ill-repute, its companies have become more globally dominant than at any point, probably, in history. Of the world’s 20 most-valuable firms, 14 are American (including, still, Microsoft). They are ruthlessly effective about meeting their objectives of greater market power and profits. If you want to find a reliance on facts, cold rationality and coherent, purposeful organisation in America, look to its firms rather than to its media or its politicians. The 10-K will appear every year. It should be read widely. ■



## Battle of three centuries

### Today's criticisms of central banks echo debates from times past

**T**WENTY years ago next month, the British government gave the Bank of England the freedom to set interest rates. That decision was part of a trend that made central bankers the most powerful financial actors on the planet, not only setting rates but also buying trillions of dollars' worth of assets, targeting exchange rates and managing the economic cycle.

Although central banks have great independence now, the tide could turn again. Central bankers across the world have been criticised for overstepping their brief, having opined about broader issues (the Reserve Bank of India's Raghuram Rajan on religious tolerance, the Bank of England's Mark Carney on climate change). In some countries the fundamentals of monetary policy are under attack: Recep Tayyip Erdogan, the president of Turkey, has berated his central bank because of his belief that higher interest rates cause inflation. And central banks have been widely slated for propping up the financial sector, and denting savers' incomes, in the wake of the financial crisis of 2007-08.

Such debate is almost as old as central banking itself. Over more than 300 years, the power of central banks has ebbed and flowed as governments have by turns enhanced and restricted their responsibilities in response to economic necessity and in-

tellectual fashion. Governments have asked central banks to pursue several goals at once: stabilising currencies; fighting inflation; safeguarding the financial system; co-ordinating policy with other countries; and reviving economies.

These goals are complex and not always complementary; it makes sense to put experts in charge. That said, the actions needed to attain them have political consequences, dragging central banks into the democratic debate. In the early decades after American independence, two central banks were founded and folded before the Federal Reserve was established in 1913. Central banks' part in the Depression of the 1930s, the inflationary era of the 1960s and 1970s and the credit bubble in the early 2000s all came under attack.

### Bankers to the government

The first central banks were created to enhance the financial power of governments. The pioneer was the Sveriges Riksbank, set up as a tool of Swedish financial management in 1668 (the celebration of its tercentenary included the creation of the Nobel prize in economics). But the template was set by the Bank of England, established in 1694 by William III, ruler of both Britain and the Netherlands, in the midst of a war against France. In return for a loan

to the crown, the bank gained the right to issue banknotes. Monarchs had always been prone to default—and had the power to prevent creditors from enforcing their rights. But William depended on the support of Parliament, which reflected the interests of those who financed the central bank. The creation of the bank reassured creditors and made it easier and cheaper for the government to borrow.

No one at the time expected these central banks to evolve into the all-powerful institutions of today. But a hint of what was to come lay in the infamous schemes of John Law in France from 1716 to 1720. He persuaded the regent (the king, Louis XV, was an infant) to allow him to establish a national bank, and to decree that all taxes and revenues be paid in its notes. The idea was to relieve the pressure on the indebted monarchy. The bank then assumed the national debt; investors were persuaded to swap the bonds for shares in the Mississippi company, which would exploit France's American possessions.

One of the earliest speculative manias ensued: the word "millionaire" was coined as the Mississippi shares soared in price. But there were no profits to be had from the colonies and when Law's schemes collapsed, French citizens developed an enduring suspicion of high finance and paper money. Despite this failure, Law was on to something.

Paper money was a more useful medium of exchange than gold or silver, particularly for large amounts. Private banks might issue notes but they were less trustworthy than those printed by a national bank, backed by a government with tax-raising powers. Because paper money was ►

► a handier medium of exchange, people had more chance to trade; and as economic activity grew, government finances improved. Governments also noticed that issuing money for more than its intrinsic value was a nice little earner.

Alexander Hamilton, America's first treasury secretary, admired Britain's financial system. Finances were chaotic in the aftermath of independence: America's first currency, the Continental, was afflicted by hyperinflation. Hamilton believed that a reformed financial structure, including a central bank, would create a stable currency and a lower cost of debt, making it easier for the economy to flourish.

His opponents argued that the bank would be too powerful and would act on behalf of northern creditors. In "Hamilton", a hit hip-hop musical, the Thomas Jefferson character declares: "But Hamilton forgets/His plan would have the government assume state's debts/Now, place your bets as to who that benefits/The very seat of government where Hamilton sits."

Central banking was one of the great controversies of the new republic's first half-century. Hamilton's bank lasted 20 years, until its charter was allowed to lapse in 1811. A second bank was set up in 1816, but it too was resented by many. Andrew Jackson, a populist president, vetoed the renewal of its charter in 1836.

### Good as gold

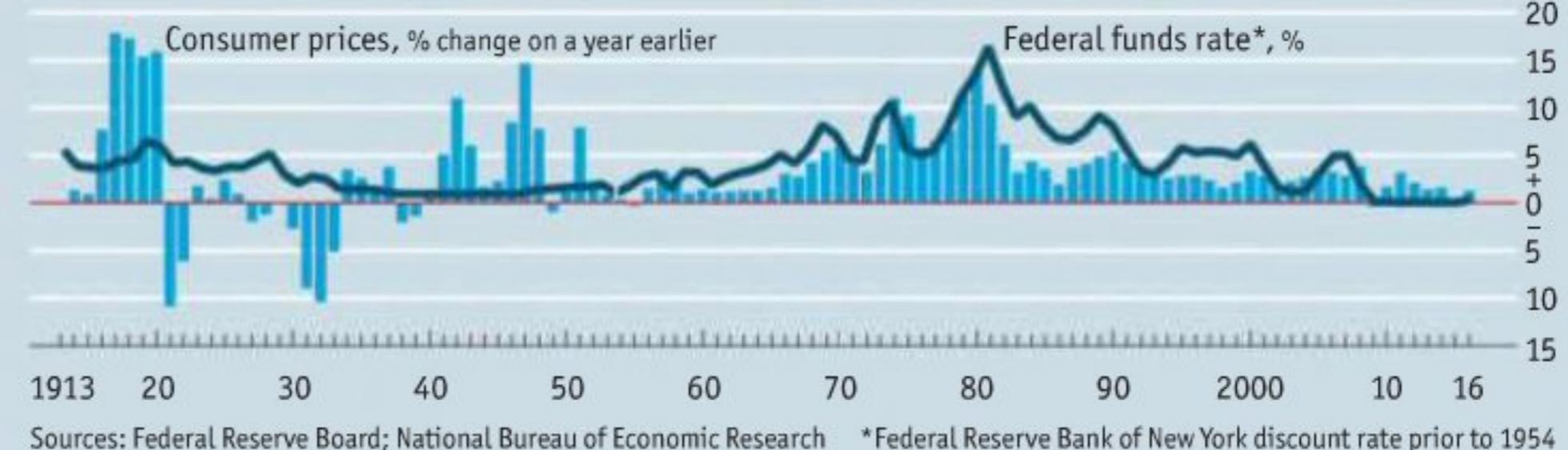
A suspicion that central banks were likely to favour creditors over debtors was not foolish. Britain had moved onto the gold standard, by accident, after the Royal Mint set the value of gold, relative to silver, higher than it was abroad at around the turn of the 18th century, and silver flowed overseas. Since Bank of England notes could be exchanged on demand for gold, the bank was in effect committed to maintaining the value of its notes relative to the metal.

By extension, this meant the bank was committed to the stability of sterling as a currency. In turn, the real value of creditors' assets (bonds and loans) was maintained; on the other side, borrowers had no prospect of seeing debts inflated away.

Gold convertibility was suspended during the Napoleonic wars: government debt and inflation soared. Parliament restored it in 1819, although only by forcing a period of deflation and recession. For the rest of the century, the bank maintained the gold standard with the result that prices barely budged over the long term. But the corollary was that the bank had to raise interest rates to attract foreign capital whenever its gold reserves started to fall. In effect, this loaded the burden of economic adjustment onto workers, through lower wages or higher unemployment. The order of priorities was hardly a surprise when voting was limited to men of property. It was a fine time to be a rentier.

### The Fed's century

United States



The 19th century saw the emergence of another responsibility for central banks: managing crises. Capitalism has always been plagued by financial panics in which lenders lose confidence in the creditworthiness of private banks. Trade suffered at these moments as merchants lacked the ability to fund their purchases. In the panic of 1825 the British economy was described as being "within twenty-four hours of a state of barter." After this crisis, the convention was established that the Bank of England act as "lender of last resort". Walter Bagehot, an editor of *The Economist*, defined this doctrine in his book "Lombard Street", published in 1873: the central bank should lend freely to solvent banks, which could provide collateral, at high rates.

The idea was not universally accepted; a former governor of the Bank of England called it "the most mischievous doctrine ever breathed in the monetary or banking world". It also involved a potential conflict with a central bank's other roles. Lending in a crisis meant expanding the money supply. But what if that coincided with a need to restrict the money supply in order to safeguard the currency?

As other countries industrialised in the 19th century, they copied aspects of the British model, including a central bank and the gold standard. That was the pattern in Germany after its unification in 1871.

America was eventually tipped into accepting another central bank by the financial panic of 1907, which was resolved only by the financial acumen of John Pierpont Morgan, the country's leading banker. It seemed rational to create a lender of last resort that did not depend on one man. Getting a central bank through Congress meant assuaging the old fears of the "eastern money power". Hence the Fed's unwieldy structure of regional, privately owned banks and a central, politically appointed board.

Ironically, no sooner had the Fed been created than the global financial structure was shattered by the first world war. Before 1914 central banks had co-operated to keep exchange rates stable. But war placed domestic needs well ahead of any international commitments. No central bank was willing to see gold leave the country and end up in enemy vaults. The Bank of Eng-

land suspended the right of individuals to convert their notes into bullion; it has never been fully reinstated. In most countries, the war was largely financed by borrowing: central banks resumed their original role as financing arms of governments, and drummed up investor demand for war debt. Monetary expansion and rapid inflation followed.

### Interwar failure

Reconstructing an international financial system after the war was complicated by the reparations imposed on Germany and by the debts owed to America by the allies. It was hard to co-ordinate policy amid squabbling over repayment schedules. When France and Belgium occupied the Ruhr in 1923 after Germany failed to make payments, the German central bank, the Reichsbank, increased its money-printing, unleashing hyperinflation. Germans have been wary of inflation and central-bank activism ever since.

The mark eventually stabilised and central banks tried to put a version of the gold standard back together. But two things hampered them. First, gold reserves were unevenly distributed, with America and France owning the lion's share. Britain and Germany, which were less well endowed, were very vulnerable.

Second, European countries had become mass democracies, which made the austere policies needed to stabilise a currency in a crisis harder to push through. The political costs were too great. In Britain the Labour government fell in 1931 when it refused to enact benefit cuts demanded by the Bank of England. Its successor left the gold standard. In Germany Heinrich Brüning, chancellor from 1930 to 1932, slashed spending to deal with the country's foreign debts but the resulting slump only paved the way for Adolf Hitler.

America was by then the most powerful economy, and the Fed the centrepiece of the interwar financial system (see chart 1). The central bank struggled to balance domestic and international duties. A rate cut in 1927 was designed to make life easier for the Bank of England, which was struggling to hold on to the gold peg it had re-adopted in 1925. But the cut was criticised for fuelling speculation on Wall Street. The ►

Fed started tightening again in 1928 as the stockmarket kept booming. It may have overdone it.

If central banks struggled to cope in the 1920s, they did even worse in the 1930s. Fixated on exchange rates and inflation, they allowed the money supply to contract sharply. Between 1929 and 1933, 11,000 of America's 25,000 banks disappeared, taking with them customers' deposits and a source of lending for farms and firms. The Fed also tightened policy prematurely in 1937, creating another recession.

During the second world war central banks resumed their role from the first: keeping interest rates low and ensuring that governments could borrow to finance military spending. After the war, it became clear that politicians had no desire to see monetary policy tighten again. The result in America was a running battle between presidents and Fed chairmen. Harry Truman pressed William McChesney Martin, who ran the Fed from 1951 to 1970, to keep rates low despite the inflationary consequences of the Korean war. Martin refused. After Truman left office in 1953, he passed Martin in the street and uttered just one word: "Traitor."

Lyndon Johnson was more forceful. He summoned Martin to his Texas ranch and bellowed: "Boys are dying in Vietnam and Bill Martin doesn't care." Typically, Richard Nixon took the bullying furthest, leaking a false story that Arthur Burns, Martin's successor, was demanding a 50% pay rise. Attacked by the press, Burns retreated from his desire to raise interest rates.

In many other countries, finance ministries played the dominant role in deciding on interest rates, leaving central banks responsible for financial stability and maintaining exchange rates, which were fixed under the Bretton Woods regime. But like the gold standard, the system depended on governments' willingness to subordinate domestic priorities to the exchange rate. By 1971 Nixon was unwilling to bear this cost and the Bretton Woods system collapsed. Currencies floated, inflation took off and worse still, many countries suffered high



unemployment at the same time.

This crisis gave central banks the chance to develop the powers they hold today. Politicians had shown they could not be trusted with monetary discipline: they worried that tightening policy to head off inflation would alienate voters. Milton Friedman, a Chicago economist and Nobel laureate, led an intellectual shift in favour of free markets and controlling the growth of the money supply to keep inflation low. This "monetarist" approach was pursued by Paul Volcker, appointed to head the Fed in 1979. He raised interest rates so steeply that he prompted a recession and doomed Jimmy Carter's presidential re-election bid in 1980. Farmers protested outside the Fed in Washington, DC; car dealers sent coffins containing the keys of unsold cars. But by the mid-1980s the inflationary spiral seemed to have been broken.

### The rise to power

In the wake of Mr Volcker's success, other countries moved towards making central banks more independent, starting with New Zealand in 1989. Britain and Japan followed suit. The European Central Bank (ECB) was independent from its birth in the 1990s, following the example of Germany's Bundesbank. Many central bankers were asked to target inflation, and left to get on with the job. For a long while, this approach seemed to work perfectly. The period of low inflation and stable economies in the 1990s and early 2000s were known as the "Great Moderation". Alan Greenspan, Mr Volcker's successor, was dubbed the "maestro". Rather than bully him, presidents sought his approbation for their policies.

Nevertheless, the seeds were being sown for today's attacks on central banks. In the early 1980s financial markets began a long bull run as inflation fell. When mar-

kets wobbled, as they did on "Black Monday" in October 1987, the Fed was quick to slash rates. It was trying to avoid the mistakes of the 1930s, when it had been too slow to respond to financial distress. But over time the markets seemed to rely on the Fed stepping in to rescue them—a bet nicknamed the "Greenspan put", after an option strategy that protects investors from losses. Critics said that central bankers were encouraging speculation.

However, there was no sign that the rapid rise in asset prices was having an effect on consumer inflation. Raising interest rates to deter stockmarket speculation might inflict damage on the wider economy. And although central banks were supposed to ensure overall financial stability, supervision of individual banks was not always in their hands: the Fed shared responsibility with an alphabet soup of other agencies, for example.

When the credit bubble finally burst in 2007 and 2008, central banks were forced to take extraordinary measures: pushing rates down to zero (or even below) and creating money to buy bonds and crush long-term yields (quantitative easing, or QE: see chart 2). As governments tightened fiscal policy from 2010 onwards, it sometimes seemed that central banks were left to revive the global economy alone.

Their response to the crisis has called forth old criticisms. In an echo of Jefferson and Jackson, QE has been attacked for bailing out the banks rather than the heartland economy, for favouring Wall Street rather than Main Street. Some Republicans want the Fed to make policy by following set rules: they deem QE a form of printing money. The ECB has been criticised both for favouring northern European creditors over southern European debtors and for cosetting southern spendthrifts.

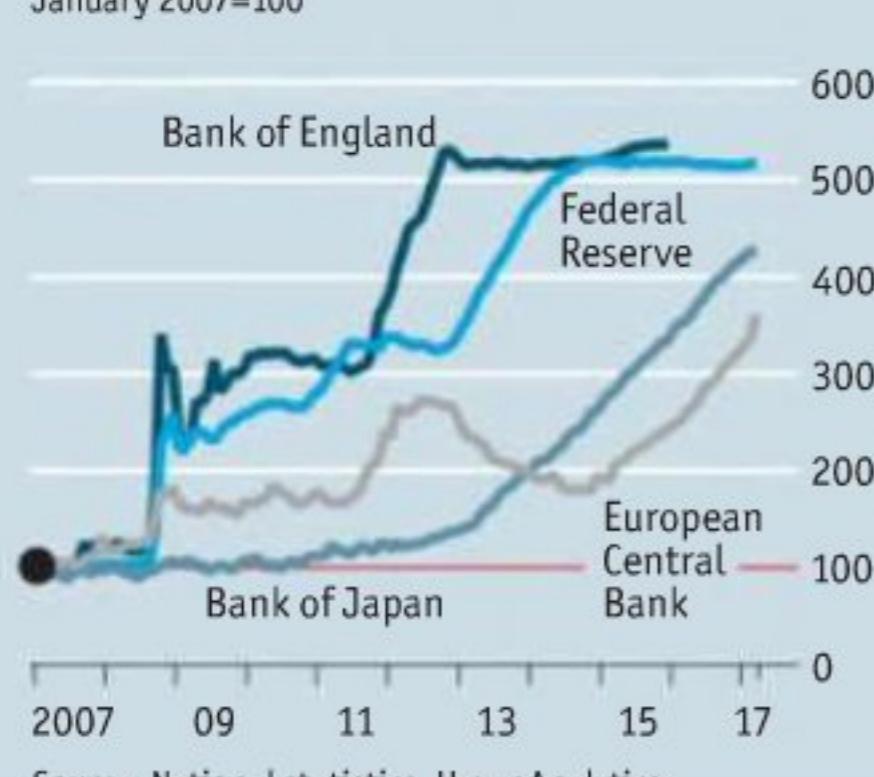
And central banks are still left struggling to cope with their many responsibilities. As watchdogs of financial stability, they want banks to have more capital. As guardians of the economy, many would like to see more lending. The two roles are not always easily reconciled.

Perhaps the most cutting criticism they face is that, despite their technocratic expertise, central banks have been repeatedly surprised. They failed to anticipate the collapse of 2007-08 or the euro zone's debt crisis. The Bank of England's forecasts of the economic impact of Brexit have so far been wrong. It is hard to justify handing power to unelected technocrats if they fall down on the job.

All of which leaves the future of central banks uncertain. The independence granted them by politicians is not guaranteed. Politicians rely on them in a crisis; when economies recover they chafe at the constraints central banks impose. If history teaches anything, it is that central banks cannot take their powers for granted. ■

### Quantitative explosion

Central banks' balance-sheets  
January 2007=100





## Trade policy

## All at sea

**Donald Trump may yet turn out as protectionist in office as on the campaign trail**

**“W**ELL, I’m mostly there on most items,” said Donald Trump of his 100-day plan. As far as trade policy is concerned, his self-assessment would indeed be true—if tweets and executive orders ratcheting up tensions in a growing number of trade disputes constituted progress.

However, although Mr Trump has withdrawn America from the Trans-Pacific Partnership (TPP), a 12-country trade deal, he has neither labelled China a currency manipulator nor made progress in renegotiating the North American Free-Trade Agreement (NAFTA). On April 26th his administration denied reports that it was poised to trigger America’s withdrawal from the agreement. No new “America-first” trade deals have emerged, and his trade-related executive orders have requested reports or investigations. Mr Trump has created more work for pencil-pushers than for exporters.

The slow pace might reflect the obvious ideological infighting within his team, a desire for evidence before acting or the realisation that Congress, which sees trade policy as within its remit, must be kept on side. Congress officially delegates responsibility for trade to the United States Trade Representative. But it has yet to confirm Robert Lighthizer, Mr Trump’s pick for the job. Another reason for delay is that other priorities have intervened. Seeking China’s help over North Korea’s nuclear programme, for example, Mr Trump has ex-

plicitly used American trade concessions as an inducement.

Mr Trump has done enough, however, to prod America’s trading partners into action. Both the Canadian and Mexican governments have been busily strengthening trade ties elsewhere. Mexican officials say they have stepped up efforts to finish a trade deal with the EU by the end of the year. They also report that Mr Trump’s threats have swayed private-sector opinion: business now understands that Mexican negotiators will have a stronger hand in talks with America if they can credibly threaten to import wheat and corn from Brazil or Argentina. So it now backs the government’s courtship of Brazil.

The EU has seen its proposed trade deal with America plunged into the deep freeze. So its trade commissioner, Cecilia Malmström, has trumpeted trade talks with Japan and the ASEAN countries of South-East Asia, as well as with Australia, New Zealand and Chile. If Mr Trump does not want to party, goes the implicit threat, others do. Mr Trump may even have eased Ms Malmström’s job by making anti-trade sentiment less cool and fashionable, particularly in Germany. She claimed on March 29th that “there has never been a more important time to defend the global, rules-based system.”

With Mr Trump seemingly hostile to America’s traditional role as promoter of that rules-based system, the Japanese are

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also keen to fill the gap. Shinzo Abe, Japan’s prime minister, had called the TPP “meaningless” without America, but his government is now trying to salvage it. Too much time, effort and political capital had been invested in TPP to give it up without a fight. And the advanced trade rules TPP imposed are too valuable to waste. Japanese officials are busy garnering support to revive the deal. In time, its economic and strategic benefits might even lure America back. A distant dream, though some joke that renaming the deal the Trump Pacific Partnership might do the trick.

The travails of the TPP had been expected to invigorate the other big trade deal in Asia and the Pacific, the Regional Comprehensive Economic Partnership (RCEP). That does not involve America, and is seen as a chance for the Chinese government to show regional leadership. Although the pace of talks picked up after Mr Trump’s election, progress remains glacial. Mari Pangestu, a former Indonesian trade minister, says that some of the seven TPP members who are also in RCEP would like to see some elements moved across. “But at this point in the negotiations it’s probably best to focus on what is already on the table.”

**Steel yourself**

Even were he interested in new multilateral trade deals, Mr Trump would find his authority constrained. On NAFTA, a drastic action such as triggering withdrawal would be his prerogative. But in any renegotiation, he will be partly beholden to Congress. On trade disputes, however, more is at stake, and there is more cause for alarm at the damage Mr Trump’s trigger-happy approach might wreak.

Since 1995 the World Trade Organisation (WTO) has been the main arbiter of international trade disputes. But on April 19th Mr Trump’s administration seemed to ➤

► take matters into its own hands, starting an investigation into whether steel imports are a threat to national security (see box). A similar probe into aluminium imports was announced this week. America has also imposed duties averaging 20% on imports of Canadian lumber (see page 25).

Wilbur Ross, the commerce secretary, will oversee the investigations. He cites the improbable worry that cheap metal im-

ports are undermining America's skills base and its ability to mount a rapid military build-up if needed. Current steel policy, a slew of 152 narrow tariffs on various products, are too easy to circumvent. He is considering broader measures. His department has 270 days to assess the problem and recommend action. Mr Trump said he expected results within 30 to 50 days.

Fans of the rules-based system are

aghast. Chad Bown, a trade expert at the Peterson Institute for International Economics, a think-tank, describes the Trade Expansion Act, the law from 1962 the Trump administration has invoked, as the "nuclear option", adding that "it calls the whole rules-based system into question." The act, sparse on details, gives the president huge discretion. WTO rules bar countries from slapping tariffs on randomly, but make an exception for national security. James Bacchus, a former chief judge for the WTO (and a former congressman), comments that "no one knows what it means and no one wants to know what it means." He says it could be a "Pandora's box", used to justify any type of trade restriction.

Mr Bacchus worries that if America looks for excuses to violate trade rules, other countries will too. "WTO law only succeeds if those who are bound by it engage in mutual self-restraint. We Americans should be the first to show self-restraint." Mr Trump has relinquished America's role of stewardship of the global rules-based system. The question is whether the system will survive such a loss. ■

### Steel tariffs

## Striking when the iron is cold

### The case against protecting American steelmakers from imports

**A**S AN example of all that is wrong with Donald Trump's view of trade, the probe he has ordered into the steel industry is particularly hard to beat. If it results, as seems to be the plan, in blanket punitive tariffs slapped on steel imports, the consequences would be dire: the American economy would be hurt by a rise in the price of an essential material; it would invite retaliation that would cost American jobs, not save them; and the underlying problem—massive global steel overcapacity—would persist.

For Trumpists, steel is an emblem of their country's descent from greatness. Ever since the 1960s, when production peaked at 168m tonnes a year, the industry has been in decline. Today it makes half as much as 50 years ago and employs just a third of the workers. Steelmakers have long blamed foreign rivals for their woes and lobbied hard for protection. So Mr Trump is not the first president to try to shield the industry from foreign competition. In the 1980s Ronald Reagan signed a series of agreements to limit imports. In 2002 George W. Bush imposed tariffs of up to 30%. Back then the bogeymen were steelmakers in Europe and Japan; now it is China, where a glut of steel has squashed prices.

Cheap steel, however, is a boon to many producers as well as to consumers. Higher prices would hit firms that use the metal, such as carmakers. Mr Bush's tariffs, for instance, are estimated to have cost 200,000 jobs in these industries—more than the 145,000 Americans employed in steelmaking today.

Moreover, the big threat to steelmakers' jobs comes not from trade but technology. In the Reagan era 80% of the metal was made in the traditional way: converting iron ore and coke into pig iron in a blast furnace, before turning this into steel. Only a third is made in this way today. Scrap metal is replacing new pig iron. Smaller electric-arc furnaces are more efficient, thanks in large part to cheaper electricity, and can compete on

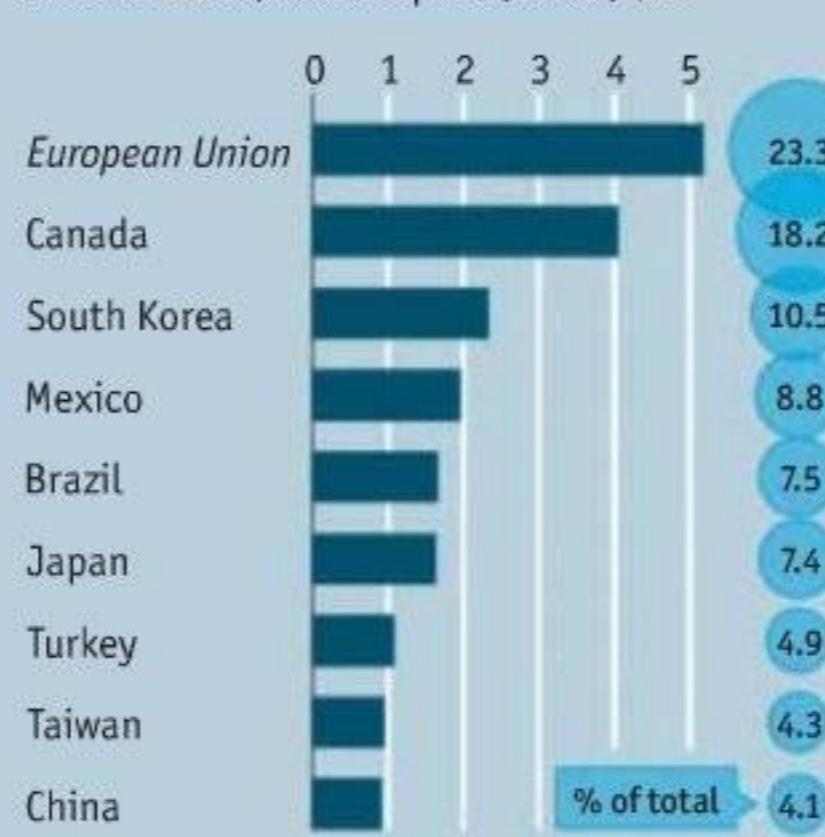
quality and cost with blast furnaces. Methods that use shale gas instead of coal to make iron for steelmaking are also replacing pig iron. Thanks to such advances, labour productivity in steelmaking has increased fivefold since the 1980s, according to the American Iron and Steel Institute, a trade association. Tariffs will not bring lost jobs back.

Nor would they solve the underlying problem in global steel markets, which is the huge excess steel capacity in China. Indeed, they could be counterproductive in their effects. Existing trade-protection measures have successfully diverted Chinese steel to other markets. In 2016 Chinese steel made up just 4% of American steel imports, compared with 27% from Mexico and Canada combined and 23% from the European Union (see chart). A tariff that was imposed on imports from other countries would risk splitting a potential alliance between America and the rest of the world against China.

If a blanket tariff were to spark a wider trade war, the irony is that the biggest losers would include modern American steelmakers. At last they are becoming competitive abroad again. If Mr Trump really wants to boost American steel, free trade would be a much better bet.

### It's a steel!

United States, steel imports, 2016, \$bn



Source: US Census Bureau

### Credit Suisse

## Thiam's tweak

### Another change of plan at Switzerland's second-biggest bank

EUROPE'S most troubled big banks may at last be on the road to recovery. Not only is economic growth perking up; uncomfortable decisions, put off too long, are also being taken. In recent months UniCredit, Italy's largest lender, has written down bad debt by €8.1bn (\$8.7bn) and tapped shareholders for €13bn. Deutsche Bank, Germany's biggest, has raised €8bn in equity and decided to keep a retail business it had hoped to sell. On April 27th it reported first-quarter net income of €575m, up from €236m a year earlier, although revenue fell.

Like Deutsche, Credit Suisse is freer to make plans after a recent settlement with American authorities over mis-selling mortgage-backed securities before the financial crisis. On April 26th Switzerland's second-biggest bank reported first-quarter net income of SFr596m (\$594m), far better than forecast, reversing a SFr302m loss a year before. Along with most of Wall Street, which published earnings earlier in the month, and Deutsche it benefited from a good quarter for fixed-income trading. It expects to wind up a unit in which it has dumped unwanted assets by the end of 2018, a year ahead of schedule.

Credit Suisse's chief executive, Tidjane Thiam, has also ditched a plan to float ►

► 20-30% of the group's Swiss universal bank—part of a scheme, conceived in 2015, to raise SFr9bn-11bn of capital. He now intends to bring in SFr4bn through a rights issue. (Share sales in 2015 raised SFr6bn.)

Shareholders had never been keen on the flotation, which would have diluted their returns from the division that contributes most to Credit Suisse's profits. A climb in the share price, by more than 50% since July, has made a rights issue more attractive. The issue will lift Credit Suisse's ratio of common equity to risk-weighted assets (a key gauge of banks' strength) from 11.7% to 13.4%. That boosts it from a middling po-

sition among its European peers, but still leaves it behind Deutsche and UBS, its bigger Swiss neighbour.

Mr Thiam claimed the quarterly figures endorsed a strategic shift towards Asia which he announced 18 months ago. He considers the region's newly rich to be ideal clients for a bank which can meet the needs of both their businesses and their families. Credit Suisse's Asian division, like the Swiss universal bank, provides wealth management and investment banking locally. Functional divisions serve the rest of the world. To many, this structure looks lopsided. Mr Thiam is sure that it

is working. The Asian wealth-management business saw profits rise by two-thirds in the year to the first quarter. The region's markets business tumbled into loss, but Mr Thiam insists that a change of management will help turn it around.

All this should placate shareholders, who have had plenty to grumble about—and whom Mr Thiam faces at the annual meeting on April 28th. This month he and other executives gave up 40% of their latest bonuses, which had been criticised by advisers to institutional investors. The bosses had hit their targets, but the bank lost money in 2015 and 2016. Better luck this year. ■

## Buttonwood | Jumping the shark

### The exchange-traded fund industry is getting too specialised

**T**HREE comes a time when every financial innovation is taken a bit too far—when, in television terms, it "jumps the shark" and sacrifices plausibility in search of popularity. That may have happened in the exchange-traded fund (ETF) industry. The latest ETF to be launched is a fund that invests in the shares of ETF providers.

The notion has a certain logic. The ETF industry has been growing fast, thanks to its ability to offer investors a diversified portfolio at low cost. The assets under management in these funds passed \$3tn last year, up from \$715bn in 2008. Some investors might well want to take advantage of that rapid expansion.

But by no stretch of the imagination would this be a well-diversified portfolio; it would be a focused bet on the financial sector. And many of the companies in the portfolio, such as BlackRock, a huge fund manager, and NASDAQ, a stock exchange, are involved in a lot more than just ETFs. Even if the ETF industry keeps growing, the bet could still go wrong.

The new fund (with the catchy title of the ETF Industry Exposure and Financial Services ETF) is just the latest example of the industry's drive to specialisation. The earliest ETFs bought diversified portfolios that track indices such as the S&P 500. But there are now some 1,338 specialist funds worldwide, with \$434bn in assets, according to ETFGI, a research firm.

Some of these specialist funds are based on industries, such as energy or media. They appeal to investors who believe an industry will outperform, but who do not want to pin their hopes on an individual company. But others are pretty obscure: an ETF that invests in founder-run companies, with just \$3.1m in assets, for example; or another which buys shares in companies based near Nashville, Tennessee, with \$8.5m. A recent



fund was launched to back companies involved in the cannabis industry.

Heady stuff. But the more specialised the fund, the fewer companies it has to invest in. So these funds will probably be more volatile and less liquid—not the ideal home for the savings of small investors.

The financial industry has been down this road before. In the early 2000s Britain suffered a crisis in the investment-trust sector. Like ETFs, investment trusts are managed portfolios that are traded on the stock-market; they have been around since the 19th century. But a craze developed for so-called split-capital trusts, which had different classes of shares; some received all the income from the fund, others all the capital growth. These shares had some tax advantages and were snapped up by small investors. However, some split-capital trusts only invested in the shares of other trusts. When problems emerged in some funds, they rippled right through the asset class, eventually requiring nearly £200m (\$258m) to be paid out in compensation.

A similar pattern emerged, on a much bigger scale, with mortgage-backed securities (MBS) in America. The idea of issuing a

bond, backed by mortgage payments, dates back to the 19th century, but the residential MBS market took off in the 1980s. The market jumped the shark only in the early 2000s, with the rapid growth of vehicles known as collateralised debt obligations (CDOs) that grouped mortgage-backed bonds together, giving different investors different rights over the assets and cash flows of the portfolio. Doubts over the creditworthiness of these securities in 2007 triggered the financial crisis.

The ETF sector has not yet reached the extremes attained by split-capital trusts or CDOs. By and large, funds do not invest directly in other ETFs; although there are a few "leveraged" ETFs, where losses and gains are magnified, they represent only 1% of the industry's assets.

Still, there are signs that rapid flows into some ETFs can lead to price distortions. A rush of money into gold funds in recent years has caused the VanEck Junior Gold Miners ETF to be the largest investor in two-thirds of the 54 companies it owns, according to Factset, a data provider. The fund's assets grew by more than half, to reach \$5.4bn, between January 1st and April 17th. The rush was accelerated by another fund which made a leveraged bet on the performance of the VanEck ETF.

The danger is of a feedback effect: as the fund pours money into the smaller companies in its portfolio, their prices rise, attracting more money into the ETF. But should investors change their mind and want to withdraw their money, there could be a sharp fall in these mining shares. VanEck is allowing the fund to invest in larger companies in an attempt to solve the problem. But the more the ETF industry specialises, the more often such difficulties are going to arise.

**Crowdfunding**

# Coining it

**Another bubble is heading for a bust, but may spawn much innovation**

**W**OULD you care to invest in Gnosis, a prediction market where users can bet on outcomes of events such as elections? Or in ZrCoin, a project to produce zirconium dioxide, used to make heat-resistant alloys? How about an “immersive reality experience” called “Back to Earth”?

These are just three of a new wave of what are called Initial Coin Offerings (ICOs). Nearly \$250m has already been invested in such offerings, of which \$107m alone has flowed in this year, according to Smith+Crown, a research firm. But it was in April that ICOs, or “token sales”, as insiders prefer to call them, really took off. On April 24th Gnosis collected more than \$12m in under 15 minutes, valuing the project, in theory, at nearly \$300m.

ICO “coins” are essentially digital coupons, tokens issued on an indelible distributed ledger, or blockchain, of the kind that underpins bitcoin, a crypto-currency. That means they can easily be traded, although unlike shares they do not confer ownership rights. Instead, they often serve as the currency for the project they finance: to pay users for a correct prediction, as does Gnosis; or for the content users contribute. Investors hope that successful projects will cause tokens’ value to rise.

In a way, bitcoin was the first ICO—except that instead of putting money in directly, investors had to buy computing gear to “mine” (ie, mint cryptographically) the tokens. Bitcoin inspired hundreds of variations—“alt-coins”. But these involved the tricky business of creating a new blockchain. Today most issuers simply write a “smart contract” on Ethereum, a rival blockchain. This piece of code then automatically creates tokens when it receives “ether”, the coin of the Ethereum realm. Issuers typically publish a “white paper” (a prospectus of sorts) and market their undertaking on social media.

As Gnosis shows, such offerings can sell out quickly. The crypto-currency cognoscenti made a lot of money investing in bitcoin and other tokens and have cash to invest (as *The Economist* went to press, the value of all ether in circulation was nearly \$5bn). Less popular projects offer incentives for buying early or a lot. “Back to Earth”, whose ICO launched on April 26th,

wants to raise 750 bitcoin (almost \$1m) by selling StarCredits. Investors who buy coins worth 0.75 bitcoin or more get a special “Golden Ticket”, entitling them to special content and, later on, free StarCredits.

But the claims in white papers are mostly unaudited. ZrCoin plans to build a factory in Russia to extract zirconium from industrial waste; cameras on the site are supposed to let investors monitor progress. ZrCoins are backed by the zirconium to be produced. But as in many ICOs, it is unclear why the funds are not raised in conventional ways. And since most ICOs have no link to any particular jurisdiction, it is hard to see what investors could do if issuers abscond with their money. Often they have immediate access to the funds raised.

Even ICO fans fret that an offering will blow up, as did Mt. Gox, an early bitcoin exchange, in 2014. But the market is showing signs of maturing, says Matt Chwierut of Smith+Crown. More ICOs now use escrow accounts, which makes it harder to take the money and run. Blockchain Capital, a venture-capital firm, has just raised \$10m, but it sold its coins in America only to “accredited” investors. On May 1st Adel, an incubator for blockchain projects, will launch one of the first ICOs to comply with anti-money-laundering and know-your-customer rules. Otonomos, which helps firms incorporate, is planning to offer a service giving ICOs a legal home.

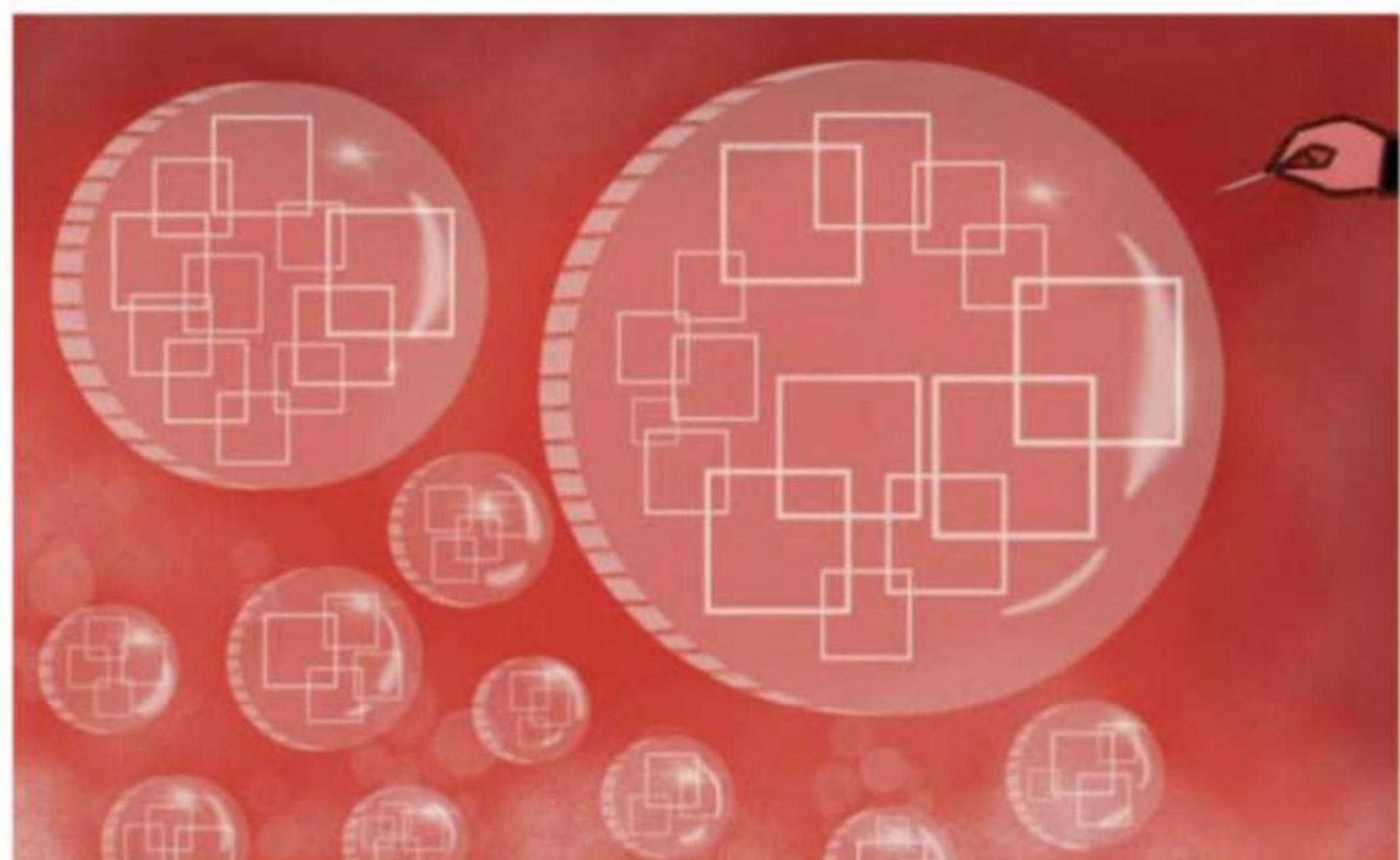
Regulators will have to decide how to deal with ICOs. Peter Van Valkenburgh of Coin Centre, a think-tank, argues that if the

tokens are mainly used as currencies, they should not be classified as securities. But in March the Ontario Securities Commission warned that issuers may need to meet legal requirements, such as registration and filing an official prospectus. This may be hard to enforce: blockchains know no borders and some ICOs, including Gnosis’s, are created expressly to avoid regulations.

America’s Securities and Exchange Commission has not said anything yet. Insiders worry it will come down too hard on ICOs, stymying innovation. Albert Wenger of Union Square Ventures, another venture-capital firm, argues that ICOs help finance projects that today remain unfunded, in particular “protocols”—code enabling computer systems to work together. One example is Storj, a service for decentralised file storage, which has issued tokens on bitcoin’s blockchain. Subscribers use the currency to pay for file storage, but can also earn it by contributing storage to the network. They hope such services might one day replace the big centralised ones that dominate the internet. Imagine Facebook had issued a token, says Olaf Carlson-Wee of Polychain Capital, a hedge fund that invests in ICOs. Users could be paid for their posts and thereby share in the firm’s wealth.

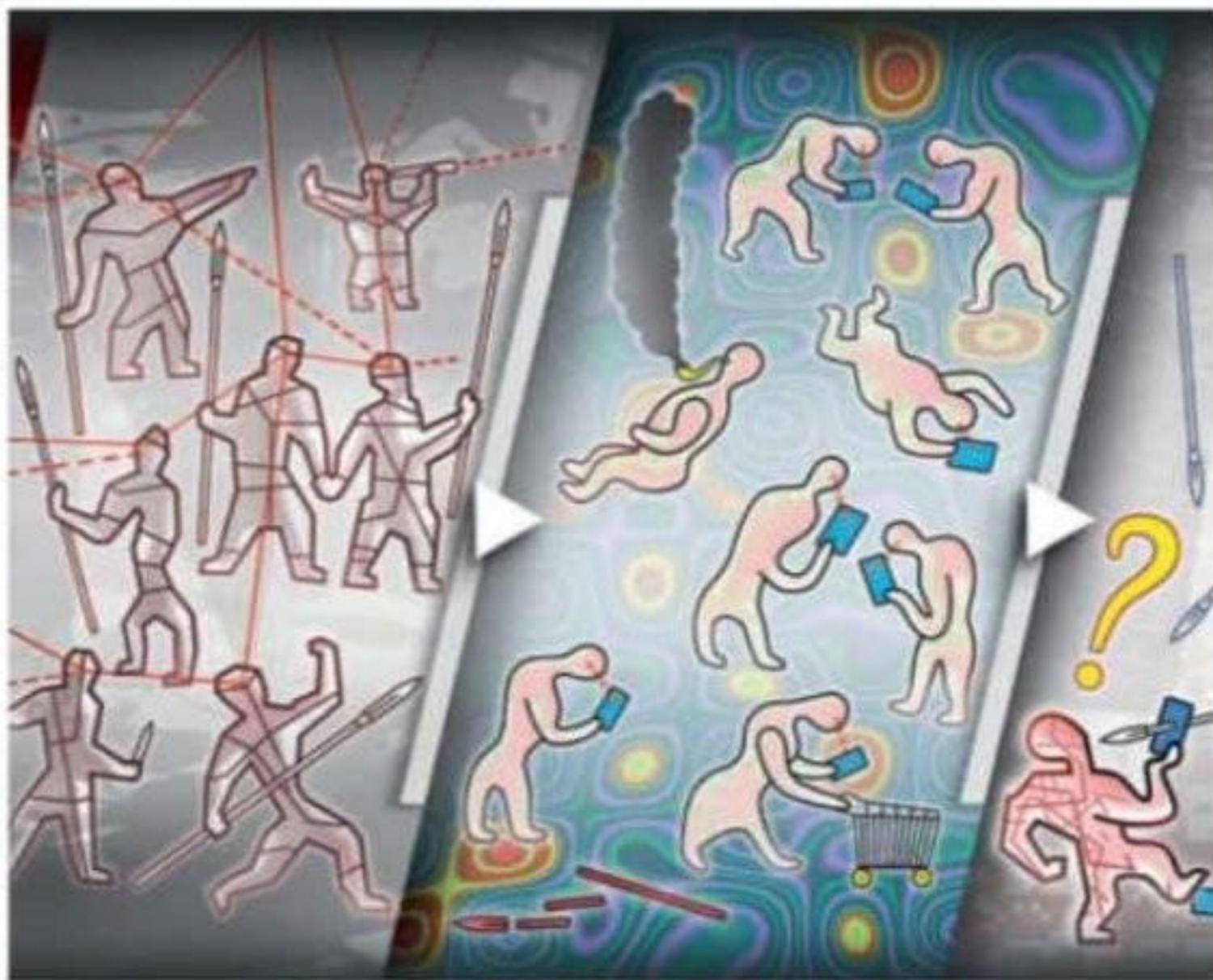
**Forever blowing**

Still, before ICOs fulfil this promise, they may well have to endure a cycle of boom and bust. Some liken the ICO craze to the South Sea bubble in the early 18th century in Britain, when promoters raised funds for companies promising the “transmutation of quicksilver into a malleable fine metal” or a “wheel for perpetual motion”. Prices soon fell, in particular after Parliament in 1720 passed the “Bubble Act” to rein in “undertakings of great advantage”. But the sorry episode was a step toward some rather useful innovations: the modern joint-stock company, for example. ■



# Free exchange | Minor threat

In times of peace, governments grow complacent



**P**ONDER the dire state of infrastructure in America and some other advanced economies, and their governments' fecklessness boggles the mind. Time was when they were able to make badly needed investments; the roads and the universities were a priority. What changed? Not for nothing do pundits cite the hustling governments of China and Singapore as evidence that liberal democracies are no longer fit for purpose. But democracy is not the problem; rather, governments may lack motivation in what is, despite appearances, an unusually peaceful world.

War is hell; the less of it the better. Yet it has also been a near-constant feature of human history, and a constant stimulus to political evolution. Defence is a textbook example of a public good. Security benefits all residents of a country, and cannot be denied to citizens who prefer not to pay for it. There is little incentive for private forces to provide defence—unless by doing so they can take over the right to extract compensation from the society they protect. Throughout history, the legitimate government is the one that can best defend its people.

As populations have grown and technology has advanced, the job of defending societies has become more complex. That, in turn, has spurred the proliferation of government responsibilities. Research by Nicola Gennaioli and Hans-Joachim Voth suggests that the growing financial demands of warfare after 1500 helped drive the formation of large, strong nation-states in Europe. The rising cost of war meant that keeping a state secure required a powerful, centralised government capable of raising large sums of money—through tax, or via modern, central bank-tended financial systems. Their work draws on research by Timothy Besley and Torsten Persson, who reckon state power built to improve defence can yield better economic policy; the capacity to use the tax system to transfer wealth directly, for instance, means society relies less on inefficient sorts of redistribution.

Military competition has long given states an interest in technological progress. But the industrial revolution and the era of total war led to dramatic changes in the reach of the state. America's federal government was slow to get involved in the education of its young people, a matter it left to state and local governments. That changed in 1958, when Dwight Eisenhower signed a law committing roughly \$1bn (more than \$8bn in 2017 dollars) to im-

proving education in science, mathematics and foreign languages, and to providing new federal loan assistance to university students. The law, the "National Defence Education Act", was a response to the launch of Sputnik and fears that America risked losing its technological lead over the Soviet Union, a critical matter of national security in the era of the nuclear-tipped ICBM.

America's experience was representative. Mr Persson, in work with Philippe Aghion and Dorothée Rouzet, examined investments in primary education across countries over the past 150 years. They found that substantial investments tend to be made at times of sharpening military rivalries or in response to recent wars, and that democratic governments are especially given to answering strategic threats with investments in schooling.

Education was not the only beneficiary. Both DARPA (an American defence-research agency responsible for the creation of the early internet, among other things) and NASA date to Eisenhower-era efforts to foster new technologies with potential strategic applications. So does the law to which America owes its expansive highway network. In the 20th century it became clear that maintaining a strategic edge required a strong, industrialised economy and a highly skilled workforce. When confronted with vulnerability, governments responded.

Despite interminable warfare in Afghanistan and the Middle East, conflicts and battle deaths have dropped since the 1990s; and the end of the cold war removed the most serious potential source of global conflict. No tears need be shed over that; besides the toll in human suffering, wars impose huge economic costs. New research by Stephen Broadberry and John Wallis finds that long-run economic advance has less to do with higher growth rates than with reduced frequency and severity of episodes of economic contraction (fighting fewer wars, for example).

Yet in the absence of acute security threats politics in many countries may have become less effective. Good economic reasons argue for investing in public goods, and for building fiscal capacity and a social safety net. But in most societies, preferences for a particular level of infrastructure investment vary far more than views of what constitutes adequate national security. Disagreements can rule out all but the easiest political bargains.

## Fight plan

Must societies choose between existential military fear and functional government? Not necessarily. Countries could get smaller. In their book "The Size of Nations", Alberto Alesina and Enrico Spolaore note that safety in numbers (ie, bigger military budgets) comes at a cost: big countries tend to be more heterogeneous politically, making it harder to satisfy voters. If a country faces fewer security threats, it pays to be smaller, with a more like-minded population. But breaking up countries can itself spark new conflicts. A non-military threat such as climate change could provide an incentive to co-operate. But reduced emissions to tackle climate change represent a global public good. Without global coordination, deadbeat countries have an incentive to free-ride on the helpful steps taken by other governments.

A peaceful world with inadequate infrastructure is preferable to one at constant risk of war but with pothole-free highways. The risk is that political frustration empowers nationalist leaders and inflames geopolitical tensions—and that governments resort to the bad, old-fashioned ways of resolving them. ■



The peopling of the Americas

## Pre-prehistoric man

**The dating of a Californian fossil site suggests *Homo sapiens* may not have been the original species of human to reach the New World**

WHEN did the first human beings arrive in the Americas? Though there are arguments about the details, the consensus is that it was around 15,000 years ago, when retreating glaciers at the end of the last ice age permitted travellers from Asia to cross what is now the Bering strait but was then dry land.

This makes sense. The evidence suggests that, recent migrants from Africa and their progeny aside, people now alive in Asia, Australia, Europe and the Americas are descended from a handful of Africans who left the continent of their birth about 70,000 years ago. This fits nicely with the conventional date for America's colonisation, by giving time for the heirs of these African émigrés to make it to eastern Asia, ready for the hop to the New World when conditions permitted.

What, then, to make of a discovery, reported in this week's *Nature*, by Thomas Deméré of the San Diego Natural History Museum and his colleagues? They have just dated an archaeological site found in California in 1992, which seems to be a place where human beings used stone tools to dismember a mastodon, a now-extinct type of elephant. Unfortunately for existing theories, the age Dr Deméré and his associates have come up with for this site is 130,000 years—a time when *Homo sapiens* was confined to Africa.

The Cerutti mastodon site, as the place

is known, is near San Diego. It is named after its discoverer, Richard Cerutti, who is one of Dr Deméré's co-authors on the paper. It contained a lone mastodon skeleton and five large cobblestones. The whole area appears to have been buried more or less intact by sediment from a stream. The cobbles are far larger than any other stones in the sediment. Marks they bear, and fragments found nearby that seem to have flaked off them, suggest they have been used as tools.

Two of the tools seem to have been anvils, and three hammerstones. Their purpose, judging from the condition of many of the mastodon's bones, which have been shattered in ways that suggest they have been hit hard and deliberately, and fragments of which (such as the two detached femur heads pictured above) are clustered around the putative anvils, was to break those bones. This might have been done to extract the nutritious marrow inside, or to use the bone-fragments themselves to make further tools. Indeed, Dr Deméré and his colleagues have conducted experiments on a modern elephant skeleton that help confirm this interpretation.

All of this was interesting 15 years ago, when the site was discovered. The stone tools found are similar to those used over 1m years ago in Africa, by *Homo erectus*, an ancestor of *Homo sapiens*, and dissimilar to the precisely crafted tools of the Clovis

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culture typical of other early-human discoveries in North America, a fact which has long been a source of speculation about the true nature of the Cerutti mastodon site. Unfortunately, no organic material remains in the bones, so they cannot be radiocarbon-dated.

It is this lack of a reliable date which the new paper addresses. A second attempt, made a few years ago using a method called optically stimulated luminescence to examine some of the site's sediment, hinted that it was at least 60,000 years old. Dr Deméré and his colleagues therefore brought a third technique, uranium-thorium dating, to bear on the matter. They used this to date fragments from several of the mastodon's bones. All agreed it had died about 130,700 years ago, give or take 9,400 years. If the cobbles at the site really are stone tools, then, the history of America's colonisation by early man will have to be rewritten.

### A mammoth conclusion

There were indeed human beings outside Africa 130,000 years ago, but they were not *Homo sapiens*. Europe was populated by Neanderthal man, *Homo neanderthalensis*. Parts of Asia were inhabited by a recently discovered (and, as-yet not formally named) species called the Denisovans. Fossils of *Homo erectus* are known from China, Indonesia, India and Georgia—and though most of these remains are clearly older than 130,000 years, some researchers believe the species was still around then. On top of all these widespread species, moreover, the island of Flores, also in Indonesia, was home to a type of dwarf human, *Homo floresiensis*, only a little after the period in question.

The date Dr Deméré has come up with is propitious, too. It coincides with the last

► interglacial warm period before the present one—a time when a crossing from Asia to America would not have been blocked by sky-high walls of ice. That the arrival of modern man in the New World was anticipated by more than 100,000 years, by an earlier species, is by no means unlikely.

Concluding that the Cerutti mastodon site was a butcher's shop does, though, depend on the five cobblestones in question actually being tools. By itself, a 130,000-year-old skeleton proves nothing. Dr Deméré's arguments that the fragmentation patterns of the mastodon's bones and the ways those bones are gathered around the putative anvils both indicate deliberation, and that the flakes from the cobbles were caused by hammerstones hitting those anvils, are persuasive, but not probative. Settling the matter would require some bones from early humans themselves to turn up.

These findings do, however, shine a spotlight on claims of greater antiquity than 15,000 years that have been made in the past for a few other sites in the Americas, notably the Calico Hills, also in California, and Pedra Furada, in Brazil. Nothing unarguably as old as the Cerutti mastodon skeleton has yet been unearthed in these places, but the dating of that skeleton should prompt renewed investigation, and also a search for other possible sites.

As to the fate of any pre-aboriginal Americans, that would be pure speculation. Suffice to say that the Neanderthals, the Denisovans and the "hobbits" of Flores did not long outlast the arrival of *Homo sapiens* in their respective necks of the woods. Any cousins these species did have in the Americas would be unlikely to have fared better. ■

#### Cyber-security

## Stream slip

WASHINGTON, DC

#### A different kind of film review

**R**EMEMBER that racy film you probably should not have enjoyed on Netflix last weekend? Eran Tromer's algorithms can tell what it was. Although videos streamed from services such as Netflix, Amazon and YouTube are encrypted in various ways to ensure privacy, all have one thing in common: they leak information. Dr Tromer, of Tel Aviv university, his colleague Roei Schuster and Vitaly Shmatikov of Cornell have worked out how those leaks can identify the film you are watching—even if they cannot directly observe the stream of bits delivering it, or obtain access to the device on which you are watching it.

Videos streamed over the internet are



We know what you're doing

usually transmitted using a standard called **MPEG-DASH**. This chops a data stream up into segments that are then encrypted and fetched one at a time by the machine playing the video. The result is an on-off, "bursty" pattern of data arrival. But not all segments are equal. One depicting the mating habits of sloths will contain less information than another showing a car chase. Streaming services use something called variable bit-rate (VBR) compression to take advantage of this. Amorous-sloth segments are compressed to a greater degree than those involving car chases, reducing the overall amount of data that must be transmitted. That means segments of the same duration (in seconds) have different sizes (in bytes). The resulting pattern forms a video fingerprint.

Dr Tromer's method recognises this fingerprint by comparing it with a pre-assembled library of such prints that a snooper has made from videos the viewership of which he might want to follow. The detection algorithm involved is a version of a program called a neural network, a type of software adept at signal-recognition tasks. Once trained, Dr Tromer's neural network can identify films with up to 99% accuracy, based on a fingerprint between one and five minutes long.

The cleverest part, though, is that, unlike other efforts to exploit leaky video streams, it does not actually need direct access to the stream itself, or even to the device the video is being shown on. By planting a small amount of JavaScript code in a web browser on a personal computer or smartphone that is merely attached to the same Wi-Fi network as the viewer's device, the film being watched can be identified with almost the same accuracy.

Web browsers confine JavaScript—which is ubiquitous in web pages and ad-

vertisements, and runs automatically—to a "sandbox" supposed to prevent it from collecting private information. JavaScript code can, however, still communicate with the computer server that sent it—and this is enough for Dr Tromer. It enables his implant to flood the entire Wi-Fi network with random data, creating congestion. The result is that a video stream feeding another device on the network will create bursty delays in the JavaScript's communications with its own server. Measuring these is enough for the spyware to be able to identify the film being watched.

Such information can reveal a lot about a viewer's personality, preferences, politics and so forth. As Dr Tromer notes, by being able to monitor this, "I can show personalised ads based on your viewing habits, adjust your insurance premiums or send in the Spanish Inquisition." That last suggestion, tongue-in-cheek though it may be, is the most troubling. Censors using his technique could spot and block the viewing of things they disapproved of, no matter how highly encrypted those things were.

At the moment, there is no practical way to derail such attacks. Eliminating VBR would increase network congestion, bringing data-buffers into play to deal with information overflow and underflow. That would translate, for viewers, into the resurrection of buffering messages, now largely a thing of the past.

In most countries, placing this sort of spyware on a machine without permission would be illegal. But its ability to spy remotely might get around that. Also, blanket permissions associated with installing new software, carelessly agreed to, might see it arrive on clueless users' machines within the letter, if not the spirit of the law. Mind how you go, then. And watch what you watch. ■

**Waste disposal**

## Moth-eaten

### Could caterpillars save the planet from plastic waste?

MOST scientific research follows a logical progression, with one experiment following up on the findings of another. Every now and then, however, serendipity plays a part. Such is the case with a paper just published in *Current Biology*, which reveals to the world a moth capable of chewing up plastic.

The experiment behind the paper was inspired when Federica Bertocchini, an amateur beekeeper who is also a biologist at Cantabria University, in Spain, noticed caterpillars chewing holes through the wax in some of her hives and lapping up the honey. To identify them, she took some home in a plastic shopping bag. But when, a few hours later, she got around to looking at her captives she found the bag was full of holes and the caterpillars were roaming around her house.

After rounding them up, she identified them as larvae of the greater wax moth, a well-known pest of bee hives. On considering their escape from their shopping-bag prison, though, she wondered whether they might somehow be put to work as garbage-disposal agents.

Past attempts to use living organisms to get rid of plastics have not gone well. Even the most promising species, a bacterium called *Nocardia asteroides*, takes more than six months to obliterate a film of plastic a mere half millimetre thick. Judging by the job they had done on her bag, Dr Bertocchini suspected wax-moth caterpillars would perform much better than that.

To test this idea, she teamed up with Paolo Bombelli and Christopher Howe, two biochemists at Cambridge University. Dr Bombelli and Dr Howe pointed out that, like beeswax, many plastics are held together by methylene bridges (structures that consist of one carbon and two hydrogen atoms, with the carbon also linked to two other atoms). Few organisms have enzymes that can break such bridges, which is why these plastics are not normally biodegradable. The team suspected wax moths had cracked the problem.

One of the most persistent constituents of rubbish dumps is polyethylene, which is composed entirely of methylene bridges linked to one another. So it was on polyethylene that the trio concentrated. When they put wax-moth caterpillars onto the sort of film it had taken *Nocardia asteroides* half a year to deal with, they found that holes appeared in it within 40 minutes.

On closer examination, Dr Bertocchini

and her colleagues discovered that their caterpillars each ate an average of 2.2 holes, three millimetres across, every hour, in the plastic film. A follow-up test found that a caterpillar took about 12 hours to consume a milligram of shopping bag. Such bags weigh about three grams, so 100 larvae might, if they spent half their lives eating, consume one in a month.

Whether releasing wax moths on the world's surplus plastic really is sensible is not yet clear. For one thing, it has not been established whether the caterpillars gain nutritional value from the plastics they eat, as well as being able to digest them. If they do not, their lives as garbage-disposal operatives are likely to be short—and, even if they do, they will need other nutrients to thrive and grow. Another question is the composition of their faeces. If these turn out to be toxic, then there will be little point in pursuing the matter. Regardless of this, though, the discovery that wax-moth larvae can eat plastic is intriguing. Even if the moths themselves are not the answer to the problem of plastic waste, some other animal out there might be. ■

**An artificial womb**

## The ultimate grow-bag

### To save children born prematurely, a man-made uterus would help

THESE days, in rich countries, premature birth is the main cause of infant mortality. A baby born at 23 weeks—just over half way through a normal pregnancy—has a fighting chance of survival. But underdeveloped lungs struggle to cope with breathing air. External pumps used to circulate blood impose potentially fatal stresses on tiny hearts. Those that do pull through are often left with lifelong problems that range from brain damage to blindness. In a paper just published in *Nature Communications*, a team of doctors at the Children's Hospital of Philadelphia, led by Alan Flake, describe an artificial womb that, they hope, could improve

things dramatically, boosting the survival rate of the most premature babies while reducing the chance of lasting disabilities.

The device, which looks a bit like a high-tech jiffy bag, is designed to mimic a real womb as closely as possible (see pictures below, of fetuses after four and 28 days in the artificial womb). The fetus—a lamb in the team's trials—is surrounded in a substitute for the amniotic fluid that keeps the animal's lungs filled with liquid in a real uterus. Once the fetus is placed inside the bag it is sealed, to prevent germs entering. The cannulas which carry blood away to be recharged with oxygen and nutrients are inserted into the animal's umbilical cord, and the tubing in the oxygen-exchange system is short, which lets the researchers dispense with pumps entirely. Instead, they rely on the animal's own heart to push blood around the system.

The results are impressive. The artificial womb kept premature lambs alive for four weeks, which is longer than any previous attempt. (The researchers say they could have carried on for longer still, had their trial protocols not forbidden it.) The lambs developed normally, growing wool and moving around as they would in a natural womb. When Dr Flake's team subsequently dissected them, they found no evidence of the strokes that sometimes afflict premature babies in conventional incubators.

The aim is to produce a system that could help human babies born at 23 weeks, which is currently the lower limit of viability (between a third and half of such babies survive, and even that requires heroic efforts). It will be a while, though, before the technology arrives in hospitals. For one thing, the parallels between sheep and people are not perfect. Human fetuses at a similar stage of gestation are only about a third of the size of lambs, so the equipment will have to be shrunk commensurately. And any procedure applied to such delicate patients will require a lot of proving before regulators give the go-ahead. Treating mothers at risk of premature birth with steroids, for instance, helps prepare their babies' lungs for breathing air, and is now routine. But it took more than 20 years of tests and research before that discovery was deemed robust enough to make its way into hospitals. ■



Sheep may safely laze





### The Reformation in England

## Fanning the flames

**The English were surprisingly divided about the Tudors' break with the pope in Rome and the introduction of the Reformation**

JUST a day after the English Book of Common Prayer was first used in Sampford Courtenay, Devon, on Whitsunday in 1549, an angry mob appeared at the church door. They demanded that the elderly rector reconsider using the new liturgy. Somewhat sheepishly, one imagines, he decided to don his popish vestments and revert to saying the Latin mass.

That village protest was the first of a series of English uprisings in Norfolk, Oxfordshire and the south-west, which led to perhaps 10,000 deaths as King Edward VI's regime suppressed dissent. It would be a mistake to think that the English Reformation was mostly peaceful, with beheadings and burnings confined to a small and fervent elite.

The historiography of Tudor England usually focuses on the monarchs' Reformation: how the state imposed religious change on the nation. Shelves groan with royal histories, but new accounts of how the ordinary English felt, objected to and imbibed it all are much more scarce. On the 500th anniversary of Martin Luther's Reformation, Peter Marshall has written a fine history of a momentous time as seen from the bottom up, drawing on a wide range of primary sources and his evident scholarship.

Mr Marshall has two contentions. First, that the English did not meekly comply with religious change. In the cities they

**Heretics and Believers: A History of the English Reformation.** By Peter Marshall. Yale University Press; 652 pages; £30. To be published in America in June, \$40

were enthused by it, but many others resisted, especially in the rural and conservative north and west of the country. Second, that though royal supremacy was the aim, the state ultimately lost control as Christian pluralism flowered. In places the King's majesty was questioned, as some began to think afresh about monarchy and church government. England ended with a less united religion than it had at the start of the 16th century.

The central story will be familiar. Henry VIII wanted to cut financial and legal ties to the Catholic church, in order to achieve national sovereignty and marry whom he liked. He was keen to shut down monasteries, rivals to kingly power for nearly 1,000 years, but he was never a zealous advocate of radical new ideas, about the meaning of the communion service, for example.

Henry's attempts to please opposing court factions left England with a vague, incoherent set of tenets for a church without a pope, thinks Mr Marshall. Confusion about the national religion led more people to define and investigate their faith for themselves. Under Henry's children,

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Edward VI and Mary, state zealotry fuelled outrage and enthusiasm. Edward's ministers set out to destroy idolatry in church, including saints' paintings, church silver, inappropriate altars and glitzy vestments. Mary returned sovereignty to Rome and launched a campaign of burning heretics.

In St Paul's Cathedral hung a rood, a grand figure of Christ on the cross, the centre of the medieval churchgoer's attention and piety, which provided a political bellwether through these years. The rood was ordered to come down under Edward. It crashed to the floor, killing two labourers beneath: perhaps not a great omen. The rood was ordered up again in Mary's reign. A man rose from his pew to deliver a mocking encomium to "your Mastership", the ascendant rood. It soon came down again under Elizabeth I.

What became known as the Elizabethan settlement—a return to Protestantism—far from settled the matter. The queen's bishops wanted to go further than Edward VI; some in England wished to ban bishops altogether, looking to John Calvin in Geneva for inspiration. Elizabeth's bishops despaired of her liking for icons and vestments, but defended her nonetheless.

Mr Marshall provides convincing evidence that Catholicism survived well into Elizabeth's reign. At least 800 clergymen were deprived or removed themselves for reasons of conscience, including as many as a quarter of the clergy in one diocese, Rochester, that is not far from Canterbury. Only 21 out of 90 senior clergy in northern England assented to the settlement, and 36 openly disagreed. Dissent among middle-ranking clergy was even higher. Of those not removed by the 1559 flu epidemic, fewer than half wished to continue.

A rebellion reckoned to be 7,000-strong in favour of the pope in 1569 was brutally ►

▶ suppressed. Many followers of the old religion simply conformed and dissembled. It is hard to understand how the people coped through these years. Tombs were vandalised; vicars protested at funerals. One village curate was known to shave his Protestant beard every time a change in religion was rumoured. However the English survived the Reformation, they did so as a nation divided.

Whig histories typically focus on the progress that the state and evangelicals made in forging a Church of England: a history of the winners. Mr Marshall's contribution is a riveting account of the losers as well, the English zealots and cynics who wanted a better world or an unchanging one. The resulting story is of a Henrician supremacy that failed and an Elizabethan unity that never was. ■

#### Britain and the European Union

## Brexit blues

**Brexit: Why Britain Voted to Leave the European Union.** By Harold Clarke, Matthew Goodwin and Paul Whiteley. Cambridge University Press; 256 pages; £15.99 and \$19.99

THERE are many theories about why Britons voted last June to leave the European Union. They include hostility to immigration, dislike of Brussels bureaucrats, worries about sovereignty, an anti-elite mood, the discontent of those left behind by globalisation, a long history of Euroscepticism and a stridently anti-EU press. Yet analysis of hard survey data is rare. The great virtue of "Brexit: Why Britain Voted to Leave the European Union", by three academics, is that it is based on detailed regression analyses of panel surveys carried out both before and after the vote.

Using data as opposed to hunches yields interesting results, even if many confirm conventional wisdom. One concerns who mostly voted for Brexit. The answer is old people, non-graduates and those from lower social grades. Although members of the UK Independence Party (UKIP), founded to take Britain out, tend to be male, there was no gender bias. Nor were Brexit voters necessarily poor: many were in the home counties and south as well as the less well-off north and east.

A second is the importance of immigration. When David Cameron promised a referendum in his speech at Bloomberg in January 2013, he made no reference to this. Even many Tories who, unlike Mr Cameron, campaigned for Brexit stressed regaining sovereignty, not reducing the numbers coming into the country. But the authors put more credence on the goal of Nigel Far-

age, UKIP's then leader: to make people see migration and Europe as the same.

Indeed, a third conclusion is the central role of UKIP and Mr Farage. It was the rise of UKIP, more than his own restive back-benchers, that drove Mr Cameron to offer the referendum. And far from causing damage, splits within the Leave campaign may even have helped. Mr Farage could appeal to those once dismissed by Mr Cameron as "fruitcakes, loonies and closet racists", while Boris Johnson and Michael Gove, two leading Tory Brexiteers, could win over the more globally minded.

Yet Brexit did not prevail just because Leavers outfought Remainers. More important were what this book calls baked-in views, built up over years of criticism of the EU. When Mr Cameron came back from Brussels in February 2016 to campaign to Remain, his credibility was weakened by his previous attacks. Even armed with dire warnings of the costs of Brexit (so-called "Project Fear"), it proved impossible to persuade voters—partly because many who believed Project Fear consciously decided to give priority to curbing migration. Remainers never tried to make a serious case in favour of immigration.

More controversially, the authors argue that there may turn out not to be large costs from Brexit. They note that, for most countries (including Britain), EU membership has not had much impact: accession to the club has more often than not been followed by slower growth. Yet this is not convincing. Nobody knows what would have happened had the country not joined. And most economists, including those at the impartial Bank of England, reckon that membership has made Britain more competitive, raising growth.

What may be true is that other policy choices matter more than being in the world's largest trading block. That notion

chimes with the different economic performance of EU countries. Broadly, Germany and the Scandinavians have done well, whereas France and the Mediterranean countries have not. On this basis, a post-Brexit Britain could prosper—so long as it follows good pro-growth policies. As an ill-tempered election in June draws near, however, that proviso is worrying. ■

#### Sheryl Sandberg on grief

## To have and to hold

**Option B: Facing Adversity, Building Resilience and Finding Joy.** By Sheryl Sandberg and Adam Grant. Knopf; 240 pages; \$25.95. W.H. Allen; £16.99

IN 2013 Sheryl Sandberg became famous, thanks to "Lean In", her book about how women can control their own fate if they "lean in" to opportunities. But in 2015, the senior Facebook executive was reminded that you can lean in and still fail to control the direction of your life. While on holiday in Mexico, her husband, Dave Goldberg, suffered from a heart arrhythmia, fell off a treadmill and died.

Ms Sandberg shares a great deal of herself and what she has learned since in "Option B", which she has written with Adam Grant, a professor of psychology and management at the University of Pennsylvania's Wharton School and author of "Originals", a business book about "out-of-the-box" thinking. "Option B" takes its name from an anecdote in which Ms Sandberg tells a friend that she does not want to take part in a parent-child activity without Goldberg; with option A not available, she has to choose the second-best option.

At its core "Option B" is a self-help book for those who have been felled by despair. People who have not experienced tragedy often distance themselves from mourners, uncertain of what to say or how to act. But what mourners want is for others to recognise their pain, not hide from it. This book is a guide both for those who have directly suffered loss and for those who are close to people who have. Its optimistic thesis is that adversity can change people for the better. They can "bounce forward" after a tragedy and become more resilient.

Ms Sandberg tracks how her behaviour and perceptions of life changed when she lost her husband. She acknowledges that she was too simplistic in her earlier book, telling women looking to excel professionally that they should share household chores with their husbands. Many women are single mothers, who raise children alone without a partner. Ms Sandberg realised this when she found herself suddenly ►



Cold shoulder

## Fiction from Denmark

# High anxiety

**Mirror, Shoulder, Signal.** By Dorthe Nors. Translated by Misha Hoekstra. Pushkin Press; 188 pages; £10.99

**S**ONJA, the heroine of "Mirror, Shoulder, Signal", is single and perplexed, and has reached the age when "everything that's supposed to get easier in life persists in being complicated". Dorthe Nors (pictured) wraps bittersweet recollections of Sonja's girlhood on a farm in Jutland and her lonely, "oddball" youth around her driving lessons through the Copenhagen suburbs.

Shortlisted for this year's Man Booker International prize, this sly, deadpan Danish novel steers its mischievous comedy of character and manners over a "viscid underworld of sorrow". Always the outsider, Sonja evokes her smugly well-adjusted sister Kate, once a "barn-dance femme fatale" and now also a caring super-mum; Ellen, a massage-therapist; and a psychologist chum called Molly. All are overconfident interpreters of a reality that Sonja "was never able to explain". There are also glimpses of a vanished lover, "Paul the Ex".

If the present baffles, the past consoles. Sonja sees memories in visions of swans in flight, of rustling rye-fields in Jutland and in the "vast, eerie, and capricious" wilderness of Loenborg Heath. Sonja thinks that she resembles her mother: both gifted with "rich, expansive inner worlds" but, as women, "not completely fine-tuned".

With its endearingly maverick hero-

► on her own, albeit with vastly more resources than most.

The most provocative chapter is about widowhood and dating after losing a spouse. Women are judged harshly for finding another partner. Among the middle-aged, more than half of men are in a romantic relationship a year after losing their spouse, compared with only 7% of women. Ms Sandberg experienced at first hand the guilt and stigma that accompany contemplating moving forward, although she was fortunate to have support from Goldberg's mother and brother.

The author is admirably and chillingly honest in the details she shares about the aftermath of Goldberg's death. She describes the "primal screams" of her children, when she tells them their father is dead, and how her mother slept in her bed for a month, holding her as she cried each night. Recounting these stories takes cour-



No hygge for her

ine, Ms Nors's novel delivers a bracing antidote to the cult of *hygge*—which has smothered Denmark's global image under a hand-knitted jumper of sentimental bonhomie. Misha Hoekstra, the translator, smartly matches Sonja's erratic course: gawky one moment; graceful the next.

Ms Nors, meanwhile, deals a vicious blow to another Nordic stereotype. Sonja earns her living translating a Swedish crime writer, Gosta Svensson, an idolised star of noir who tends in his books to leave "mutilated women and children... rotting everywhere on Scandinavian public land". His latest chart-topper has wowed the critics as "a harrowing read about human trafficking". Ms Nors, in contrast, turns her gridlocked human traffic into a transport of delight.

age, especially for a businesswoman who always appears highly scripted in her public statements.

"Option B" will be helpful for many mourners. But two things hold it back. Although the book has two authors, Ms Sandberg narrates in the first person and Mr Grant is referred to in the third. It feels unbalanced. Indeed, Mr Grant does not really appear until about a quarter of the way through the book, and the reader may be left wondering whose voice is really telling this story. Corporate self-promotion also sneaks into the book's pages, where it does not belong, with mentions of Facebook's power to connect grievers and make the world better. In the end an online social network can never really lift someone's fog of grief; it needs time, strength and a willingness to believe that, against the odds, something good can one day emerge from the bad. ■

## The Museum of the American Revolution

# A hymn to the republic

## PHILADELPHIA

A new museum re-examines the birth of America

FOR people who pride themselves on keeping their eyes on the future, Americans often seem mired in their own history. Here the past is never safely buried, but is continually exhumed to shape and reshape the present. Political battles are waged through contested narratives that have been centuries in the making.

The new Museum of the American Revolution in Philadelphia, which is only two streets from Independence Hall, the nation's birthplace, will help shape people's understanding of the founding struggle for many years to come. David McCullough, a Pulitzer prize-winning historian and long-time champion of the project, believes it will serve as an exemplar for an age sorely in need of a moral compass. He hopes that learning more about those who were engaged in the desperate struggle for liberty—in particular the example of George Washington—will inspire current and future generations. "Character, it's what counts most of all. [That is] what's taught in the story of the revolution," he says.

The museum tries hard to break down the barriers that separate the 18th century from today. Its handsome new classical brick-clad building engages in friendly dialogue with the historical buildings around it. Inside, the conversation between old and new is amped up a couple of decibels. On one side are Revolutionary-era artefacts, including weapons of war like a musket commissioned by Washington from a Philadelphia gunsmith, as well as everyday objects and political texts, including a page from the *Pennsylvania Evening Post* of July 6th 1776, with the first published text of the Declaration of Independence.

Fleshing out these stories are tableaux with life-size mannequins that recreate telling moments: the toppling of a statue of King George in New York; a meeting of the leaders of the Oneida Indian Nation as they debate whether to join the colonists' struggle. The story of the nation's founding springs to life in an atmosphere that more closely resembles a theme park than a traditional archive. In one gallery visitors are thrown into the heart of the action through a multimedia restaging of the Battle of Brandywine, complete with fog machine and ground-shaking effects.

One thing is clear: this is not your grandfather's museum, either in the story it tells or in the way it tells it. Scott Stephenson, head of collections, exhibitions and ►

► programming, says he does not want to present history as a pious sermon but as "a richer, messier tale". This messier tale exposes the hypocrisy of people who fought in the name of liberty while denying it to others. The stirring rhetoric of the Declaration of Independence can ring a bit hollow as visitors contemplate shackles small enough to bind the limbs of the youngest slaves.

Still, there is plenty that is uplifting on display as well: stories of heroic sacrifice, including harrowing tales of the bitter winter at Valley Forge or of scrappy Minutemen facing off against hardened veter-

ans at Lexington and Concord. The museum celebrates high ideals that were not always lived up to in practice but that paved the way for future advances in human rights.

The way that history and its symbols are so often the subject of a struggle is captured here by the saga of the museum's star attraction: Washington's headquarters tent, which served as the general's mobile home throughout most of the war. Passed down through the family of Washington's widow, the tent came into the possession of Mary Custis Lee, the wife of Robert E. Lee who commanded the army that

attempted, in the 1860s, to tear apart the nation that Washington had worked so hard to stitch together.

When General Lee's Virginia home was overrun by Union soldiers, the tent was brought back to the capital and put on display to serve as a patriotic rallying-point. Forty years later it was returned to the family, and later sold to raise money to support the widows of Confederate veterans. Now, treated as a sacred relic, Washington's wartime headquarters forms the centrepiece of a new museum dedicated to the continuing American argument over the meaning of its past. ■

## Johnson | Word for word

**Translation platforms such as Google Translate cannot replace humans, but they are still astonishingly useful**

**A**RAB newspapers have a reputation, partly deserved, for tamely taking the official line. On any given day, for example, you might read that "a source close to the Iranian Foreign Ministry told *Al-Hayat* that 'Tehran will continue to abide by the terms of the nuclear agreement as long as the other side does the same.'" But the exceptional thing about this unexceptional story is that, thanks to Google, English-speaking readers can now read this in the Arab papers themselves.

In the past few months free online translators have suddenly got much better. This may come as a surprise to those who have tried to make use of them in the past. But in November Google unveiled a new version of Translate. The old version, called "phrase-based" machine translation, worked on hunks of a sentence separately, with an output that was usually choppy and often inaccurate.

The new system still makes mistakes, but these are now relatively rare, where once they were ubiquitous. It uses an artificial neural network, linking digital "neurons" in several layers, each one feeding its output to the next layer, in an approach that is loosely modelled on the human brain. Neural-translation systems, like the phrase-based systems before them, are first "trained" by huge volumes of text translated by humans. But the neural version takes each word, and uses the surrounding context to turn it into a kind of abstract digital representation. It then tries to find the closest matching representation in the target language, based on what it has learned before. Neural translation handles long sentences much better than previous versions did.

The new Google Translate began by translating eight languages to and from English, most of them European. It is much easier for machines (and humans)

to translate between closely related languages. But Google has also extended its neural engine to languages like Chinese (included in the first batch) and, more recently, to Arabic, Hebrew, Russian and Vietnamese, an exciting leap forward for these languages that are both important and difficult. On April 25th Google extended neural translation to nine Indian languages. Microsoft also has a neural system for several hard languages.

Google Translate does still occasionally garble sentences. The introduction to a *Haaretz* story in Hebrew had text that Google translated as: "According to the results of the truth in the first round of the presidential elections, Macaron and Le Pen went to the second round on May 7. In third place are Francois Peyon of the Right and Jean-Luc of Lanschon on the far left." If you don't know what this is about, it is nigh on useless. But if you know that it is about the French election, you can see that the en-

gine has badly translated "samples of the official results" as "results of the truth". It has also given odd transliterations for (Emmanuel) Macron and (François) Fillon (p and f can be the same letter in Hebrew). And it has done something particularly funny with Jean-Luc Mélenchon's surname. "Me-" can mean "of" in Hebrew. The system is "dumb", having no way of knowing that Mr Mélenchon is a French politician. It has merely been trained on lots of text previously translated from Hebrew to English.

Such fairly predictable errors should gradually be winnowed out as the programmers improve the system. But some "mistakes" from neural-translation systems can seem mysterious. Users have found that typing in random characters in languages such as Thai, for example, results in Google producing oddly surreal "translations" like: "There are six sparks in the sky, each with six spheres. The sphere of the sphere is the sphere of the sphere."

Although this might put a few post-modern poets out of work, neural-translation systems aren't ready to replace humans any time soon. Literature requires far too supple an understanding of the author's intentions and culture for machines to do the job. And for critical work—technical, financial or legal, say—small mistakes (of which even the best systems still produce plenty) are unacceptable; a human will at the very least have to be at the wheel to vet and edit the output of automatic systems.

Online translating is of great benefit to the globally curious. Many people long to see what other cultures are reading and talking about, but have no time to learn the languages. Though still finding its feet, the new generation of translation software dangles the promise of being able to do just that.



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**Economic data**

% change on year ago

	Gross domestic product			Industrial production latest	Consumer prices latest	Unemployment rate, %	Current-account balance		Budget balance 2017†	Interest rates, % 10-year gov't bonds, latest	Currency units, per \$	
	latest	qtr*	2017†				latest 12 months, \$bn	% of GDP 2017†				
United States	+2.0	Q4	+2.1	+2.3	+1.5 Mar	+2.4 Mar	+2.4	4.5 Mar	-481.2 Q4	-2.8	-3.5	2.27
China	+6.9	Q1	+5.3	+6.5	+7.6 Mar	+0.9 Mar	+2.3	4.0 Q1§	+196.4 Q4	+1.7	-4.0	3.35§§
Japan	+1.6	Q4	+1.2	+1.2	+4.7 Feb	+0.2 Feb	+0.7	2.8 Feb	+187.8 Feb	+3.5	-5.3	0.02
Britain	+1.9	Q4	+2.7	+1.7	+2.8 Feb	+2.3 Mar	+2.7	4.7 Jan††	-115.7 Q4	-4.0	-4.0	1.09
Canada	+1.9	Q4	+2.6	+2.0	+3.5 Jan	+1.6 Mar	+1.9	6.7 Mar	-51.2 Q4	-2.7	-2.7	1.48
Euro area	+1.8	Q4	+1.9	+1.6	+1.2 Feb	+1.5 Mar	+1.6	9.5 Feb	+398.9 Feb	+3.0	-1.6	0.36
Austria	+1.7	Q4	+2.0	+1.6	+3.1 Feb	+2.0 Mar	+1.7	5.7 Feb	+6.6 Q4	+2.4	-1.1	0.63
Belgium	+1.2	Q4	+2.0	+1.4	+4.0 Feb	+2.3 Mar	+2.0	7.0 Feb	-2.0 Dec	+1.1	-2.7	0.81
France	+1.1	Q4	+1.7	+1.3	-0.7 Feb	+1.1 Mar	+1.3	10.0 Feb	-28.5 Feb	-1.0	-3.1	0.83
Germany	+1.8	Q4	+1.7	+1.6	+2.3 Feb	+1.6 Mar	+1.8	3.9 Feb†	+287.3 Feb	+8.2	+0.5	0.36
Greece	-1.4	Q4	-4.8	+1.2	+10.7 Feb	+1.7 Mar	+1.0	23.5 Jan	-0.7 Feb	-0.8	-4.2	6.41
Italy	+1.0	Q4	+0.7	+0.9	+1.9 Feb	+1.4 Mar	+1.4	11.5 Feb	+46.8 Feb	+2.5	-2.3	2.32
Netherlands	+2.5	Q4	+2.5	+2.0	+5.1 Feb	+1.1 Mar	+1.2	6.1 Mar	+64.8 Q4	+8.5	+0.6	0.61
Spain	+3.0	Q4	+2.8	+2.6	-1.7 Feb	+2.3 Mar	+2.2	18.0 Feb	+24.9 Jan	+1.5	-3.3	1.61
Czech Republic	+2.0	Q4	+1.6	+2.5	+2.7 Feb	+2.6 Mar	+2.4	3.5 Feb†	+2.3 Q4	+0.7	-0.5	1.04
Denmark	+2.3	Q4	+1.9	+1.4	+2.3 Feb	+1.0 Mar	+1.2	4.3 Feb	+24.9 Feb	+7.1	-1.4	0.66
Norway	+1.8	Q4	+4.5	+1.7	-4.0 Feb	+2.4 Mar	+2.4	4.2 Jan‡‡	+18.1 Q4	+4.9	+2.7	1.67
Poland	+3.3	Q4	+6.6	+3.2	+11.1 Mar	+2.0 Mar	+2.0	8.1 Mar§	+0.4 Feb	-1.2	-3.2	3.46
Russia	+0.3	Q4	na	+1.4	+0.8 Mar	+4.2 Mar	+4.5	5.4 Mar§	+34.9 Q1	+2.8	-2.8	8.13
Sweden	+2.3	Q4	+4.2	+2.6	+4.1 Feb	+1.3 Mar	+1.6	6.8 Mar§	+23.7 Q4	+4.8	-0.4	0.65
Switzerland	+0.6	Q4	+0.3	+1.4	-1.2 Q4	+0.6 Mar	+0.5	3.3 Mar	+70.6 Q4	+9.7	+0.2	-0.08
Turkey	+3.5	Q4	na	+2.6	-1.7 Feb	+11.3 Mar	+9.7	13.0 Jan§	-33.7 Feb	-4.4	-2.0	10.53
Australia	+2.4	Q4	+4.4	+2.7	+1.0 Q4	+2.1 Q1	+2.1	5.9 Mar	-33.1 Q4	-1.3	-1.8	2.63
Hong Kong	+3.1	Q4	+4.8	+2.6	-0.9 Q4	+0.5 Mar	+1.7	3.2 Mar‡‡	+14.5 Q4	+5.9	+1.5	1.49
India	+7.0	Q4	+5.1	+7.2	-1.2 Feb	+3.8 Mar	+4.6	5.0 2015	-11.9 Q4	-1.0	-3.2	6.95
Indonesia	+4.9	Q4	na	+5.2	+3.3 Feb	+3.6 Mar	+4.3	5.6 Q3§	-16.3 Q4	-2.0	-2.2	7.00
Malaysia	+4.5	Q4	na	+4.3	+4.7 Feb	+5.1 Mar	+4.0	3.5 Feb§	+6.0 Q4	+2.8	-3.1	4.09
Pakistan	+5.7	2016**	na	+5.4	+8.1 Feb	+4.9 Mar	+4.6	5.9 2015	-7.1 Q1	-2.6	-4.8	8.98†††
Philippines	+6.6	Q4	+7.0	+6.6	+10.8 Feb	+3.4 Mar	+3.3	6.6 Q1§	+0.6 Dec	+0.3	-2.4	5.13
Singapore	+2.9	Q4	-1.9	+2.1	+10.2 Mar	+0.7 Mar	+1.3	2.2 Q4	+56.7 Q4	+19.2	-1.0	2.18
South Korea	+2.8	Q1	+3.6	+2.5	+6.6 Feb	+2.2 Mar	+1.8	4.2 Mar§	+97.6 Feb	+6.4	-1.0	2.21
Taiwan	+2.9	Q4	+1.8	+1.8	+3.2 Mar	+0.2 Mar	+2.1	3.8 Mar	+70.9 Q4	+12.1	-0.7	1.11
Thailand	+3.0	Q4	+1.7	+3.5	-1.5 Feb	+0.8 Mar	+1.3	1.1 Feb§	+46.8 Q4	+11.7	-2.3	2.51
Argentina	-2.1	Q4	+1.9	+2.7	-2.5 Oct	— ***	—	7.6 Q4§	-15.0 Q4	-2.7	-4.2	na
Brazil	-2.5	Q4	-3.4	+0.6	-0.8 Feb	+4.6 Mar	+4.5	13.2 Feb§	-20.6 Mar	-1.6	-7.7	9.98
Chile	+0.5	Q4	-1.4	+1.8	-7.6 Feb	+2.7 Mar	+3.0	6.4 Feb§††	-3.6 Q4	-1.3	-2.2	3.95
Colombia	+1.6	Q4	+4.0	+2.2	-3.2 Feb	+4.7 Mar	+4.1	10.5 Feb§	-12.5 Q4	-3.5	-3.1	6.34
Mexico	+2.4	Q4	+2.9	+1.5	-1.7 Feb	+5.4 Mar	+5.0	3.5 Mar	-27.9 Q4	-2.6	-2.5	7.28
Venezuela	-8.8	Q4~	-6.2	-5.5	na	na	+562	7.3 Apr§	-17.8 Q3~	-1.5	-19.6	10.43
Egypt	+3.4	Q3	na	+3.9	+23.9 Feb	+30.9 Mar	+19.2	12.4 Q4§	-20.1 Q4	-6.2	-10.8	na
Israel	+4.3	Q4	+6.3	+3.9	+3.2 Jan	+0.9 Mar	+0.6	4.3 Feb	+12.4 Q4	+4.4	-2.3	2.25
Saudi Arabia	+1.4	2016	na	+0.8	na	-0.4 Mar	+2.0	5.6 2015	-24.9 Q4	-2.1	-7.4	3.68
South Africa	+0.7	Q4	-0.3	+1.1	-2.4 Feb	+6.1 Mar	+5.7	26.5 Q4§	-9.5 Q4	-3.6	-3.1	8.74

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. \*\*\*Official number not yet proved to be reliable; The State Street PriceStats Inflation Index, Jan 29.53%; year ago 30.79% †††Dollar-denominated bonds.

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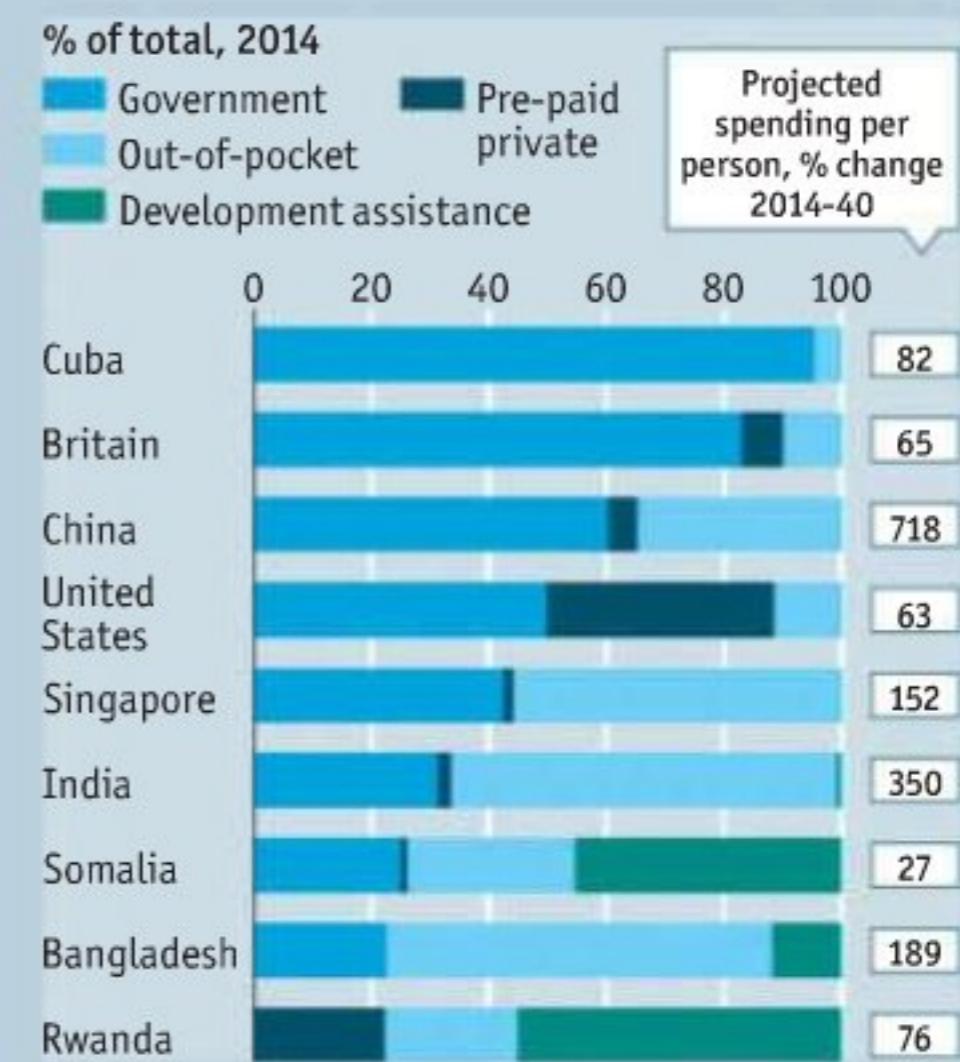
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## Markets

	Index Apr 26th	% change on		
		one week	Dec 30th 2016 in local currency terms	in \$
United States (DJIA)	20,975.1	+2.8	+6.1	+6.1
China (SSEA)	3,288.9	-0.9	+1.2	+2.1
Japan (Nikkei 225)	19,289.4	+4.7	+0.9	+5.5
Britain (FTSE 100)	7,288.7	+2.5	+2.0	+6.2
Canada (S&P TSX)	15,649.5	+0.6	+2.4	+1.3
Euro area (FTSE Euro 100)	1,214.7	+4.5	+9.2	+12.6
Euro area (EURO STOXX 50)	3,578.7	+4.6	+8.8	+12.2
Austria (ATX)	2,974.7	+4.8	+13.6	+17.1
Belgium (Bel 20)	3,890.8	+3.2	+7.9	+11.3
France (CAC 40)	5,287.9	+5.7	+8.8	+12.1
Germany (DAX)*	12,472.8	+3.8	+8.6	+12.0
Greece (Athex Comp)	706.4	+4.0	+9.8	+13.2
Italy (FTSE/MIB)	20,836.5	+5.1	+8.3	+11.7
Netherlands (AEX)	524.5	+2.6	+8.5	+11.9
Spain (Madrid SE)	1,083.5	+3.9	+14.8	+18.4
Czech Republic (PX)	998.7	+3.2	+8.4	+12.2
Denmark (OMXCB)	863.7	+2.7	+8.2	+11.5
Hungary (BUX)	33,198.9	+1.6	+3.7	+5.7
Norway (OSEAX)	766.3	+2.1	+0.2	+0.4
Poland (WIG)	61,699.6	+3.7	+19.2	+28.0
Russia (RTS, \$ terms)	1,119.1	+4.7	-2.9	-2.9
Sweden (OMXS30)	1,620.3	+3.5	+6.8	+10.4
Switzerland (SMI)	8,830.3	+3.5	+7.4	+9.8
Turkey (BIST)	94,522.3	+4.1	+21.0	+19.0
Australia (All Ord.)	5,936.8	+1.7	+3.8	+7.5
Hong Kong (Hang Seng)	24,578.4	+3.2	+11.7	+11.3
India (BSE)	30,133.4	+2.7	+13.2	+19.8
Indonesia (JSX)	5,726.5	+2.1	+8.1	+9.6
Malaysia (KLSE)	1,768.9	+1.7	+7.7	+11.2
Pakistan (KSE)	49,827.5	+4.7	+4.2	+3.8
Singapore (STI)	3,173.8	+1.5	+10.2	+13.9
South Korea (KOSPI)	2,207.8	+3.2	+9.0	+17.0
Taiwan (TWI)	9,856.5	+2.2	+6.5	+14.1
Thailand (SET)	1,567.5	nil	+1.6	+5.6
Argentina (MERV)	21,027.7	+2.5	+24.3	+27.4
Brazil (BVSP)	64,861.9	+2.3	+7.7	+10.2
Chile (IGPA)	24,357.9	+0.3	+17.5	+18.2
Colombia (IGBC)	10,213.7	+0.9	+1.1	+3.8
Mexico (IPC)	49,565.2	+1.4	+8.6	+17.6
Venezuela (IBC)	61,296.2	+28.9	+93.3	na
Egypt (EGX 30)	12,671.3	-1.7	+2.6	+2.7
Israel (TA-100)	1,274.7	+1.5	-0.2	+5.5
Saudi Arabia (Tadawul)	6,917.0	-0.4	-4.4	-4.4
South Africa (JSE AS)	53,680.7	+2.2	+6.0	+9.3

## Health-care spending

Global spending on health care per person will more than double by 2040, according to a study in the *Lancet*, a medical journal. This increase will be driven principally by rising expenditure in upper-middle-income countries. Spending per person in China is projected to rise by more than 700% by 2040. At the bottom end of the scale, Somalia will spend only \$42 per person in 2040. Cuba has a world-class health-care system; in 2014 96% of spending was accounted for by the government. In Singapore the government accounted for less than half of total spending. The state also bears little of the burden in Bangladesh, where personal out-of-pocket payments account for two-thirds of expenditure.



## Other markets

	Index Apr 26th	% change on		
		one week	Dec 30th 2016 in local currency terms	in \$
United States (S&P 500)	2,387.5	+2.1	+6.6	+6.6
United States (NAScomp)	6,025.2	+2.8	+11.9	+11.9
China (SSEB, \$ terms)	335.1	-0.5	-2.0	-2.0
Japan (Topix)	1,537.4	+4.5	+1.2	+5.8
Europe (FTSEurofirst 300)	1,526.4	+3.1	+6.9	+10.2
World, dev'd (MSCI)	1,882.4	+2.6	+7.5	+7.5
Emerging markets (MSCI)	982.5	+3.1	+13.9	+13.9
World, all (MSCI)	456.3	+2.6	+8.2	+8.2
World bonds (Citigroup)	907.0	-0.4	+2.6	+2.6
EMBI+ (JPMorgan)	814.7	+0.1	+5.5	+5.5
Hedge funds (HFRX)	1,228.1 <sup>§</sup>	+0.6	+2.1	+2.1
Volatility, US (VIX)	10.9	+14.9	+14.0 (levels)	
CDSs, Eur (iTRAXX) <sup>†</sup>	67.1	-12.9	-6.9	-4.0
CDSs, N Am (CDX) <sup>†</sup>	63.3	-8.1	-6.7	-6.7
Carbon trading (EU ETS) €	4.6	-2.9	-29.8	-27.6

Sources: IHS Markit; Thomson Reuters. \*Total return index.

<sup>†</sup>Credit-default-swap spreads, basis points. <sup>§</sup>Apr 25th.

**Indicators** for more countries and additional series, go to: [Economist.com/indicators](http://Economist.com/indicators)

## The Economist commodity-price index

	2005=100	% change on		
		Apr 18th	Apr 25th*	one month one year
<b>Dollar Index</b>				
All Items	141.3	140.8	-2.6	+2.7
Food	151.0	149.4	-2.8	-6.0
<b>Industrials</b>				
All	131.2	131.8	-2.3	+15.2
Nfa <sup>†</sup>	136.4	137.1	-3.3	+10.6
Metals	129.0	129.5	-1.8	+17.5
<b>Sterling Index</b>				
All items	201.4	199.6	-4.8	+16.8
<b>Euro Index</b>				
All items	164.2	160.2	-3.1	+6.3
<b>Gold</b>				
\$ per oz	1,287.5	1,268.1	+1.0	+2.1
<b>West Texas Intermediate</b>				
\$ per barrel	52.4	49.2	+1.8	+11.8

Sources: Bloomberg; CME Group; Cotlook; Darmann & Curr; FT; 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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## Ancient as the hills

**Emma Morano, the oldest recorded Italian and, for a year, the oldest person in the world, died on April 15th, aged 117**

THOSE who live to be very old are never previously famous. Few in the world know them, and they know almost nothing of the world. Emma Morano had never been to Rome, let alone abroad. Her world was Pallanza-Verbania on the shores of Lake Maggiore in northern Italy, stretching to Varallo Sesia in the hills, where she had family. The fading photographs she would lay out, on a lace cloth, for reporters showed herself and her siblings enjoying lunch outside, posing in Pallanza's main square and on the lakeside promenade, all within a stroll of the tiny flat, down an alley by the church of San Leonardo, where she still lived. For her last 15 years, though she could walk, she did not leave it.

The very old tend not to have led glamorous lives. They work deep in the fabric of the everyday. Miss Morano's job, from the age of 13 to 55, was in Maioni's jute factory, sewing sacks for potatoes. After that, she worked for 20 years as a dinner lady at a local college. The young Emma wondered sometimes, since she had a lovely voice—a voice that would stop men in their tracks when she sang "Parlami d'amore, Mariu" from the window—about a musical career. But the thought wasn't serious, and she contented herself with listening to Claudio Villa's popular songs on the radio, a device first dreamed up in the year she was born.

Visitors often marvelled at the events she had lived through: not least the tumultuous history of Italy from monarchy, through fascism, to republic. But much of the time her head had been down, sewing sacks. She remembered Victor Emmanuel III, and the queen too. But the second decade of the 20th century was vivid mostly for slipping out of the house to go dancing, and for birch-stick beatings on her legs when her mother caught her. The first war was memorable only because her fidanzato, Augusto, was called up and did not return. When his letters stopped she assumed he was dead, and never learned, because no one told her, that he had left town for a steelworks in Milan.

Similarly, the rise of fascism was overshadowed by growing violence in her own house. She recalled the constant black-shirt parades. But far worse was the abuse from Giovanni, the man she had married in 1926 after he had threatened to kill her otherwise. She dreaded marrying him, but could not escape; he was "from the lake" too, living in the same courtyard, and both sets of parents pressed her. In 1937 she had a little son; he lived from January till August. The next year she kicked Giovanni out, and they separated. Divorce was not yet legal, and separation itself was rare. This made her a pioneer, she felt.

When researchers called, puzzling over her longevity, she told them that a single life definitely helped. She refused to let anyone dominate her, including the manager of the jute factory, who completely lost his head over her and proposed running away together—that, in the days when lowly female workers did not dare answer back to superiors. And her determination played a part, too. It showed in the large baby photograph she kept in the kitchen: bold dark eyes, a fierce little chin, her amulet askew on her neck. It was just as evident in middle age, when she prided herself on working hard to pay for things she wanted, like her hand-carved bedroom suite; and at 112, when she still manoeuvred heavy copper pans on the stove and put down newspaper to save her floors from muddy feet.

### Food for longevity

The family genes were good, with several members living to advanced old age. But as a girl she was often ill. The doctor diagnosed anemia and advised a move to the lakeshore, from which she did not move again. He also told her to eat three eggs a day, two of them raw: a diet she kept to for almost a century, usually scooping them up with biscotti from a bowl. For lunch she had pasta with raw minced meat, for supper a glass of milk. At night she would raid the biscotti and the large tin of gianduiotti, local hazelnut chocolates, that sat on the sideboard. Last came her home-spiked grappa, infused in a wide-necked jar with seven sage leaves, herbs and a few grapes, and taken in spoonfuls every day.

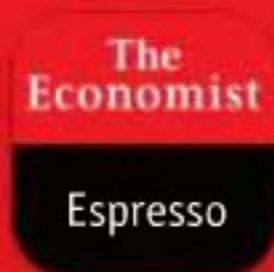
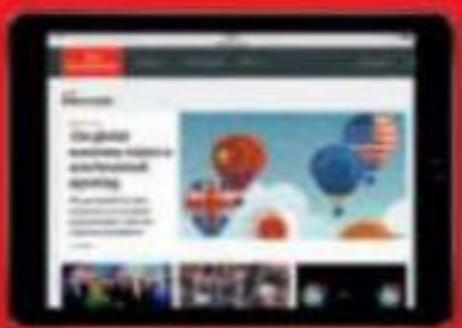
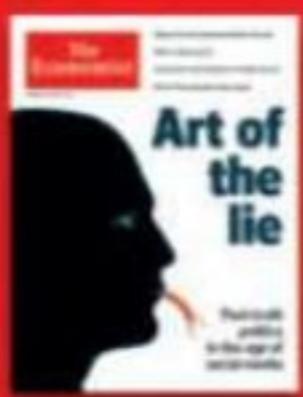
This diet, doctors said, broke all the rules. Its only virtues were simplicity and long, long regularity. Those same virtues applied to her life as a whole. It had three pillars: family, self-sufficiency, and faith. Her flat was a shrine to them all. Glass-bead rosaries were draped over framed photographs of her parents, brothers and sisters, and the Holy Family presided above her bed. The Madonna and child watched over her bedside table, where she kept the anti-ageing cream she faithfully smoothed on each night. She liked to watch Mass on Channel Four, since it was shorter than the RAI one; she had not lost her impish streak. As for death, "quand la vegn, la vegn", and her prized collection of chiming clocks ticked her way towards it.

On May 12th 2016 fame and glamour arrived together, as she became the world's oldest person. Officials rained certificates on her. The gas company thanked her for her loyalty, and the mayor for her services to tourism. On her 117th birthday a huge cake came, and a team from RAI; at the party in her flat she sang "Parlami d'amore, Mariu" again, though she was cross that her voice had gone. "My word," she told a neighbour, "I'm as old as the hills!" The hills she had never been beyond. ■

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