

# The Economist

Merkel's unfinished business

Spy-fi: a peculiarly British genre

Making sense of China's capacity cuts

The Dreamers' nightmare

SEPTEMBER 9TH-15TH 2017

# Nowhere to hide

What machines can tell from your face





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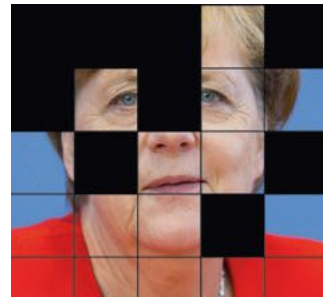
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## Politics



**North Korea** tested a nuclear device about eight times more powerful than the one it tested a year ago. President Donald Trump responded by criticising South Korea almost as much as the North, for seeking talks with its northern neighbour. America is pushing to tighten already stringent sanctions on North Korea.

Over 150,000 Rohingyas, a Muslim minority group in **Myanmar**, fled into Bangladesh after the Burmese army went on the rampage, shooting villagers and burning homes in response to attacks on police posts by Rohingya militants. The UN urged Myanmar's government to protect civilians "without discrimination".

Police in **Cambodia** arrested Kem Sokha, the leader of the main opposition party, on spurious charges of treason. The Cambodian government appears to be stifling all dissent in the run-up to next year's elections.

**Australia's** High Court ruled that the government could hold a non-binding postal referendum on legalising gay marriage. Critics say the ballot is superfluous and that parliament should simply vote on the matter.

**North Korea's** nuclear explosion overshadowed a meeting in China of leaders of BRICS countries: Brazil, Russia, India, China and South Africa. The participants issued a statement condemning the test and expressing "deep concern". The gathering underlined signs of an easing of tensions between China and India, which

until a few days earlier had been involved in a standoff near their border.

State-controlled media in **China** reported that facial-recognition technology had been used to catch 25 criminal suspects at a beer festival in the coastal city of Qingdao. Visitors' faces were scanned at entrances and matched with police records. One of those caught had been on the run for a decade. Dozens of other people with criminal records were also spotted by the cameras and denied entry.

### The face of migration

The French minister of foreign affairs appointed an "ambassador for migration", who will foster co-operation with migrants' countries of origin and of transit. **France's** president, Emmanuel Macron, announced plans for a new migration law in 2018.

The European Court of Justice dismissed legal complaints from **Slovakia** and **Hungary** over accepting refugees. A quota system adopted in 2015 is aimed at easing pressure on Italy and Greece. Countries refusing to respect quotas could now face fines.

David Davis, **Britain's** Brexit secretary, assured Parliament that talks in Brussels over Britain's exit from the European Union were making "concrete progress". Yet EU negotiators suggested that not enough had been settled, especially on Britain's exit bill, to start talks on future trade in October, as Britain wants.

### Packed with corruption



Police in **Brazil** found suitcases stuffed with cash worth more than \$16m in an apartment

used by one of President Michel Temer's former cabinet ministers. The stash was discovered the same day that Rodrigo Janot, the chief prosecutor, charged two previous presidents, Dilma Rousseff and Luiz Inácio Lula da Silva, of the opposition Workers' Party, with running a "criminal organisation" that collected more than \$450m in bribes.

The **Revolutionary Armed Forces of Colombia** (FARC) completed their transition from a guerrilla army to a political party, keeping their acronym but changing their name to the Common Alternative Revolutionary Force and their logo to a red rose. Colombia's president, Juan Manuel Santos, announced the first bilateral ceasefire between his government and the National Liberation Army, another leftist guerrilla group.

**Hurricane Irma** ripped apart buildings, flooded homes and damaged infrastructure on several Caribbean islands, including St Martin, St Barthélemy and Barbuda. At least nine people were killed. Barbuda was left "barely habitable", said the prime minister of Antigua and Barbuda. Residents of the Dominican Republic, Haiti and Cuba braced themselves for heavy rain and 185-mph winds. Donald Trump declared a state of emergency in Florida, Puerto Rico and the US Virgin Islands.

### Deal or no deal

**America's** ambassador to the UN, Nikki Haley, hinted that President Donald Trump would not recertify a nuclear accord signed with **Iran** in 2015 when it comes up for renewal in mid-October. He may leave it to Congress. International inspectors recently declared that Iran is complying with the agreement to constrain its nuclear-weapons programme.

The **Syrian** army and its allies pushed into the eastern city of Deir ez-Zor, one of the last strongholds of **Islamic State** in Syria. The soldiers freed a government-held enclave that had been under siege since

2014. And **Israel** bombed a site in Syria that has been linked to chemical weapons.

**Kenya's** electoral commission set October 17th as the date for a new presidential election. The Supreme Court annulled a vote held in August, saying proper procedures had not been followed.

### A dream deferred



America's attorney-general, Jeff Sessions, announced that in six months the government would end **Deferred Action for Childhood Arrivals** (DACA), an Obama-era programme that allowed around 800,000 immigrants who were brought to America illegally as children to live and work legally in the country. Young adult immigrants, who call themselves "Dreamers", urged Congress to pass a law to replace the programme.

Residents of Texan towns clobbered by **Hurricane Harvey** began sorting through the wreckage. Governor Greg Abbott said the damage could cost up to \$180bn. The House of Representatives approved nearly \$8bn in initial emergency aid and congressional leaders announced a deal with President Donald Trump to tie Harvey relief to short-term government-funding measures and to raise the debt ceiling until December 15th.

Officials from America, Mexico and Canada concluded a second round of talks about the **North American Free Trade Agreement**. "Our work continues at a record pace," said Robert Lighthizer, the US representative. But progress on controversial issues appeared to be minimal.

## Business

The vice-chairman of America's **Federal Reserve**, Stanley Fischer, unexpectedly resigned for "personal reasons". His term was not due to end until June 2018. The resignation of Mr Fischer, who has also served as head of the Bank of Israel and as chief economist of the World Bank, increases the pressure on President Donald Trump to fill a mounting list of vacancies at the Fed.

The number of jobs in **America** grew by 156,000 in August, less than analysts had expected. Unemployment ticked up to 4.4%, from 4.3% in July.

Amid signs of robust economic growth, the **Bank of Canada** raised its benchmark interest rate by 0.25%, to 1%, less than two months after its previous rate hike in July.

After its economy added 59,000 jobs in July, total **employment** in Italy rose above 23m for the first time since 2008.

**Norway's** sovereign-wealth fund, the world's largest, proposed a significant change in how its bond portfolio should be measured, recommending that only government bonds in dollars, euros or sterling should make up its benchmark index, rather than bonds in 23 currencies. The fund has been shifting away from bonds and towards equities.

### Winning lots of won

Workers at **Kia** won a victory over their employer in a wage dispute when a South Korean court ordered the carmaker to pay 420bn won (\$370m) in back pay. Kia says the ruling will cost it closer to 1trn won once all wages are adjusted.

**United Technologies**, an American aerospace company, announced that it would acquire a competitor, **Rockwell Collins**, for \$30bn. Boeing, one of the putative combination's largest customers, said it was "sceptical" that the deal would be in the best interest of

its industry, and said it might pursue "regulatory options" to protect its position.

**Bell Pottinger**, a prominent London public-relations firm, put itself up for sale after its chief executive, and another senior manager, stepped down. The firm ran into trouble after being expelled by its industry body, the Public Relations and Communications Association, which had found that Bell Pottinger's work for **South Africa's** influential Gupta family was likely to have inflamed "racial discord" in the country.

The European Court of Justice gave firms offering price rebates a reprieve. By sending an appeal by **Intel** over a €1bn (\$1.2bn) €U fine in 2009 back to a lower court for reconsideration, the court said EU anti-trust authorities would have to show rebates harmed competition to be deemed illegal.

### Crypto curbs

A group of Chinese regulators, led by its central bank, declared **initial coin offerings** (ICOs), a type of fundraising for companies based on issuing virtual tokens, to be illegal. The regulators not only called a halt to new offerings, but also said that proceeds from al-

ready completed ICOs should be refunded to investors.

Six banks, including **HSBC** and **Credit Suisse**, signed on to a consortium spearheaded by **UBS**, another bank, to create a "utility settlement coin", a new form of blockchain-based **digital currency** for clearing and settling transactions that it hopes to launch next year. This brings the total number of financial institutions involved in the project to 11.

A review by **PwC** into a scandal over sham accounts at **Wells Fargo** revealed that the American bank had opened 1.4m more unauthorised accounts, or around 70% more, than had initially been estimated last year.

Trouble in paradise. **Nordea**, the Nordic region's largest bank, announced that it would move its headquarters from Stockholm to Helsinki. The move comes after over a year of complaints from the bank about Swedish policies, including plans for a bank levy (since put on hold). The bank cited Finland's membership in the EU's banking union, which will allow the lender to be regulated in the same way as its European peers, as the main reason for choosing the Finn-

ish capital over Copenhagen, the Danish capital, which it also considered.

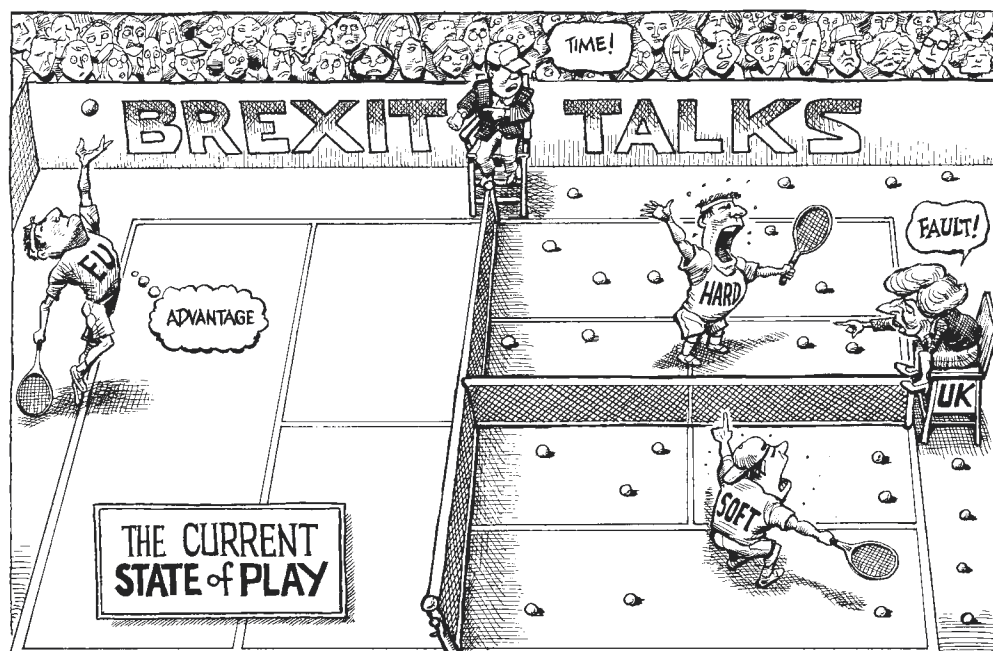
Four of the top ten executives at **Reckitt Benckiser**, a British consumer-goods giant, are leaving the firm. The shake-out follows a series of setbacks, including a hit from a severe cyber-attack in June.

### Happy birds



**Rovio**, a Finnish games company and maker of "Angry Birds", is planning an initial public offering. The firm suffered when interest in its signature game flagged in 2014, but is now basking in the success of the first "Angry Birds" film, which grossed \$350m at box offices worldwide in 2016. Some worry that the firm is too much of a one-tweet wonder.

Other economic data and news can be found on pages 76-77



# Nowhere to hide

**Facial recognition is not just another technology. It will change society**



**T**HE human face is a remarkable piece of work. The astonishing variety of facial features helps people recognise each other and is crucial to the formation of complex societies.

So is the face's ability to send emotional signals, whether through an involuntary blush or the artifice of a false smile. People spend much of their waking lives, in the office and the courtroom as well as the bar and the bedroom, reading faces, for signs of attraction, hostility, trust and deceit. They also spend plenty of time trying to dissimulate.

Technology is rapidly catching up with the human ability to read faces. In America facial recognition is used by churches to track worshippers' attendance; in Britain, by retailers to spot past shoplifters. This year Welsh police used it to arrest a suspect outside a football game. In China it verifies the identities of ride-hailing drivers, permits tourists to enter attractions and lets people pay for things with a smile. Apple's new iPhone is expected to use it to unlock the homescreen (see page 53).

Set against human skills, such applications might seem incremental. Some breakthroughs, such as flight or the internet, obviously transform human abilities; facial recognition seems merely to encode them. Although faces are peculiar to individuals, they are also public, so technology does not, at first sight, intrude on something that is private. And yet the ability to record, store and analyse images of faces cheaply, quickly and on a vast scale promises one day to bring about fundamental changes to notions of privacy, fairness and trust.

## The final frontier

Start with privacy. One big difference between faces and other biometric data, such as fingerprints, is that they work at a distance. Anyone with a phone can take a picture for facial-recognition programs to use. FindFace, an app in Russia, compares snaps of strangers with pictures on VKontakte, a social network, and can identify people with a 70% accuracy rate. Facebook's bank of facial images cannot be scraped by others, but the Silicon Valley giant could obtain pictures of visitors to a car showroom, say, and later use facial recognition to serve them ads for cars. Even if private firms are unable to join the dots between images and identity, the state often can. China's government keeps a record of its citizens' faces; photographs of half of America's adult population are stored in databases that can be used by the FBI. Law-enforcement agencies now have a powerful weapon in their ability to track criminals, but at enormous potential cost to citizens' privacy.

The face is not just a name-tag. It displays a lot of other information—and machines can read that, too. Again, that promises benefits. Some firms are analysing faces to provide automated diagnoses of rare genetic conditions, such as Hajdu-Cheney syndrome, far earlier than would otherwise be possible. Systems that measure emotion may give autistic people a grasp of social signals they find elusive. But the technology also threatens. Researchers at Stanford University have demonstrated

that, when shown pictures of one gay man, and one straight man, the algorithm could attribute their sexuality correctly 81% of the time. Humans managed only 61% (see page 67). In countries where homosexuality is a crime, software which promises to infer sexuality from a face is an alarming prospect.

## Keys, wallet, balaclava

Less violent forms of discrimination could also become common. Employers can already act on their prejudices to deny people a job. But facial recognition could make such bias routine, enabling firms to filter all job applications for ethnicity and signs of intelligence and sexuality. Nightclubs and sports grounds may face pressure to protect people by scanning entrants' faces for the threat of violence—even though, owing to the nature of machine-learning, all facial-recognition systems inevitably deal in probabilities. Moreover, such systems may be biased against those who do not have white skin, since algorithms trained on data sets of mostly white faces do not work well with different ethnicities. Such biases have cropped up in automated assessments used to inform courts' decisions about bail and sentencing.

Eventually, continuous facial recording and gadgets that paint computerised data onto the real world might change the texture of social interactions. Dissembling helps grease the wheels of daily life. If your partner can spot every suppressed yawn, and your boss every grimace of irritation, marriages and working relationships will be more truthful, but less harmonious. The basis of social interactions might change, too, from a set of commitments founded on trust to calculations of risk and reward derived from the information a computer attaches to someone's face. Relationships might become more rational, but also more transactional.

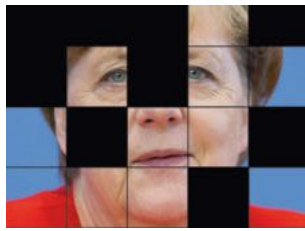
In democracies, at least, legislation can help alter the balance of good and bad outcomes. European regulators have embedded a set of principles in forthcoming data-protection regulation, decreeing that biometric information, which would include “faceprints”, belongs to its owner and that its use requires consent—so that, in Europe, unlike America, Facebook could not just sell ads to those car-showroom visitors. Laws against discrimination can be applied to an employer screening candidates' images. Suppliers of commercial face-recognition systems might submit to audits, to demonstrate that their systems are not propagating bias unintentionally. Firms that use such technologies should be held accountable.

Such rules cannot alter the direction of travel, however. Cameras will only become more common with the spread of wearable devices. Efforts to bamboozle facial-recognition systems, from sunglasses to make-up, are already being overtaken; research from the University of Cambridge shows that artificial intelligence can reconstruct the facial structures of people in disguise. Google has explicitly turned its back on matching faces to identities, for fear of its misuse by undemocratic regimes. Other tech firms seem less picky. Amazon and Microsoft are both using their cloud services to offer face recognition; it is central to Facebook's plans. Governments will not want to forgo its benefits. Change is coming. Face up to it. ■

## Germany's election

## Angela's unfinished business

Mrs Merkel must become bolder in her (almost inevitable) fourth term



TO HER many fans, Angela Merkel is the hero who stands up to Donald Trump and Vladimir Putin, and who generously opened her country to refugees. To others, she is the villain whose ill-thought-out gamble on immigration is “ruining Germany”, as Mr Trump once put it, and whose austerity policies laid waste to southern Europe.

The fans are closer to the truth. Her country has indeed done well under her leadership and the world been better for her steady hand. But during three terms in office, Mrs Merkel has not done enough to prepare Germany for the future. If her many years at the top are to be viewed as more than merely sufficient, she must use her fourth term to bring about change.

### A steady hand in a turbulent world

There is little doubt that Mrs Merkel and her Christian Democratic Union are coasting towards victory when Germany votes on September 24th. That is partly owing to the lacklustre Martin Schulz, her Social Democratic Party (SPD) rival. His party's domestic policy is undistinctive and his foreign policy barely credible. He has also failed to put the chancellor on the spot. Their debate on September 3rd was more like the negotiation of a new “grand coalition” than a clash of ideas.

But her imminent victory also reflects how Germany has prospered since 2005, when Mrs Merkel took office (see briefing). Unemployment has fallen from 11.2% to 3.8%; wages are rising; consumer confidence is at a high. The chancellor has stood by the labour-market reforms introduced by Gerhard Schröder, her SPD predecessor—though she has not extended them. She has provided stable and unideological political leadership. German society has become more open and relaxed on her watch; she allowed, for instance, a vote on gay marriage even though she personally opposed it.

And in trying to cope with the euro crisis and the influx of refugees from the Middle East and north Africa, Mrs Merkel has proved to be the indispensable European. Beyond that, she persuaded Germans that their country should take on more of the responsibilities its size demands but its history makes difficult. At summits she is a calm, well-informed presence, helping to broker European sanctions against Russia over its invasion of Ukraine, and the Paris climate accord. Germany is also taking on international burdens, with troops in Afghanistan, Mali and Lithuania, a scale of deployment unthinkable a decade ago. Her commitment to NATO's target for defence spending of 2% of GDP speaks of a country growing up in the world.

Yet, for all this, Mrs Merkel has often governed on the “easy” setting, especially in her policies at home. She has enjoyed a host of advantages. Mr Schröder's reforms made German workers competitive. The euro, raw materials and borrowing have all been cheap for much of her chancellorship, too. Emerging economies such as China cannot yet make the things Germany does (like luxury cars), so they import them. Germany has the second-oldest population in the world, but

its baby-boomer bulge is largely still of working age. The country has been living through a golden age.

The trouble is that none of the factors that brought this about is permanent. Mrs Merkel had a chance to prepare the country for the future. She has squandered it. Her government's obsession with balanced books has led it to invest too little. The net value of German infrastructure has fallen since 2012. Since 2010 the country's broadband speed has fallen from 12th to 29th in the world. New industries like the internet of things and electric cars are underdeveloped. The mighty German automotive industry took a bad gamble on diesel engines, and is now mired in allegations of faked emissions tests.

Little has been done to prepare Germany for its demographic crunch. Mrs Merkel's outgoing government not only reversed a raise in the retirement age, but cut it to 63 for some workers and introduced a “mothers' pension” for women who took time off to care for children before 1992, benefiting a generation that was already well-catered for. At the same time she did little for those Germans left behind. Inequality and the use of food-banks have both risen on her watch.

When she does take big decisions, Mrs Merkel has a habit of ducking the consequences. The switch to renewable energy is proving so slow and expensive that Germany's coal usage and carbon emissions are rising—her sudden decision to shut the country's nuclear plants after a meltdown in Japan only made the transition harder. Having helped to hold the euro zone together through a series of weekend crises, Mrs Merkel (along with Wolfgang Schäuble, her finance minister) has stood in the way of reforms that would mitigate the next crisis. The task of integrating legions of refugees has been left primarily to cash-strapped state governments and citizens. The chancellor barely talks about them these days, having reduced arrival numbers using a murky repatriation deal with Turkey.

In the election campaign Mrs Merkel has said little to confront her compatriots with the need to reform governance of the euro, to raise investment and to prepare the economy for a revolution in the nature of work. Instead, her manifesto is vague, and her public appearances have been banal.

### Action needed in Act IV

And yet Mrs Merkel could accomplish a lot in her next—and possibly last—term. She could use Germany's budget surplus, of €26bn (\$31bn) last year and rising, to invest more in human and physical capital. She could look to Emmanuel Macron of France for ideas to strengthen institutions that govern the euro and for a sense of urgency about high-tech. She could cement Germany's foreign-policy credentials, by pressing on towards NATO's 2% goal. Her legacy depends on it.

Success will partly depend on Mrs Merkel picking the right partners in government. A continuation of the present grand coalition with the SPD threatens yet more sleepy stasis. Instead she should team up with the free-market Free Democratic Party and the Greens—who are wise on Europe and tougher on Russia. Such a coalition would stand a chance of shaking the country up. As its leader, the hesitant Mrs Merkel might even become the chancellor who surprised everybody. ■



## North Korea

# Messaging the shooter

**Detering a nuclear-armed North Korea requires clarity and consistency from America's government**



ON SEPTEMBER 3rd North Korea tested what it claimed was a hydrogen bomb. Whether it was really that, or merely a boosted fission device, is unclear (see page 20). What is certain is that the bomb was hefty enough to cause big earth tremors in neighbouring China. Seismic data suggest the blast was around 120 kilotons—at least eight times more powerful than the North's previous test a year ago. If converted into a warhead small enough to fit on its Hwasong-14 intercontinental ballistic missile, it could kill nearly everyone across a 15-square-kilometre area. Even if Kim Jong Un's ruthless regime does not have a hydrogen bomb today, it will within a year or so probably have mastered a technology that has the potential for almost unlimited destruction.

This is a terrible prospect. Alas, there are no good options for preventing it. Talking is always worthwhile, but North Korea is unlikely to give ground—and is untrustworthy if it says it will. A pre-emptive attack on North Korea's nuclear facilities should be out of the question. The North's existing weapons, including shorter-range missiles with fission warheads, would imperil the lives of millions of South Koreans and Japanese, as well as around 300,000 Americans who live in those countries. Chinese state media have debated whether China should squeeze North Korea's oil imports. However, this would hurt ordinary North Koreans first, and China does not want to squeeze so hard that Mr Kim's regime collapses.

So Mr Kim must be contained and deterred. To that end, it is essential America and its allies present a united front. Astonishingly, President Donald Trump's first reaction to the nuclear test was to lambast South Korea's president, Moon Jae-in, for seeking to talk to North Korea, accusing his government on

Twitter of "appeasement". He took almost 36 hours to telephone Mr Moon and then only after it had emerged that he had asked aides to prepare for America to pull out of a decade-old free-trade deal with South Korea. Even if the economics were sound (they are not), this is an awful time to pick a fight.

Mr Kim would love to drive a wedge between America and its allies. He hopes that a credible nuclear threat to American cities will weaken America's security guarantees to South Korea and Japan. Put crudely, Mr Kim wants to open up the old cold-war question of whether an American president would really risk San Francisco, say, to defend Seoul. If the answer is no, Mr Kim will soon be able to keep America at bay with his nukes and threaten his neighbours with impunity. For Mr Trump to let this happen would be an unforgivable blunder.

James Mattis, Mr Trump's defence secretary, tried to repair some of the damage after a meeting at the White House to discuss the test. Mr Mattis said that, although the administration still hoped for a diplomatic path to North Korean denuclearisation, "any threat to the United States or its territories, including Guam, or our allies will be met with a massive military response." He should have been more precise. Does "any threat" include fiery rhetoric? Against an apocalyptic blusterer like Mr Kim, it certainly should not. Mr Mattis should simply have stated that America would respond quickly and forcefully to an imminent threat by North Korea of an attack on its allies or itself. Mr Kim should be in no doubt that if he starts a war, he will perish along with his dynasty.

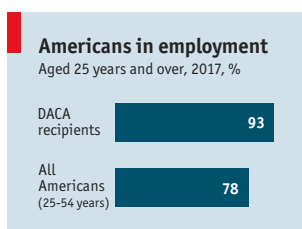
## Speak plainly and carry a big stick

Deterrence works when red lines are reasonably clear. With Mr Trump they are not. That creates the danger that Mr Kim might miscalculate, with catastrophic consequences. In dealing with the world's most dangerous regime, there is no substitute for steadiness, consistency and clarity. ■

## America's immigration laws

# Let them stay

**Donald Trump is right: Congress should pass DACA**



were brought to the country as children from deportation, covers about 800,000 people. They are a high-achieving lot. More than 90% of those now aged over 25 are employed; they create businesses at twice the rate of the public as a whole; many have spouses and children who are citizens. They are Ameri-

can in every sense bar the bureaucratic one.

Correcting that ought to be about as hard politically as declaring a new public holiday. Instead, there is a good chance that Congress will return them to their prior limbo, or worse. Recipients of DACA were obliged to give their addresses to the federal government, which is charged with immigration enforcement, making it considerably easier to round them up now. After the Trump administration announced that it would end the programme in six months' time, and called on Congress to pass a bill to replace it, the White House issued a set of talking points which suggested that Immigration and Customs Enforcement would find this personal information, given in exchange for shelter, very useful. ▶▶

▶ Both Mr Trump and Jeff Sessions, his attorney-general, presented the decision to end DACA as a victory for the rule of law (see page 27). There is something to this. Mr Obama said publicly that he doubted he had the authority to protect people from the enforcement of immigration laws passed by Congress and signed by previous presidents. Then he decided that, in fact, he did. Mr Trump's administration thus faced having to defend an executive action by its predecessor from a legal challenge by several Republican attorneys-general—a challenge that the administration might lose in the Supreme Court at the hands of his own nominee, Neil Gorsuch. With that prospect, Mr Trump pushed the decision back to Congress.

But the choice on DACA is not between the rule of law and rule by presidential edict. It is between two different types of legal failure—executive actions that are possibly unconstitutional and a set of immigration laws that are definitely impossible to enforce. There are about 11m people in the country illegally, many of whom arrived decades ago. America already spends a huge amount on deportation—more than on the FBI, DEA, Secret Service, US Marshals and Bureau of Alcohol, Tobacco and Firearms, combined. At current deportation rates it would take over 40 years to expel them all. Congress has not willed the means to make this happen and would not want to face the consequences of doing so. The collective failure to say this on the part of the Republicans, who control both houses of Congress, is a giant exercise in ignoring reality. “Useless laws weaken necessary laws,” wrote Montesquieu, whose work

the authors of the constitution consulted frequently. That is a fair description of the effect of America's immigration laws, whose uselessness results in lawbreaking becoming routine.

### Deferred action

The solution is for Congress to write DACA, or something like it, into law. Yet the long-running saga over DACA and its recipients, whose average age is now 25, has been another sign that Congress's default setting is to inaction. Mr Obama issued his executive action after years of waiting for Congress to write legislation. Congressmen ducked the decision, leading the president to take it unilaterally, on questionable authority.

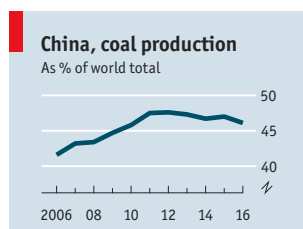
Mr Trump's call on Congress to act may set up a repeat of this cycle. The programme expires in six months' time, at which point many Republican congressmen will face primaries. They will be confronted by challengers denouncing anyone who supports such legislation as being pro-immigration-amnesty and too unpatriotic to put real Americans first, a Republican strain of identity politics that has been turbocharged by Mr Trump. If Congress fails to decide yet again, then Mr Trump may find himself in the same position as his predecessor, reintroducing something like DACA by executive action.

Better if the lawmakers who spent years denouncing Mr Obama for grabbing power from Congress now choose to exercise that power themselves. The alternative is an act of economic and moral self-harm, in which Congress would further undermine both itself and the standing of the law. ■

## China's economy

# Created destruction

Investors have found faith in China's capacity cuts. They should look more closely



STOCKMARKETS have been on a tear over the past 18 months. Shares are, on average, up by a third globally. Commodities have rallied. And the optimism has infected corporate treasurers, who, for the first time in five years, are spending more

on new buildings and equipment. Plenty of factors have fed into the upturn, from Europe's recovery to early hopes for the Trump presidency. But its origins date back to a commitment by China to demolish steel mills and shut coal mines.

On the face of it, that is an unlikely spark for a change in sentiment. Normally, growth comes from the investment in new facilities, not the closure of those in use. In fact, China's case is a rare one. By taking on extreme overcapacity, its cutbacks have provided a boost, for itself and for the global economy. The risk, however, is that the way the country is going about the cuts both disguises old flaws and creates new ones.

### Steel crazy after all these years

China needs lots of material to build all its homes, trains and tunnels. Even so, it produces more than it can use. It accounts for roughly half of global production of steel, coal, aluminium, glass and cement. By one oft-cited gauge, China's unused steel capacity equals the total annual output of the next four biggest producers (Japan, India, America and Russia) combined. As

the excesses piled up in China over the years, they weighed on global prices, depressing profits for all. However, unlike their international rivals, Chinese firms could carry on expanding, confident of state support.

Then, in early 2016, China unveiled plans to cut its steel and coal capacity by at least 10% over five years, reducing potential global supply by 5%. The government's theory was that it could turn the vicious industrial cycle into a virtuous one. With less production, prices would rise, leading to higher profits and, ultimately, a healthier economy. There were plenty of doubts about China's ability to follow through; after all, pledges to cut capacity had featured in officials' plans since the early 2000s, and over-investment had continued unabated.

But the idea that things might be different this time has gradually caught on (see page 59). Coal and steel prices have soared, as have profits in those industries. That set off a dramatic shift in market sentiment about China. Convinced that Xi Jinping, China's president, has the will and ability to impose capacity cuts, investors have shed their fears that damaging deflation might be China's next export. The yuan has appreciated; nominal growth is just shy of a five-year high. Economic policymakers in Beijing have regained some of their standing, which had been dented by a stockmarket crash and a ham-fisted currency devaluation in 2015. Global markets are reassured by the steady hand of Chinese central planners.

That confidence may be misplaced. Investors are overlooking two shortcomings in China's approach. The first is the na- ▶▶

▶ture of top-down diktats about supply, which lack flexibility and therefore tend to generate volatile outcomes. China wanted to puff up prices. But the surge that it has caused has gone well beyond what it intended, raising concerns that high prices will lead once more to surplus capacity. Local officials, still hungry for growth, have dusted off their plans for big new coal mines. Officials have started to warn about a speculative bubble in the steel market. In Chinese ports stocks of iron ore, a vital ingredient in steelmaking, are near record highs.

The second problem is that enforced production cuts are not a genuine solution to overcapacity. That firms listen to the government in China should never have been in doubt; the problem is that they still do not pay sufficient heed to the market. In many cases the cuts are not all they appear. In the coal industry, for instance, officials last year simply decreed that mines should operate for just 276 days—a limit that they un-

wound this year.

More fundamentally, China has done little to tackle the underlying causes of overcapacity. The banking system continues to direct cheap capital at favoured projects and companies. State-owned firms can still be reckless in their investments, safe in the knowledge that they can always be bailed out. And the government's policy of earmarking bits of the economy for development sets off mad rushes into them. Even as China is fighting to rein in excess capacity in heavy industry, it is laying the groundwork for the same affliction in new fields such as robotics and advanced manufacturing.

China has done more to turn around its industrial sector than many expected, to the benefit of its own economy and the wider world. Investors are right to conclude that its planners are powerful. Even so, a tendency towards overcapacity still lurks, and Chinese officials are still fallible. ■

## The Rohingyas

# Going along with a pogrom

**The Burmese government must at least try to stop the army's attacks on the Rohingya minority**



THE reports are horrifying: soldiers and militiamen surrounding villages, raping women, decapitating children, herding men into buildings and setting them ablaze. The Burmese army is letting few outsiders into the northern part of Rakhine state, near the border with Bangladesh, so it is hard to be certain about the scale of the atrocities. But the UN says that well over 150,000 refugees have fled to Bangladesh since August 25th, with 35,000 crossing the border in a single day this week. They are the lucky ones. Satellite images reveal burning villages across northern Rakhine, and bodies have been washing up on the shores of the river that separates Myanmar from Bangladesh (see page 21). The victims are Rohingyas, a Muslim minority that has been persecuted by the Burmese authorities with varying degrees of ferocity since the 1980s.

Today's government is led by Aung San Suu Kyi, herself a victim of persecution by past military regimes, and winner of the Nobel peace prize for her long vigil for democracy. But she seems no more sympathetic to the Rohingyas' plight than her jackbooted predecessors. She denies that there is any systematic abuse by the security services, claiming instead that they are simply trying to hunt down organised Rohingya militants who have attacked police and army posts. Pleas from the UN, neighbouring governments, aid agencies and even her fellow Nobel laureates to curb the violence and allow humanitarian aid to flow to the victims have had no effect. She is not even willing to use the term Rohingya; her government dismisses the 1m-strong group that has been present in Rakhine since precolonial times as illegal immigrants from Bangladesh.

Ms Suu Kyi's initial reluctance to take up the Rohingya cause was understandable, though not admirable. The vast majority of Burmese share the official view, that Rohingyas are foreign interlopers; many also imagine that, as Muslims, they are plotting against Buddhism, the religion of the majority. When sectarian riots broke out in 2012 between Rohingyas

and Rakhines, a largely Buddhist ethnic group inhabiting the same region, the local media painted the Rohingyas as the aggressors, even though they came off much the worse. Moreover, Ms Suu Kyi has little authority over the army, which granted itself the right to regulate itself (and the police) before handing power to her civilian government. Why take on an unpopular fight that she had almost no prospect of winning?

But the violence in Rakhine has reached such an unconscionable level that there can be no justifying continued passivity. Whether it is popular or not, the first duty of any government is to keep the people it governs alive. Even if Ms Suu Kyi cannot rein in the army, she should at least denounce its behaviour, and make clear to ordinary Burmese the horrors it is unleashing in their name. She has managed to face the generals down once before, after all, during her campaign for democracy, and retains immense moral authority.

### Give and take

By the same token, Western governments have been reluctant to take Ms Suu Kyi too strongly to task, for fear of undermining the transition to democracy that they advocated for so long. The time for such delicacy is past. Democracy is of little worth if it entails mass displacement and slaughter. Foreign donors should make it clear that continued development aid depends on efforts to end to the violence.

Best of all would be to try to change the army's behaviour by adopting sanctions that punish it directly. It is heavily involved in business, with investments in everything from jade-mining to mobile networks. The top brass, in particular, benefit from sinecures in and payouts from this empire. Should America and other countries reinstate penalties for firms that do business with companies linked to the army, the generals' wealth would be imperilled. That might make them reconsider their conduct in Rakhine. The Burmese army is not easy to influence, but economic and diplomatic isolation do seem to have played a part in persuading it to surrender power in the first place. To spare the Rohingyas further suffering, such sanctions should be deployed again. ■

## Political Islam



As you rightly surmise (“Islam and democracy”, August 26th), there appear to be varied and shifting positions among Islamists and Muslims on the question of democracy as well as broader Western principles.

During the Golden Age, Islamic scholars were open to knowledge and wisdom from other cultures, and the libraries of the Muslim world were replete with ancient works of the Greek philosophers, which were studied and debated in the Muslim world. The Golden Age expired because, beginning with Al Gazali, successive scholars of Islam argued that the Koran was the only source of wisdom. For most of the past 700 years and in the Muslim world today, there is only Islamic jurisprudence, derived solely from the Koran, the Hadith and interpretations of Islamic jurisprudence which are the domain of four schools of Islam. Reason has no place.

It is true that many enlightened and educated Muslims adhere to democratic principles. But democracy cannot prevail in the Middle East until enlightened and educated Muslims are bold and willing to overthrow the firm grip that Muslim clergy have on the minds of ordinary Muslims. This needs a new Atatürk; a Muslim Reformation; and, above all, a return to Reason.

MARK LOGGIN  
*Maidenhead, Berkshire*

The United States has been lucky in many ways, and one of the most important is that our founding fathers had the wisdom to separate the church and state constitutionally. Similarly, President Harry S.

Truman had the wisdom to make such separation part of the constitution he imposed after the Japanese unconditional surrender. Lenin, Stalin and Mao exterminated the church’s power over government with ghastly purges. This has created a modern world with religion separate from government—except in the Islamic states. Until Islam accepts this subordinate position, there will be no peace in the Middle East.

RICHARD S. BLAKE  
*East Falmouth, Massachusetts*

## You don’t Say

The term “Say’s Law”, (Economics brief, August 12th) was invented by the American economist, Fred Taylor, and popularised in his introductory text, published in 1921. Moreover, the phrase “supply creates its own demand” is not classical in origin, but was first used in print by another American economist, Harlan McCracken, in a text that John Maynard Keynes is known to have read while he was writing the *General Theory*. Jean-Baptiste Say neither invented the concept nor was he its most staunch defender.

STEVEN KATES  
Associate Professor  
School of Economics, Finance  
and Marketing  
RMIT University  
*Melbourne, Australia*

Say’s monetary views were shaped by his family’s disastrous experience with inflationary assignats in France. Likewise, David Hume’s experience living in London through the period of gold suspension refined the Quantity Theory of Money. Both Say’s and Hume’s seminal contributions to economic theory were grounded in their own personal experiences of different national monetary traditions.

FRANCIS DANIELS  
*Melrose Estate, South Africa*

## Better buildings

The call for mass-production techniques to be applied to the building trade is not new. Nor is the call for modular build-

ing, particularly in housing. Le Corbusier’s 1923 Utopian tract, “Towards an Architecture”, made such demands of a stagnant industry. “A house is a machine for living in,” he famously declared. Le Corbusier called for an engineering solution to the problem of producing housing, claiming the “application of the spirit of mass production and industrial organisation” would produce housing that was worthy of a modern age. Le Corbusier applied this modular approach to his famous *Unité d’habitation* in Marseille, though the entire edifice retains a degree of craftedness despite its underpinning philosophy of mass production and modular construction. Almost a century on, Le Corbusier’s call still remains largely unheeded.

GAVIN KIELY  
*Dublin*

## Thailand’s minorities

“Trampled by elephants” (August 12th) was misleading in its treatment of the situation in the southern region of Thailand. The incidents in the border provinces of Yala, Pattani and Narathiwat are not linked to religious strife, as you claim, but caused by many factors, including criminal activities, as well as by conflict of interests in local politics.

The government’s effort to resolve the situation there has led to a decrease in violent incidents, down by 50% from October 2016 to March 2017 compared with the same period in the year before.

This is in part owing to the philosophies espoused by the late King Bhumibol Adulyadej, which include administering justice and human rights and dealing with the grievances of those suffering from violence. It also means promoting Islamic practices and supporting secular and Islamic education in Yala, Pattani and Narathiwat, which is contrary to your assertion that the government’s policy is one of assimilation. Like Thais of all faiths, Thai Muslims are guaranteed freedom of religion as enshrined in the constitution.

The conduct of security and

related personnel to ensure the human rights of those arrested or suspected fully complies with international obligations and human-rights treaties. Moreover, those personnel are trained regularly to raise their awareness of such obligations.

Pursuing a dialogue with those who hold differing views from the state is a national agenda. The dialogue is still at a preliminary stage, yet it is crucial for building trust and confidence. This is an inclusive, open process and the government considers input from local people, civil organisations, religious leaders and academics to be an important part of finding a sustainable solution.

BUSADEE SANTIPITAKS  
Spokesperson  
Ministry of Foreign Affairs  
*Bangkok*

## Journalese

Surely the all-time winner of tabloid-reader-grabbing headline-writing (Johnson, August 26th), had to be the late *News of the World* in the 1970s for its highly informative banner (quickly picked up by *Private Eye*, inevitably): “Nudist Welfare Man’s Wife Falls in Love with Chinese Hypnotist from Co-op Bacon Factory”.

Who could resist reading on? Three missing prepositions all the same.

CHRIS JOHNSON  
*Geneva*

I take some issue with Johnson’s description of the most “New York” headline in the *New York Post* as “Mob Cop Sex Fury”. I believe there are at least two better *Post* headlines: “Headless Body in Topless Bar” and “Head Red Dead” upon the sudden departure of a Soviet leader.

GEORGE A. SMITH  
*Middletown, New York* ■

Letters are welcome and should be addressed to the Editor at The Economist, The Adelphi Building, 1-11 John Adam Street, London WC2N 6HT  
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### Angela Merkel has coddled Germany

THE chancellor's helicopter swoops in over Kühlungsborn, a Wilhelmine resort on Germany's Baltic coast. In the beach-front Concert Garden her face, in soft focus, beams down from posters promising "a Germany where we live well and gladly". A local Christian Democrat (CDU) candidate welcomes the chancellor to the stage, exclaiming: "They used to call this holiday weather! Now they call it Angela Merkel weather."

"Holidays", Mrs Merkel tells the crowd, "give us the opportunity to think things over." It is a competitive world out there, she reports: the average age in Germany is 45; in Niger and Mali it is 15. But her prescriptions are undemanding. Almost every sentence has something for the right and something for the left. Prosperity must be earned and fairly distributed. The state must not boss people around and it must support them. Refugees must integrate.

Diversity is strength. The chancellor rocks gently from right to left and back as she speaks, a political hammock cradling her audience in the afternoon warmth.

Mrs Merkel has been chancellor since 2005. Her centre-right CDU and its Bavarian sister party, the Christian Social Union (CSU), governed first in coalition with the centre-left Social Democrats (SPD), then with the pro-business Free Democrats (FDP), then with the SPD again (see timeline on next page). The CDU is heading for another comfortable victory at the Bundestag election on September 24th (see page 43), after which she will lead another coalition, perhaps with the SPD, perhaps with the FDP, the Greens or both.

Her years in office have made her a familiar figure to Germans and to the world. But she remains a conundrum—as inscrutable, says *Der Spiegel*, a magazine, as "sphinxes, divas and queens". In a quintessentially cryptic aside the chancellor, who rarely talks about herself or her overall record, once told an audience: "Merkel is Merkel, with all the risks and side-effects." But which Merkel? Which side-effects?

The chancellor does not work at the grand desk in her cavernous Berlin office, preferring the corner of a meeting table. The room boasts portraits of Konrad Adenauer—West Germany's first post-war leader, whose 14 years as chancellor Mrs Merkel looks likely to surpass come 2019—and Catherine the Great. There is a silver cross and a cluster of giant chess pieces. When visitors call, she shows them the trace of the now-vanished Berlin Wall from the window. At night she returns to her modest flat, where she listens to Wagner and cooks potato soup.

Her Lutheran faith ("an inner compass", she calls it) expresses itself in her unflashy style and her instincts: debt is bad; helping the needy, good. She thinks ethically, not ideologically. "I'm a bit liberal, a bit Christian-social, a bit conservative," she said in 2009. For Konstantin Richter, whose novel "The Chancellor" imagines her inner life, her distrust of ideology is rooted in her experience of East Germany: "She witnessed ideology collapse and believers turn into non-believers overnight."

She is reactive rather than programmatic, managing events as they arise rather than hatching long-term plans. "She works like a scientist: she reads lots, assesses the facts and doesn't have preconceptions," observes Jens Spahn, her CDU colleague and deputy finance minister. She monitors events and mood-shifts in a constant exchange of text messages with aides, officials and MPs. In her campaigning Mrs Merkel invites voters to endorse her temperament, not specific proposals. Her message: I will handle such dramas as cross my desk calmly, rationally and without anything so distracting as a project.

A third crucial aspect to her character is ►►

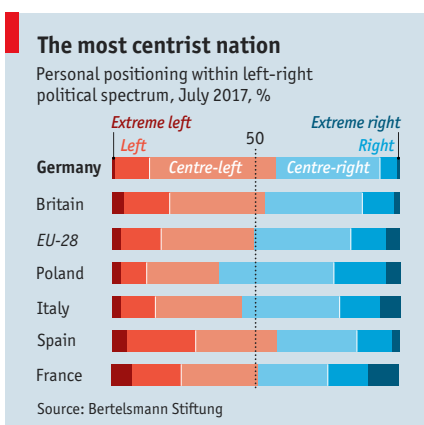
▶ detachment. She keeps her options open and strives never to rile or polarise. Her sentences are paper-chains of subclauses and qualifications. East Germany's paranoid and hyper-surveilled society and Helmut Kohl's patriarchal CDU taught her the virtues of ambiguity and patience. At a recent rally in the northern city of Bremen protesters heckled, kazooed and klaxoned the chancellor. Barely audible, she ploughed on unruffled: "Some have decided to spend the next four years yelling," she ad-libbed with a shrug and a smile. She employs similar putdowns—calm but gently mocking—at international summits.

Ethical not ideological, reactive not programmatic and detached not engaged, Merkelism is the absence of political anchors. That suits modern Germany's political culture well. Comfortable circumstances suppress the appetite for change. Its hard-won economic success buoyed for the time being by a weak euro, low interest rates, an oil glut and the liberalising labour-market reforms of her SPD predecessor, Gerhard Schröder, the country wants an administrator, not a reformer.

**Angela momentum**

Yet it is hardly a country with no need for reform. The lowest-paid 40% of German workers are earning less in real terms than 20 years ago. Food-bank use is up. The rate of investment has been dropping since 2012. Bridges creak and potholed roads challenge even the best-engineered suspensions. Not that Germany's automotive excellence is what it once was: the image of the economically crucial car industry has been tainted, as has the country's air, by emissions from the diesel engines it favours—a scandal it tried to cover up. Dirty coal is filling some of the gap left by the closure of the country's nuclear plants as part of an "energy transformation"; the country's carbon-dioxide emissions are up.

Mrs Merkel bears a good bit of the blame for all this. Closing the nuclear



plants was her idea. The car industry has had an over-cosy relationship with the parties of her "grand coalition". After her 12 years as chancellor the tax system remains strikingly unprogressive and state governments' ability to invest in infrastructure or anything else is limited by an excessively rigid "debt brake". Red tape frustrates builders and entrepreneurs; on average it takes 4.5 days to start a business in Britain but 10.5 in Germany. Last time the economy saw serious reforms there was no such thing as Facebook, let alone Uber.

The current election campaign was a chance to take on what Christian Lindner, the FDP's leader, calls the "prosperity hallucination": that in a changing world more of the same is good enough. Instead Mrs Merkel offers balanced banalities. Her critics call this "asymmetric demobilisation": the purposeful pursuit of maximum inoffensiveness as a means of lowering turnout for her opponents.

To Mrs Merkel's acolytes her blandness shows a refreshing distaste for yah-boo politics from a leader who refuses to pander to her base. When the local CDU attacked Hamburg's SPD mayor over the riots that marred the G20 summit there in July, for example, Mrs Merkel stepped in to defend him. This blend of centrist policies

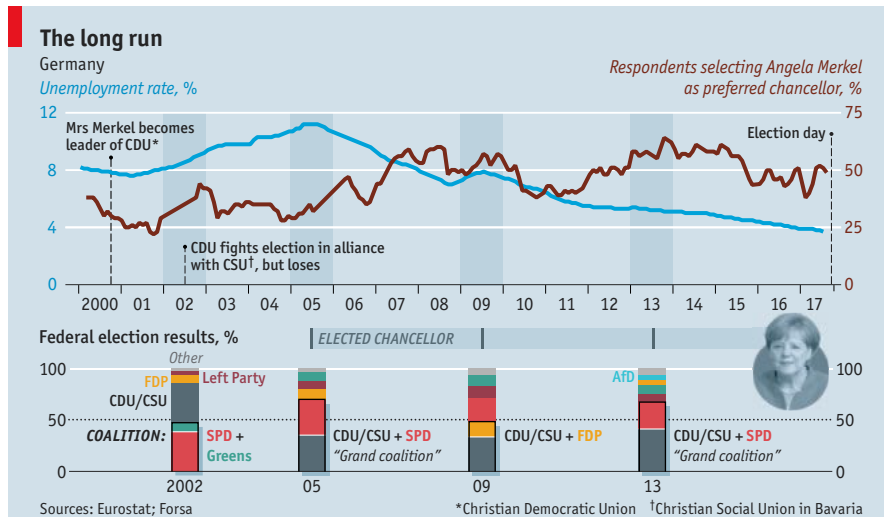
and non-partisan behaviour explains why her appeal stretches well beyond the CDU's typically older, more right-wing electorate. Younger and Green-leaning voters like her liberal refugee policies, SPD voters like her support for the minimum wage, FDP voters like her stability. Germany is a very centrist country (see chart); Mrs Merkel suffices it.

When she chooses to, she can move quickly. Witness that closure of the nuclear plants, or her support for three Greek bail-outs. Witness her decision to welcome more than 1m refugees and other asylum-seekers in the summer of 2015. The first of these spooked business, the second upset many of the CDU's conservative supporters. The third, though, now often seen as the most controversial, was at the time widely applauded.

As the refugee crisis of 2015 built up, Mrs Merkel dithered: it was the year that "merkeln", meaning to put off big decisions by doing and saying little, was added to the country's vocabulary. By the end of August thousands of refugees were squeezing on to westbound trains in Hungary and trudging along Austrian motorways towards Munich. The chancellor found herself left with a blunt choice between letting them in and seeing ugly images of German border guards forcibly repelling men, women and children. She and the public knew which option they preferred. Closing the borders would have "upset a large majority of citizens", according to Robin Alexander, a journalist for Die Welt who has written a book on that time. Crowds cheered the arrivals at Munich's station.

Mrs Merkel's decision mixed a concern for public opinion, demographic considerations (an ageing society needs immigrants) and deep conviction (growing up behind the Berlin Wall taught her the evil of sealed borders) into a characteristic blend of flannel and political nous, conflict-aversion and moral rectitude. But it stretched Mr Spahn's assertion that "the chancellor only prefers to take risks when she is confident she can control them." The influx alienated the conservative CSU and fuelled the rise of the right-wing, populist Alternative for Germany party. As the number of refugees rose the chancellor's popularity tumbled; the international press pushed out premature political obituaries. But she recovered her standing as the rate of new arrivals fell, thanks partly to a murky deal with Recep Tayyip Erdogan, the president of Turkey, which traded money and visas for refugee repatriation. "There can and shall not be another year like 2015," she told a cheering CSU rally on August 25th.

In so far as Mrs Merkel's reaction to the refugee crisis was a departure from her usual timid style, it points to a curious contrast between her domestic and international outlook. At home she does little to ▶▶





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International woman of mystery

► shore up the economy against the pressures of tomorrow; looking abroad she worries deeply about the future of the multilateral global order which has made today's prosperous Germany possible.

Among her favourite books are one that describes the rise of 19th-century globalisation (Jürgen Osterhammel's "The Transformation of the World") and one that narrates its collapse in 1914 (Christopher Clark's "The Sleepwalkers"). Mrs Merkel's commitment to protecting rules-based globalisation is evident in her close involvement in climate talks, which began at a 1995 summit in Germany when she was the CDU's environment minister. It was also present in her successful diplomatic push for European sanctions on Russia.

The chancellor's detached demeanour serves her well in negotiations. She turns up at international summits well informed; she keeps her cool. The logo for the G20 summit hosted in Hamburg was a reef knot—a fastening the purpose of which is to pull together a loose bundle, and which gets tighter the more its loose ends are pulled. At the summit she worked closely with countries similarly fearful for the global order, most notably China, which joined Germany in sidelining America to reaffirm the importance of climate action.

When the Pew Research Centre asked people in 37 countries about various world leaders this spring, Mrs Merkel was the only one in whom more people expressed confidence than a lack of confidence. With America incoherent, Britain in isolationist retreat and France led by a new and untested president, some describe Mrs Merkel as the West's new *de facto* leader. But that demands too much of her. Germany has a strong economy and a capable chancellor. But it remains reliant on America for its defence, however much Mrs Merkel rolls her eyes at Donald Trump. As Ian Bremmer of the Eurasia Group, a consultancy, puts it, Mrs Merkel "understands that she will

have to manage a leaderless environment, but she is not prepared to become the leader of the free world".

Indeed, Mrs Merkel frets about whether a European country "with few natural resources and an ageing population", as one of her aides puts it, can stay relevant at all. She worries about the absence of European technology champions. Germany and Europe are becoming smaller and relatively poorer in the world, she observes, telling an audience in Berlin on August 23rd that some 80m Germans are not "per se" important to the Chinese or Indians.

So German foreign policy plays out as a conflict between rising international demands and the chancellor's essential traits: her distrust of ideology, her reactivity and her detachment. Throughout the euro-zone crisis, for example, Germany dragged its feet on proposals to help southern Europe's struggling economies, but made concessions at the last possible moment rather than allow Greece to fall out of the system—as her CDU finance minister, Wolfgang Schäuble, would have preferred. Though the currency bloc has recovered, its ability to survive another challenge without greater common governance and burden-sharing is uncertain. In France, Emmanuel Macron supports such reforms. That challenges Mrs Merkel to say where she stands.

For now she has remained warm but ominously non-committal. On the French president's first official visit in May she welcomed him with a line of poetry from Hermann Hesse: "Jedem Anfang wohnt ein Zauber inne" (A magic dwells in each beginning). She has backed his proposal for a euro-zone finance minister and greater common investments; insiders say she wants to harmonise the corporate-tax rates of the two countries. But a finance minister with what powers? Investments on what scale, paid for by what mechanisms? And is this the same tax harmonisation that has

been promised for years? Answers come there none, at least so far.

Another case study is Germany's growing contribution to international security. The country now has troops deployed in Afghanistan, Mali and Lithuania, where it leads NATO's military mission. And it has launched a new "Marshall Plan" of investments and co-operation in sub-Saharan Africa, spending some €4bn more to help prevent future refugee crises. All of this would have been unthinkable a few years ago, observes Wolfgang Ischinger of the Munich Security Conference. Moreover, the chancellor has made a commitment to raising defence spending from 1.2% of GDP to the NATO target of 2%—a difference of some €25bn (\$30bn) a year by 2024.

Question-marks remain, however. That fewer sub-Saharan Africans are making it to Germany is a product of Italian military and intelligence operations in the Mediterranean and Libya, not the Marshall Plan. And Germans seem to have little appetite for some of the international responsibilities the country already has, let alone new ones it might accrue. According to a poll by the Pew Research Centre in June, just 38% would want to use force to defend a NATO ally under any sort of attack. The closest Mrs Merkel has come to confronting her compatriots with the new realities was when, in May, she told a crowd in Munich: "The time when we could entirely rely on others is somewhat over." Yet this cryptic comment is better seen as a way of distancing herself from Mr Trump than as new foreign-policy direction.

### Rise up singing

Challenged by a journalist in August 2015 to specify what she still wanted to achieve as chancellor, Mrs Merkel offered only platitudes about wanting to fulfil her duty. Two years, a refugee crisis, the advent of Mr Trump and a federal-election campaign later, she has still not answered the question. Mrs Merkel's CDU manifesto is a perfunctory list of modest correctives, like 15,000 more police officers, increased child benefit, a new digitisation tsar and tighter rules on dual citizenship.

"Enjoy the summer. Vote right in the autumn", says a CDU poster of a woman snoozing in a sun-dappled meadow. But then what? One day, Mrs Merkel's time will pass. "I don't want to be a half-dead wreck when I leave politics," she said before she became chancellor. When she steps down, if indeed she does, her party will face an uncertain future: she has built up few potential successors. So will her country, with its emergent diplomatic heft bound up with her individual contacts and methods she has picked up. All that will go with her. Germany has enjoyed a long summer living well and gladly under Mrs Merkel's irenic inaction. Clouds fleck the blue horizon. ■




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**The Koreas**

## A bomb for a bomb

SEOUL

**South Koreans want to bolster their own military capabilities in response to the North's nuclear test**

**T**HE runaway pace of North Korea's nuclear development has confounded predictions and diverted the attention of world leaders. It is also meddling with one North Korean grandmother's retirement plans. Ri Chun Hee, a veteran broadcaster at Korean Central Television, was promised a rest in 2012, after 41 years gleefully reading out propaganda. The 74-year-old would only return for significant announcements. Yet these now come most weeks. North Korea has already tested 22 missiles this year. On September 3rd Mrs Ri was back, claiming the regime had tested a hydrogen bomb (see next story). It was, she declared with trademark exuberance, the "perfect" explosion.

Mrs Ri is not the only cold war relic that could be put back into service as a result of the test. Some South Koreans want America to show its support by moving nuclear weapons back to their country. The White House put 950 of them there after the Korean war, but withdrew them in 1991. Soon afterwards both Koreas agreed to keep nuclear weapons off the peninsula. But the North has long flouted the deal, testing its first bomb 11 years ago. Liberty Korea, the South's biggest opposition party, called in August for the weapons to be redeployed. Hong Joon-pyo, its leader, reiterated the demand two days after the latest test.

South Koreans are growing less certain

that they can entrust their security to America. A poll by the Pew Research Centre in June found that 78% of South Koreans have no confidence in Donald Trump to "do the right thing" in world affairs. His response to the latest test will have done little to assuage these fears. James Mattis, his defence secretary, warned Mr Kim that a threat to America or its allies would prompt "a massive military response". But Mr Trump, who had earlier mused about ditching a free-trade agreement with South Korea, chose instead to criticise Moon Jae-in, the South's president, who has called for talks with the North. "South Korea is finding, as I have told them, that their talk of appeasement with North Korea will not work," he tweeted. For Mark Fitzpatrick of the International Institute for Strategic Studies, a think-tank, "that was exactly the wrong response."

### Not fickle, but fissile

Mr Hong argues that redeploying nuclear weapons would be proof of America's will to defend the South. Several conservative newspapers have endorsed the notion. One big one, *JoongAng Ilbo*, said the move would "raise our trust in the United States". A poll in August found that only 27% of South Koreans favour keeping their country nuclear-free. On September 4th Song Young-moo, the defence minister,

said asking for the weapons was "one alternative" that should be reviewed. He mentioned public demand for the idea in a recent meeting with Mr Mattis.

Another option is for South Korea to acquire its own nuclear weapons. It tried this twice in the 1970s but was pressed by America to stop. Experts believe it could have its own bomb within three years if it chose to do so. Most South Koreans have been keen on the idea for two decades. Another paper, *Chosun Ilbo*, said the government must consider it: "A nuclear threat must be met with a nuclear deterrent. There is no other option."

Yet South Korea will probably remain nuclear-free. Making its own bombs could jeopardise the alliance with America and risk sanctions for violating the nuclear non-proliferation treaty of 1968. Mr Moon and his party continue to oppose asking the Americans for some of theirs. Even if they change their minds, American generals are unlikely to back such a scheme.

America has plenty of nuclear weapons capable of striking the North—from submarines, bases on Guam or even the American mainland. Putting them in the South would antagonise China and Russia just as America is trying to enlist their help to press the North to abandon its drive for long-range nuclear weapons. This week at the United Nations, America circulated a resolution that would bar exports of oil to North Korea, most of which come from China, and which is the one plausible means left to rein in the North. "From an American perspective, it [deploying nuclear weapons in the South] is unnecessary and dangerous," says David Straub, a former American diplomat now at the Sejong Institute, another think-tank.

Mr Moon is far more likely to boost con- ▶▶

ventional defences. He has reversed his earlier opposition to THAAD, an American anti-missile system. Four more launchers were installed soon after the latest test. Mr Moon has also persuaded Mr Trump to lift a limit on the range and payload of its (non-nuclear) missiles, allowing the South's army to deploy more powerful ones, eg, able to destroy bunkers.

"Kim Jong Un must not be allowed to sleep easy," cried *Chosun Ilbo*, referring to the North's leader. Mr Moon hopes to persuade South Koreans that they, at any rate, still can. That should be relatively easy. By mid-week a qualifying match for the football World Cup had bumped North Korea from the top three search terms on Naver, South Korea's answer to Google. Passers-by in Gwanghwamun, a square in the centre of Seoul, were not fretting about an imminent apocalypse. Asked to judge the current atmosphere in the capital, a middle-aged man replied, "The pollution isn't as bad these days." ■

### North Korea's nuclear weapons

## Almost there

### The rogue state's missile programme is advancing much faster than expected

**K**IM JONG UN, North Korea's leader, has made no secret of his goal of developing a nuclear-tipped missile with enough range to destroy cities in America. What has confounded many experts is the speed at which his engineers are getting there. Only last year the consensus was that they would not succeed before 2020; now the target seems achievable within a year.

If North Korea's sixth nuclear test, on September 3rd, was of a two-stage nuclear device small enough to fit on a Hwasong-14 intercontinental ballistic missile (ICBM), as it claims, that marks a big advance over the previous nuclear test a year ago. The regime claimed that test, too, was of a two-stage device (also known as a thermonuclear or hydrogen bomb), in which an initial nuclear explosion is used to amplify a second one. But estimates of its yield (explosive power) varied between 10 and 30 kilotons, which even at the higher end is too little for a hydrogen bomb. David Albright, the president of the Institute for Science and International Security, a think-tank, believes that the North had instead tested a "boosted fission" device, in which lithium, deuterium and tritium are placed at the centre of a single-stage bomb, to increase its yield with a bit of fusion.

The most recent test was calculated by NOR SAR, a Norwegian seismic agency, to have had a yield of about 120 kilotons, or

about eight times that of the fifth test (see chart). That would be quite low for a two-stage thermonuclear device of the kind North Korea would like the outside world to believe it has developed, but not too powerful for it to have been a boosted fission device.

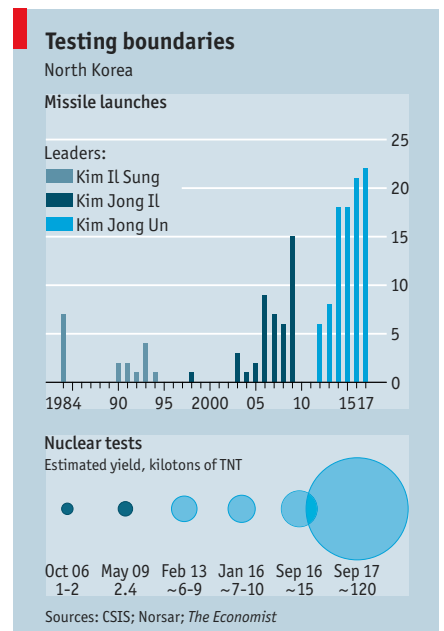
The day before the test, Mr Kim was pictured posing in front of a peanut-shaped container (almost certainly a plausible mock-up), with each end of the shell supposedly holding one of the device's two stages. The official statement suggested that the test was of a device that could be adjusted to produce explosions that range between tens of kilotons and hundreds. That is a tricky feat to master, but a convenient way of explaining the relatively low yield for a genuine thermonuclear device.

Jeffrey Lewis of the Middlebury Institute of International Studies sees no reason to doubt North Korea's claims. He argues that, based on the experience of other countries, six tests is more than enough to develop a thermonuclear device. Mr Albright remains more sceptical that the North has mastered two-stage technology. That matters, he says, because single-stage devices have a limited yield (even boosted-fission ones), whereas the power of a two-stage warhead is immense. With the latter, even with a relatively inaccurate guidance system, an entire city could be destroyed by a single missile. Either way, says Mark Fitzpatrick of the International Institute for Strategic Studies (IISS), the North Koreans will have learned a lot from the latest test and will probably have a true thermonuclear capability sooner rather than later.

If the story of North Korea's path to a hydrogen warhead has been one of predictable, albeit accelerating, progress, the same cannot be said of the rapid advance it has made in long-range missiles over the past two years. Its intermediate-range (up to 4,000km) Musudan missile, which is also known as the Hwasong-10, had failed in six out of seven tests, the most recent in October last year. Yet since May, North Korea has twice successfully tested both the intermediate-range Hwasong-12 and the Hwasong-14.

Michael Elleman of the IISS says that no other country has advanced from a medium-range capability to an ICBM in such a short time. In a report published last month, he argues that the reason for the startling breakthrough was that North Korea had quite suddenly got hold of much better, more reliable rocket engines.

Mr Elleman believes that the Hwasong-12 and -14 are powered by versions of a high-performance Soviet missile engine known as the RD-250 which the North has acquired by stealth. Mr Elleman says that North Korea could not have developed and manufactured such large rocket motors, which generate 40 tonnes of thrust, from scratch. The only outfits with a his-



tory of producing this type of engine are Energomash in Russia and KB Yuzhnoye in Ukraine.

The latter has fallen on hard times, particularly since 2014, when Russian-backed separatists seized nearby parts of eastern Ukraine. Even before that, in 2011, North Korea had been caught trying to procure missile parts from KB Yuzhnoye. Mr Elleman reckons that, amid the chaos in the surrounding area, the North Koreans may now have succeeded, with the help of disgruntled employees or corruptible guards, in acquiring a "few dozen" RD-250 engines and transporting them home by train (they are only about two metres high and a metre wide).

Mr Lewis, among others, questions Mr Elleman's theory and suggests that the North Koreans could have sought help from Iran, or that their own indigenous skills are being underestimated. The Bulletin of Atomic Scientists, however, agrees with Mr Elleman both about the type of engine and its probable source. Whoever is right, what is not in doubt is the sudden leap forward this year of North Korea's missile programme.

The one piece of the jigsaw still needed to produce a credible nuclear-armed ICBM is a re-entry vehicle that will protect the warhead during its descent through the earth's atmosphere. The re-entry vehicle attached to the second Hwasong-14 that was tested appeared to burn up in the terminal phase of its flight. But even if North Korea does not yet have one that can withstand the speed at which an ICBM travels, neither Mr Fitzpatrick nor Mr Elleman thinks building one will be an insuperable obstacle to engineers who have come this far this fast. North Korea's nuclear-weapons programme is not quite there yet, but it is getting very close. ■

## Atrocities against the Rohingyas

## Scorched earth

GHUMDUM, AZA KHAYA AND SHAH PORIR DWIP

## A state-led massacre in Myanmar's Rakhine state triggers an exodus

**A**CROSS the border, inside Myanmar, columns of smoke can be seen rising at dawn; each evening dusk reveals the fires at their bases. All week villages have been burning in northern Rakhine state, home of the Rohingyas, a persecuted Muslim minority. Refugees have been fleeing to Bangladesh across rice paddies, along muddy mountain paths and in boats over the Naf river, which divides the two countries. They are fleeing systematic violence from the Burmese army and armed mobs of Rakhines, another local ethnic group. The UN has counted 164,000 who have already arrived in Bangladesh; many more are thought to be on their way.

At the end of the Myanmar-Bangladesh Friendship Road, backed against the border fence near the town of Ghumdum, is a rapidly growing, makeshift camp holding some 5,000 new refugees. A Bangladeshi border guard points to a nearby hillock where a fire is raging; he says the Burmese army is burning down houses. Nurul Islam, a 30-year-old farmer, says he left his home in Razabil village in Myanmar last week when soldiers opened fire on villagers and set the houses on fire. Women and men were separated. Soldiers raped his 13-year-old sister Khadiza; mobs of Rakhines armed with swords mutilated her body. His father was also killed.

Fatima Khatun managed to escape her burning village and arrived in Bangladesh on September 4th with eight members of her family. She says many children and old

people died on the week-long trek through the muddy monsoon-soaked hills. When she and others crossed a river inside Myanmar by clinging to bamboo rafts, soldiers opened fire on them. Many more villagers are hiding in Myanmar or have lost their way, she says.

At a nearby petrol station, Mohammad Jahangir explains that he has just arrived from the town of Taung Bazaar after a 13-day march. He is carrying his 8-year-old son, who cannot walk because of a bullet wound on his right leg.

Matthew Smith of Fortify Rights, an NGO, says that based on copious, detailed testimony from many witnesses, "We can now say with a high level of confidence that state-led security forces and local armed residents have committed mass killings." It looks, says Mr Smith, as if the Burmese army is trying to drive all Rohingyas out of the country. Fortify Rights has documented many cases of indiscriminate killing, rape, mutilation and other crimes.

To the south of Ghumdum, at another border crossing, locals reckon 5,000 refugees have arrived that morning alone. One member of the exhausted procession is Sawza (who goes by one name), a health worker from the town of Buthidaung. She left her home on August 25th, the day the Burmese army went on the rampage in response to attacks by Rohingya militants that killed 12 policemen. At first, Sawza thought it would be safe for her family to stay. But when she heard that Zabar Khali-mullah, a wealthy local, had been killed, she decided to flee. Unlike during another bout of violence last year, affluent land-owning Rohingyas are leaving this time. Sawza says that during her 15-day journey she saw parents forced to abandon children who were too weak to keep walking and a man in his 50s who had to leave his 80-year-old father by the wayside.

Even farther south, on the beach at

Shah Porir Dwip, the southernmost tip of Bangladesh, Roshida Begum climbs out of a wooden boat with a few belongings and what is left of her family. Burmese soldiers took away her daughters, who were 16 and 22, she says. She later found their mutilated bodies. Her husband was also killed. Farther along the beach is another group of 30 or so Rohingyas, who spent five days hiding in the hills before crossing to Bangladesh. Obaida Khatun, the oldest woman in the group, says that three of the young women with her were raped.

The narrow strip of Bangladesh that juts into the Bay of Bengal alongside Myanmar already hosts hundreds of thousands of Rohingya refugees from previous exoduses, in 1978 and 1991-92. They compete with locals for food, firewood, land and jobs. It is the poorest part of Bangladesh. Literacy in the region is 27%. Aid is arriving in dribs and drabs—food, water purifiers, tarpaulins—but not nearly enough. Among the throngs of refugees looking for shelter in the area this week was Zainab Begum, whose father was killed by Burmese soldiers. "Everything has turned to ashes," she says. ■

## Politics in Cambodia

## Closing time

PHNOM PENH

## The government is crushing its opponents ahead of elections next year

**T**HE newsroom of the *Cambodia Daily* is littered with piles of proofs, pens without lids, an empty bottle of Tabasco sauce, a cat frolicking under the strip lighting—but no journalists. The country's most prominent independent newspaper printed its final edition on September 4th, after the authorities suddenly presented it with an unpayable tax bill of \$6.3m. The move forms part of a fierce new campaign against the government's detractors ahead of elections due in July. Cambodia's democracy, if not dead, is dying.

The largely foreign journalists of the *Cambodia Daily* managed to cover one last important story. Early on September 3rd Kem Sokha (pictured on next page), leader of the Cambodia National Rescue Party (CNRP), the country's main opposition, was arrested for treason with the help of 100 police. He now languishes in the miserable confines of a remote prison near the border with Vietnam. As evidence of his alleged crime, the government is pointing, absurdly, to a four-year-old video of a speech in which he explains that he has received American advice about how to provide effective democratic opposition. If convicted, he faces as much as 30 years in ▶▶



Many more did not make it



There goes another opposition leader

▶ prison; the CNRP could be dissolved.

Lord Prime Minister and Supreme Military Commander Hun Sen, as Cambodia's leader likes to be known, has been in power since 1985. Bloody protests occurred after a bitter election four years ago in which his Cambodian People's Party (CPP) lost ground to the newly formed CNRP. Since then dozens of activists, politicians and critics have found themselves behind bars. A tough cybercrime law has landed others in trouble for posts on social-media sites. The previous head of the CNRP, Sam Rainsy, has been hounded out of the country by spurious criminal charges. Most gravely Kem Ley, once acting head of the CNRP, was shot dead over his morning coffee 14 months ago. His killer, who claims he acted over an unpaid debt of \$3,000, was sentenced to life imprisonment in March after a superficial investigation.

Yet this intimidation does not seem to have scared voters. At local elections in June the opposition won 46% of the popular vote to the ruling party's 51% (a similar result as in the parliamentary election of 2013). Hence the events of recent days.

The pretext of preventing foreign meddling is being used as a means to strangle dissent more broadly. In July the government sent legal ultimatums to two organisations participating in an election-monitoring consortium, demanding that they withdraw. In August local radio stations were banned from broadcasting Voice of America and Radio Free Asia—two international news services funded by America's government. Broadcasts on at least 32 radio frequencies have been taken off air. The National Democratic Institute, an American democracy-building NGO, also received sudden orders to close. An ambiguous law passed two years ago means other pressure groups and charities, both do-

## Bangladesh v Pakistan

# East overtakes west

Bangladesh's GDP per person is now higher than Pakistan's

WHEN Bangladesh won independence from Pakistan in 1971, it was much poorer than the country it left. Industry accounted for only 6-7% of its GDP, compared with over 20% in Pakistan. The battle for independence had killed or displaced millions, damaged roads and railways, and severed ties with Pakistan's bankers and industrialists (including the owner of one of the world's biggest jute mills). Even before the war, Bangladesh had been trampled by another apocalyptic horseman: a cyclone killed hundreds of thousands in 1970. The country's independence leader, Sheikh Mujibur Rahman, complained that West Pakistan had not promptly shared its bumper wheat crop or "given a yard of cloth for our shrouds".

Last month revealed a remarkable turnaround. Bangladesh's GDP per person is now higher than Pakistan's. Converted into dollars at market exchange rates, it was \$1,538 in the past fiscal year (which ended on June 30th). Pakistan's was about \$1,470.

Strange as it may sound, Bangladesh jumped ahead because of an advance in Pakistan. On August 25th Pakistan released the results of its census, updating earlier population estimates. They showed that the country has 207.8m people, more than 9m more than previously thought. It may now have the fifth biggest population in the world, surpassing Brazil's. But the new count also lopped 4-5% off Pakistan's GDP per person, the arithmetic consequence of revealing so many more people.

A caveat should be noted. A dollar

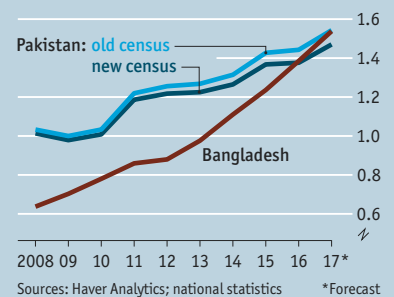
stretches further in Pakistan than in Bangladesh because prices in the former tend to be lower. So Pakistan's \$1,470 per person actually has more purchasing power than Bangladesh's \$1,538.

This is nonetheless a good moment to celebrate Bangladesh's economic progress. Its annual growth has averaged more than 6% over the past ten years and has run above 7% over the past two. Industry accounts for 29% of its GDP. A country that once lacked cloth for shrouds now exports more ready-made garments than India and Pakistan combined. Working conditions are still far worse than they should be. They are also far better than they once were.

Bangladesh's GDP per person received a boost from another source. Its last census, in 2011, led to a large revision of the country's population, larger even than Pakistan's. But in Bangladesh's case, the revision was downwards.

### More bucks for Bangladesh

GDP per person, \$'000  
Current prices and market exchange rates



mestic and foreign, can easily be shut down for purported partisanship.

Western governments criticise such injustices, but events elsewhere in Asia are proving a distraction. America expressed "grave concern" at Mr Kem Sokha's arrest; Mr Hun Sen retorted that it was defending its "puppet". China, which has become Cambodia's biggest source of aid, says it supports the government. Analysts speculate that it may also be offering advice on how to curb opposition, particularly online, given the sophisticated nature of recent repression. Jodie DeJonge, the former editor of the *Cambodia Daily*, points out that using a tax bill to silence the (loss-making) newspaper was particularly shrewd. European and American officials have been telling the government to pursue evaders more vigorously for years.

As it stands, there is no chance that the election in July will be either free or fair. The CNRP hopes to soldier on without a new leader—assuming the courts allow it. The government may intend to put it out of business altogether; it has issued vague threats against other senior figures within the party. "Even if people don't vote for the prime minister next year there won't be any other choices," reckons Phil Robertson of Human Rights Watch, a charity. So when it comes to Cambodia's callow democracy, what will the end look like? Phnom Penh's Peace Palace, Mr Hun Sen's office, offers one vision of the future. The huge edifice, lined with colonnades, towers behind gates and guards on a busy boulevard in the centre of the city. It dominates the street, the sky and the view of anyone who dares to look up. ■



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# Banyan | Sweeter than honey

Chinese investment is a boon for Pakistan, though it carries risks



NEVER mind that the two countries' slogan factory has always been based in China, or that it started off with some truly clunky products. What matters is that Communist China and Pakistan have a joint venture churning out declarations of friendship that date back almost to the two states' respective founding, some seven decades ago. China and Pakistan have long hailed each other as "all-weather friends", or "iron brothers" as close as "lips and teeth". The mutual bond is, leaders from both countries affirm, "higher than the Himalayas, deeper than the deepest ocean, and sweeter than honey".

And then, from China, come the lover's gifts. Never has Pakistan been so wooed. The original promised dowry, of \$46bn in Chinese grants and soft loans for infrastructure projects, has only grown, to \$62bn. This munificence is dubbed the China-Pakistan Economic Corridor (CPEC), launched amid fanfare in 2015, on a visit to Pakistan by President Xi Jinping.

Most of the money is earmarked for power plants to improve Pakistan's notoriously unreliable electricity supply. The rest is going on roads, railways, dams, industrial zones, agricultural enterprises, warehousing, pipelines and a deepwater port in the coastal settlement of Gwadar. Some of the promised money is bound not to materialise, and the claim by the interior minister, Ahsan Iqbal, of "benchmarking" Singapore and Hong Kong when turning remote, dusty Gwadar into a container-shipping hub speaks more of hope than experience. Yet over \$14bn has already been spent. CPEC is very different from earlier schemes, when co-operation was promised only to run into the sands.

For Pakistan, the scale of ambition is unprecedented—a "game- and fate-changer" as overwrought locals put it. If CPEC gets electricity and goods flowing efficiently, then growth could jump by over two percentage points a year, by one estimate. Better yet, CPEC could shift the national narrative—too often dominated by coups, extremists and a chippy kind of nationalism—to wards economic construction.

What is in it for China is often misunderstood, especially by Sino-phobes in Delhi, Tokyo and Washington. They make much of the "corridor" in the plan, concluding that China's chief aim is to gain access to the Indian Ocean, the better to encircle India. In fact, argues Andrew Small of the German Marshall Fund, an

American think-tank, improving transport links through the mountainous neck of land that joins Pakistan to Xinjiang province in China's far west is one of CPEC's lesser aims. Yes, Gwadar, as a port on the Indian Ocean, interests the Chinese navy, but would have done so regardless of CPEC. Most of CPEC's investments are aimed at improving Pakistan's domestic economy.

China does have strategic motives, of course. A more dynamic Pakistan would certainly act as a counterbalance to the deepening security relationship between India and America, which also provides military aid to Pakistan. Then there is Islamist militancy, which spills back into Xinjiang; development might, as Li Ke-qiang, China's prime minister, put it, "wean the populace from fundamentalism". China needs new markets for its products, as well as new terrain for infrastructure and industrial projects. Most importantly, CPEC has become the main plank of Mr Xi's ambitious "belt-and-road" initiative, whereby improved infrastructure will help to strengthen economic ties and thus spread China's influence through Asia and beyond. As Mr Small points out, CPEC has to be seen to work for the broader scheme to seem both credible and appealing.

Even if CPEC is not the neo-imperialist exercise its critics make it out to be, it still has its flaws. The IMF warns that Pakistan may struggle to repay China's loans, which could in turn prompt a balance-of-payments crisis. Pakistan's central bankers have in the past deplored a lack of transparency surrounding CPEC contracts; suspicion abounds that Pakistani taxpayers have been short-changed. And security is a problem. Just one example is the new Chinese-funded road to Gwadar, which runs through an area long gripped by insurgency in the remote, backward province of Balochistan. Mr Iqbal argues that the road and the development it is bringing will help extinguish the conflict. It might equally pour fuel on it, if locals feel excluded.

## Human ties

In opinion polls, Pakistanis have high regard for the Chinese. A film released in April, "Chalay Thay Saath", depicts a cross-border love story. It throws together—at a graveyard along the highway connecting the two countries—a Chinese man (played by a Canadian), whose father had worked as a road-builder in Pakistan, and a young Pakistani doctor on her way to visit her father in the far north. Despite the vicissitudes of landslides, family emergencies and communicating via a language app, the couple end up marrying.

In real life, most Pakistanis have never met a Chinese. That will change, as the number of Chinese residents swells from around 30,000 today. In Gwadar locals gripe about the tight security at the port, for the benefit of Chinese workers, who do all the construction and who keep to themselves. A politician complains that "they do not even buy a single needle in the market."

In Islamabad, the Ni Hao ("Hello") Chinese supermarket stocks pork, to the disgust of a Pakistani working there. He gripes that before long everything will come from China. Over the past year massage parlours have sprung up in swanky parts of town. Chinese women are starting to walk about the conservative capital in short skirts and shorts. As one local notes, "People are becoming very aggressive, saying, 'What the fuck is that? This is a Muslim country.'" Pakistan's elites may be enthralled by the idea that Chinese investment might make their country stronger, but among the masses, the romance has not really taken hold. The film, at any rate, flopped. ■



Also in this section

26 Bookshops turn cool



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## Politics

## All the president's men?

**A date has been announced at last for a crucial Communist Party conclave. It will offer clues to China's future**

CHINA'S elite have long had to keep their diaries clear for much of September, October and November, waiting for a date to be announced for a five-yearly congress of the ruling Communist Party. At last, it has been revealed. The red carpets will be rolled out and the skies turned blue (by shutting down factories and keeping cars off the roads) on October 18th. It will be the 19th such gathering since the party was founded in 1921. At the meeting, some 2,300 hand-picked delegates will choose a new Central Committee which will then hold its own conclave to reshuffle membership of the country's most powerful decision-making bodies. The line-up has been largely settled during months of secretive horse-trading. Rumours abound about who has made the cut.

The president, party chief and supreme commander of the armed forces, Xi Jinping, certainly has. He has already served five years as the party's general secretary. If he sticks to precedent, he has another five years to go (though some believe he wants to keep the job longer than the usual decade). This meeting will give Mr Xi his first chance to implement sweeping changes of personnel at the very top of the party—his predecessors selected the 25 members of the current Politburo at the previous congress in 2012. It is widely expected that this gathering will offer clues as to how effectively Mr Xi has consolidated his power since then and what he plans to do with it.

The signals, however, will be hard to read.

Around half of the nearly 400 members of the Central Committee will be replaced, as will about two-fifths of the Politburo. New military chiefs will be appointed, too. But most attention will focus on who makes it into the Politburo's Standing Committee. Five of its seven members are due to retire, including Wang Qishan, Mr Xi's one firm supporter in the group, who is in charge of his anti-corruption campaign. There has been speculation that he may keep Mr Wang on. To do so would breach convention but no rules. However, retaining Mr Wang would not, by itself, prove that Mr Xi is strong. It could suggest that he lacks other close allies whom he trusts to do the politically dangerous job of fighting graft.

### Isn't Xi great

It is likely that the new Standing Committee will contain more Xi loyalists. But the problem for outsiders is that, even when the new men (and they will almost certainly all be men) are paraded before journalists at the end of the meetings, it may still be hard to calculate how much additional clout Mr Xi will enjoy. Factional allegiances are often ill-defined. Mr Xi is a stickler for secrecy.

It is not yet known how, or whether, the congress will change the party's constitution to recognise Mr Xi's contributions to Communist ideology. If it rules that the

party should be guided by "Xi Jinping Thought", that would suggest he has gained enormous power (the only other leader acknowledged to have Thought with a capital T is Mao Zedong). If the term chosen is "Xi Jinping Theory", that would place him on a par with Deng Xiaoping—not bad either. Avoiding being elevated to Mao's level may simply reflect good judgment on Mr Xi's part. Diehard Mao fans would be appalled by his hubris should he claim to have Thought, too.

Assuming that Mr Xi does emerge stronger (which is likely), what will that mean? Early in his tenure some commentators predicted that he would spend the first five years building up his power, and then use it to carry out wide-ranging economic reforms as well as, perhaps, some limited political ones. That now seems unlikely. Mr Xi's concentration of power has developed its own momentum and intensifying control over a fast-evolving society appears to be his main aim. As one party official puts it, Mr Xi will remain a "stabilising factor"; policy will not change much.

It is not clear what will happen when he steps down. Chinese leaders have tended to line up successors by this stage of their tenure. Not Mr Xi. He recently ousted the party chief of the south-western region of Chongqing, once tipped as a possible heir. The lack of an anointed successor need not mean Mr Xi will stay for a third term. But it does make it more likely that, even if he steps down as general secretary in 2022, he may try to hold the strings of any new leader. After all, Deng retained power from his perch as head of the China Bridge Association. Since the pro-democracy upheaval of 1989, the party has owed its longevity partly to managing peaceful, institutionalised transitions of power from one autocratic leader to another. Mr Xi may prove the joker in the pack. ■

## Shopping

## A turn-up for the books

GUANGZHOU AND SHANGHAI

Never mind the censors, some bookshops are cool

IN AN underground railway station below the main public library in Shanghai is a spacious bookshop called Jifeng. It is one of the city's most respected, but its days are numbered. A display inside the entrance (pictured, top) shows how many of them remain before the shop closes—147 as of September 6th. The authorities, it seems, have had enough of its open-minded selection of works and the talks it hosts on controversial topics.

The shop's landlord is the library, which has told the owners that it has "no choice" but to terminate the rental contract when it expires. Customers are mourning. "I refuse to believe the dream is over...the spirit of freedom will always exist," wrote one on the bookshop's noticeboard. The owners, however, have made it clear that the shop is unlikely to get permission to reopen elsewhere in Shanghai for the foreseeable future.

During two decades of operation, Jifeng has tested the patience of Shanghai's culturally conservative authorities. One of its founders was a prominent liberal academic in the heady days before the crushing of the Tiananmen Square protests in 1989. The shop's selection of books on politics and philosophy reflects his tastes. Ever tighter controls on debate under President Xi Jinping may have added to pressure on officials in Shanghai to take action.

Yet around China, privately owned bookstores continue to defy both competition from online booksellers and heavy-handed censorship (recently curbs are reported to have been imposed on the number of foreign children's books allowed to be published). They are cashing in on demand for something spicier than the dour offerings of state-run counterparts.

Take Fang Suo Commune, a chain which opened its first store six years ago in Guangzhou. At the time, it appeared to have little chance of success. The southern city is often scorned in China as a "cultural desert", its residents stereotyped as having little interest in highbrow pursuits. How could such an establishment, located in an upscale shopping mall, survive?

But Commune has become an aspirational brand like Dior and Dolce & Gabbana—European fashion houses that have outlets in the same shopping centre in Guangzhou. By some estimates, almost a third of visitors to the complex enter Commune's doorway carved from a massive single piece of ancient wood, and step into



The end is nigh

its subtly lit interior.

On entering, customers encounter a display of volumes of poetry, including Chinese translations of Seamus Heaney, an Irish Nobel laureate, and of Philip Larkin, one of Britain's best-loved 20th-century bards. "Even though the market for poetry is very small, we put this right at the front of the store—we want people to realise this is the root of literature," says Cheng Chen, a spokesperson. Farther inside are Chinese versions of books by Susan Sontag, an American feminist, and of Robert Pirsig's classic novel about self-discovery, "Zen and the Art of Motorcycle Maintenance". As in many Western bookshops, staff are chosen for their expertise in topics related to the works on sale: something rarely found among employees of state-owned shops.

Commune sells clothes, too. One corner of the shop is devoted to the Exception de Mixmind fashion brand, which was founded by the store's owner, Mao Jihong, and has made coats for China's first lady, Peng Liyuan. These account for 20-30% of Commune's sales, says Ms Cheng. But books are its main business.

The model is catching on. Similar stores, featuring cafés and sections selling products such as teapots and fabric bags, have been opening around the country. In 2015 Eslite, a Taiwanese chain—which pioneered 24-hour service in Taiwan's capital, Taipei—entered the market in China with a branch in the city of Suzhou, west of Shanghai. Another one planned for Shang-

hai itself has not materialised, possibly for political reasons. Eslite's shops in Taiwan regularly sell items that would be considered sensitive in China, such as a documentary on DVD about Ai Weiwei, a dissident Chinese artist.

But even in Shanghai, despite Jifeng's travails, several new, elegantly designed bookshops have opened in the past two years. They include Long Time No Read. It displays titles such as "Gay Life Stories" and "On Democracy's Doorstep", a permitted book about the history of universal suffrage in America. Commune, having opened branches in the south-western cities of Chongqing and Chengdu as well as in Qingdao on the coast, is planning to open another one, covering 8,000 square metres, in a mall in Shanghai next year.

That, too, may test local officials' tolerance. Like Jifeng, Commune tries to attract customers by organising talks—though not always as edgy as Jifeng's. Speakers over the past year have included the Chinese translator of Umberto Eco's novel, "Numero Zero", which satirises politicians and the media; and a film director, Jia Zhangke, whose movies about the social costs of China's boom sometimes rile the censors.

But companies like Commune are careful not to provoke the authorities too blatantly. They obtain books published abroad from a state-owned distributor, the China National Publications Import and Export Corporation (its motto: "Opening, Harmonising, Innovating, Advancing"), which prohibits anything critical of the Communist Party. "There's nothing we can do about it," Ms Cheng says.

In Shanghai, in a quiet side-street close to Jifeng, is a café called 1984 that looks much like a trendy bookshop (pictured, bottom). Its entrance hall is lined with different editions of George Orwell's dystopian novel. But its owners are canny. "None of the books in this shop is for sale," says a sign inside. ■



Orwell-themed Orwellianism




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**Immigration politics**

## A dream deferred

CHICAGO, LOS ANGELES AND WASHINGTON, DC

**Donald Trump ends a controversial Obama-era programme, leaving the fate of undocumented immigrants with Congress**

WHEN Karla Robles was 16 years old, she tried to register for college-entrance exams, like hundreds of thousands of high-school juniors in Chicago. She found that she could not—she lacked a social-security number. That was how Ms Robles learned she was in the United States illegally. Her parents brought her and her two brothers from Mexico when she was eight years old. Her father delivered pizzas, pumped petrol and drove trucks; her mother cleaned houses. Like many of America's other 11m or so undocumented immigrants, Ms Robles and her brothers may have been heading for similar lives in the grey economy.

In June 2012, however, Barack Obama created the Deferred Action for Childhood Arrivals (DACA) programme. DACA gives two-year work and residency permits to undocumented immigrants younger than 31, without criminal records, who were brought to America before they were 16, provided they are in or have graduated from high school or university or were honourably discharged from the armed forces. DACA is not automatic; recipients must apply, pay \$495 for each two-year renewable permit and provide a great deal of personal information. In five years the programme has brought nearly 800,000 young people—Americans in all but legal status—out of the shadows and let them live productive lives. Now those shadows

beckon again. On September 5th President Donald Trump's administration announced the end of DACA, though he promised no action would be taken against current recipients for six months, to give Congress the chance to act.

To Mr Trump's supporters, this decision is overdue; cracking down on illegal immigrants defined his campaign, and as a candidate he vowed to end DACA on his first day in office. Once in office, however, he softened. "DACA is a very, very difficult subject for me," he said in February. In an interview with the Associated Press he told DACA recipients that they should "rest easy", because his administration is "after the criminals, not them."

The mixed messaging continues. Mr Trump said he had "great heart for these folks", and called his decision a "gradual process, not a sudden phase-out", but White House talking points urged DACA recipients to "prepare for and arrange their departure from the United States". Mr Trump said that DACA was "an end-run around Congress" that "violat[es] the core tenets that sustain our Republic." But then he changed tack, tweeting that if Congress fails to act, "I will revisit this issue!"

To announce DACA's end, Mr Trump dispatched Jeff Sessions, his attorney-general, a longtime immigration sceptic, who said that DACA "denied jobs to hundreds of thousands of Americans by allowing

those same jobs to go to illegal aliens"—a claim for which no evidence exists. The average DACA recipient came to America at the age of six, and today is 25 years old. According to a survey conducted by Tom Wong of the University of California, San Diego, most recipients say that DACA helped them get better-paying jobs and become more financially independent. Over 93% of DACA recipients above the age of 25 are employed (compared with 78% of all Americans between the ages of 25 and 54). They have strong ties to America; most have a spouse, child or sibling who is an American citizen. The Migration Policy Institute, a think-tank, found that they are likelier than their ineligible coevals to be in white-collar jobs, rather than the informal manual labour often performed by undocumented workers.

**Terrific people**

Mr Wong's survey found that, freed from the fear of deportation, many DACA recipients are starting businesses, buying homes and cars and opening bank accounts. Mr Trump's administration might have quietly continued DACA had ten state attorneys-general, led by Ken Paxton of Texas, not threatened to take the White House to court if it did not undo DACA by September 5th. That forced Mr Trump either to end the programme, or have Mr Sessions defend it in court.

Unsurprisingly, he chose to end it. Republicans have long had DACA in their cross-hairs. Mr Obama's administration had called it a mere "exercise of prosecutorial discretion", but Republicans never accepted that description. It became an article of faith on the right that DACA was, as Mr Sessions described it, "an unconstitutional exercise of authority by the executive branch"—though no court has found it ►►

▶ so. But Mr Paxton and his nine would-be co-plaintiffs chose their judge carefully. They brought suit before Andrew Hanen, a federal district judge who in 2015 blocked a broader companion programme to DACA aimed at undocumented-immigrant parents of American citizens (though not on constitutional grounds). Ending DACA also allowed Mr Trump to further his attacks on his predecessor's legacy, which seems to be an animating impulse of his presidency.

Now the work moves to Congress. Demonstrations broke out across the country when the administration announced its decision. Angel Padilla of Indivisible, a left-wing activist group that successfully mobilised against the repeal of the Affordable Care Act, says, "we are ramping up our efforts... This White House has a vision of what America should look like, and brown people aren't included in that vision." Mr Obama broke his customary post-presidential quietude to call Mr Trump's decision "self-defeating" and "cruel".

Similar sentiments have been expressed in the business world. Tim Cook, Apple's boss, said he was "dismayed" at Mr Trump's decision, having previously tweeted that 250 Apple employees are DACA recipients, and "I stand with them." More than 400 business leaders—including the bosses of Amazon, AT&T and Wells Fargo—posted an open letter urging Mr Trump not to scrap DACA. Loren Kruger, boss of a firm that makes shipping-pallets in Texas, says she signed because DACA recipients "are our neighbours, colleagues and friends. To send them to a country and culture they don't know: that's inhumane and unacceptable."

It is another question whether Congress can overcome its dysfunction and act on such sentiments—and those of the vast majority of Americans, who also oppose deporting DACA-eligible immigrants. Legislative proposals exist. Lindsey Graham and Richard Durbin, a Republican and a Democratic senator, have once again reintroduced the DREAM Act—a piece of legislation that would do what DACA does and has been floating around Congress, close to but never quite passing, for more than 15 years. In the House Mike Coffman, a Republican from Colorado, plans to introduce a discharge petition to force his BRIDGE Act—which freezes DACA in place for three years—to the House floor, bypassing the lengthy committee process. Carlos Curbelo, a Republican congressman from Florida, has introduced the RAC (Recognising America's Children) Act, which does much the same thing as DACA but also includes a path to citizenship; Thom Tillis, a Republican from North Carolina, will introduce it in the senate. Our YouGov poll shows that only half of those who say they voted for Mr Trump in 2016 oppose DACA.

But the popularity of any of these measures on their own is academic. Republi-

cans will almost certainly demand enforcement measures. Some, Democrats could probably live with; others—notably the border wall, over which Mr Trump threatened to shut down government—they could not. The Republican leadership dislikes bringing measures to the floor that need Democratic votes to pass, which virtually any immigration bill will. The small but powerful coterie of hardliners in both houses have *Breitbart* at their backs, ready to rile up Mr Trump's base against anything that smacks of "globalism". The six-month delay means Congress may only get to immigration in March, right as moderate House Republicans start worrying about primary challenges from the right. "The uncertainty is nerve-racking," says Karla Robles, now at university studying to become a teacher. It will not end soon. ■



Tax reform

## Holiday nightmare

WASHINGTON, DC

**Cutting taxes on profits already earned abroad would be a pointless giveaway**

THE White House has long promised to fund tax cuts by scrapping unspecified loopholes and deductions. As Congress fills in the blanks, there is one source of revenue that looks all but certain to be tapped: the staggering pile of cash America's firms keep in foreign subsidiaries, which totalled \$2.6trn in 2015, according to an estimate by the Joint Committee on Taxation. (The president says the figure is \$3trn-5trn today.) Unfortunately, this would probably result in a windfall for shareholders, with few gains for anyone else.

Firms keep profits offshore primarily to avoid paying corporate tax, which is levied only when money is repatriated (monies

paid to foreign governments are knocked off the bill). As untaxed profits have piled up, politicians from both parties have eyed them greedily. Hillary Clinton once hoped to start an infrastructure bank with money raised from firms' foreign cash.

Getting firms to bring more money home has been tried before. In 2004 Congress enacted a tax holiday to that end. Firms were charged a bargain rate of 5.25%, instead of the usual 35%, on repatriated profits. The law's advocates said it would spark an investment boom, despite warnings from President George W. Bush's economic advisers that none would materialise. The wonks were right. According to the best available study, repatriations did not increase domestic investment or employment. Instead, each of the \$312bn brought back to America was associated with a payout to shareholders of 60-92 cents. Regulations designed to stop such payouts were ineffective.

Circumstances are different this time. Republicans want more than a temporary holiday; they promise a switch to a "territorial" tax system, like those found in the rest of the rich world. That means taxing only profits earned at home, removing the incentive to stash away foreign earnings in the first place. Still, making the switch means deciding what to do with the cash accumulated overseas under the old system. The effect of bringing it home would probably be the same as in 2004. Yet the president says that repatriations would "spur billions of dollars in new investments in our struggling communities".

There are three reasons for scepticism. First, firms are not short of cash to invest. In the S&P 500, the ten firms with the biggest foreign bank balances, totalling \$683bn, already have \$153bn to hand onshore. It is unlikely that filling domestic coffers further would encourage more investment, given that the same firms returned \$138bn to shareholders in dividends and buy-backs over the past year. Repatriation alone would not suddenly make investments more attractive than such payouts.

Second, almost half of the cash firms hold in foreign subsidiaries is already denominated in dollars, according to a survey from 2011. These funds are probably sitting in American bank accounts. (Such deposits do not count as repatriations for tax purposes.) They already support bank loans, and hence investment, in America.

Finally, to the extent that firms do buy dollars to bring profits home, they will push up the value of the greenback. A stronger dollar would be bad for the manufacturers who are close to Mr Trump's heart. It would also tend to increase the trade deficit, which he deplores.

In any event, the low tax rates Republicans and some Democrats want to levy on repatriated cash make little sense. In 2016 Republicans in the House of Representa- ▶▶

tives proposed a rate of just 8.75%; Mr Trump's plans have suggested a 10% levy. If firms are forced to repatriate cash, there is an argument for a discount from 35%, says Alan Viard of the American Enterprise Institute, a think-tank, because firms would lose the benefit of putting off the bill indefinitely. But go too low and the government would just be giving shareholders an unexpected payday.

A higher charge would help pay for tax cuts on future earnings—a policy which could spark new investment. It would also avoid rewarding tax-avoidance strategies. A recent study by scholars at Stanford University and the University of Chicago found that firms began stashing significant amounts of cash overseas at the same time as Congress started debating a second repatriation tax holiday in 2011. ■

### Think-tanks

## It's complicated

WASHINGTON, DC

**The New America Foundation's goat rodeo illustrates a recurring problem**

**B**ARRY LYNN does not waste time. Two days after being sacked from the New America Foundation, a think-tank where he had worked for 15 years, he stands calmly directing staffers in an immaculate grey suit in an office just around the corner from his old gig. The trouble began for Mr Lynn and his Open Markets team, a research outfit that advocated anti-monopoly regulations, after he published a statement praising the European Commission for levying a \$2.7bn fine on Google—a big donor to the think-tank. Eric Schmidt, chairman of Google's parent company, was upset. Susan Molinari, Google's chief lobbyist, spoke to Anne-Marie Slaughter, New America's president and chief executive.

What transpired next is disputed. A few hours after he published the offending statement, says Mr Lynn, he received a call from Ms Slaughter. In his telling, she said that Mr Schmidt and Google, which had donated more than \$21m to the foundation, wanted to cut off all ties—and that Mr Schmidt wanted his name scrubbed from the think-tank's website, and his name removed from its conference room, the "Eric Schmidt Ideas Lab". Two days later, Mr Lynn was told that New America and Open Markets would be parting ways, and was given two months to leave. Ms Slaughter said she would not discuss private conversations with either Mr Lynn or Mr Schmidt, but said Google never threatened to pull funding. Google said the same.

What is certain is that the fight ended with Mr Lynn's team leaving New America

and a black eye for Ms Slaughter, who appears to have folded under pressure and fired a well-respected scholar. The scandal has morphed into an existential crisis for New America, a newcomer in the think-tank world that has nonetheless established itself as a heavyweight. But it is only the latest victim of a common ailment among think-tanks—overly cosy relationships with donors that, when revealed, damage institutional credibility.

A month ago, leaked e-mails showed that the UAE had arranged a secret \$20m donation to the Middle East Institute, a respected think-tank, to counter "egregious misperceptions about the region". Last year, an investigation by the *New York Times* found that the Brookings Institution, perhaps America's most prestigious think-tank, had accepted large donations from Lennar Corporation, a home-building firm, and promoted the company's projects. The Centre for American Progress, a left-leaning think-tank, kept a secret roster of corporate donors and advocated for some of their interests.

Much think-tank wonkery is treated as authoritative by journalists and regulators—the reaped rewards from decades of rigorous work. Companies and foreign governments recognise the advantages this brings over conventional lobbying, which few would mistake as independent and impartial. Laundering lobbying through a think-tank, which offers tax advantages and less onerous disclosure requirements, can seem attractive.

Some think-tanks host sister lobbying organisations, which present their own risks. Witness the sad decline of the Heritage Foundation, once a conservative thought juggernaut and now hard to distinguish from a campaign group. Other thinkers juggle jobs, collecting cash from industries they write about. The Peterson Institute, a prominent economic-policy think-tank, fired three researchers for such conflicts of interest. With enough such stories, the entire enterprise starts to seem suspect—no good thing when dispassionate analysis is already dismissed as elitist.

Such tensions may reflect a fundamental flaw. Unlike other institutions designed to promote free inquiry, such as universities or some publications, think-tanks do not enjoy large endowments, researcher tenure or subscription revenue to insulate thinkers from paymasters. And thinking costs a lot. In its latest tax filing, Brookings reported spending more than \$100m in a year. Some big patrons might clumsily seek to influence research directly, and must be politely rebuffed by think-tank bosses. Some take a more subtle approach. "When the king expresses displeasure, everyone knows how to interpret it," says Zephyr Teachout, a law professor and fellow at the Open Markets programme.

This is the mess in which Ms Slaughter,



**Slaughter in hot water**

a respected scholar in her own right, finds herself. Despite her insistence that the sacking had nothing to do with Mr Lynn's work but was instead forced by his lack of collegiality, the weight of the evidence appears to be on Mr Lynn's side. E-mails she said had been taken out of context did not, when made public, offer much exculpatory evidence. After initially casting the story about Mr Lynn's firing as "false", she has said she regretted that choice of words. To assuage her critics, who say that she has now tainted the work of all of New America's scholars, the ultimate penalty may be more than contrition. ■

Richard Posner

## Gavel down

NEW YORK

**America's most prolific judge retires after 35 years on the Seventh Circuit**

**I**N a profession marked by pomp and pretence, Richard Posner, who is retiring from the judiciary, is a renegade. For Dick, as he is known to his staff, the tradition of clerks addressing their bosses as "judge" exemplifies the judiciary's stodginess and resistance to innovation. In his decades as a writer and a jurist, Mr Posner, aged 78, "changed the legal landscape", says Eric Segall, his collaborator and a law professor at Georgia State University. Laurence Tribe of Harvard Law School says Mr Posner has had a "uniquely broad influence" on the legal academy and on America's courts.

Few of the nearly 200 circuit-court judges who handle appeals from America's 94 district courts make headlines. Mr Posner grabs many. The judge's "staggering work ethic" and "fierce intellect" start to explain his renown, Mr Segall says. Mr ►►

► Posner is the most-cited legal scholar of all time, according to a 2000 study. He has written more than 3,000 judicial opinions, hundreds of articles and dozens of books, including “The Federal Judiciary: Strengths and Weaknesses”, a scathing 2017 portrait in which readers are hard-pressed to discover many “strengths”.

Mr Posner thinks most judges are lousy writers who rely unduly on their clerks and are “stuck in the past”, paying obeisance to fusty traditions. He does not spare the Supreme Court. “I don’t think the justices are doing a good job,” he writes, and “obviously” are not the nine best-qualified lawyers in America. (Are they “nine of the best 10,000? I’ll give them that.”) None measures up to the likes of Oliver Wendell Holmes or Louis Brandeis, he writes, “with the possible exception” of Stephen Breyer and Ruth Bader Ginsburg, two liberal justices on the Supreme Court. Mr Posner reserves particular ire for the late Antonin Scalia, a “hyperconservative” justice he lambasted for his originalist jurisprudence and for neglecting his health.

The cardinal sin of most judges and justices, Mr Posner argues, is their disingenuous allegiance to a formal conception of law. Whether a judge aims to apply the law as it was understood at the time it was enacted (Scalia’s originalism) or in light of its underlying moral principles (as the late Ronald Dworkin, the second-most-cited legal scholar of the 20th century, did), the quest is quixotic. “I’m a pragmatist,” Mr Posner writes. His approach to a case is “not to worry initially about doctrine, precedent and the other conventional materials of legal analysis”. Instead, he tries to “figure out the sensible solution to the problem” and only then ask whether it is “blocked by an authoritative precedent of the Supreme Court or by some other case that judges must obey”.

Before he took his seat on the Seventh Circuit, Mr Posner spent six years working in government and 12 as a law professor at Stanford and the University of Chicago. In 1973 his “Economic Analysis of Law” became a foundational text of the widely influential “law and economics” movement. According to this approach, law is best understood as a mechanism for promoting economic efficiency writ large. Compensation is not the heart of tort law, for example: encouraging people to guard against accidents is. Racial discrimination is worth banning not because people have inviolable rights but because bias exacts a toll in the form of warped relationships. “Law and economics” has been employed to make sense of concepts as disparate as the right to privacy, contracts and, as Mr Posner wrote in 1981, “the meaning of justice”.

A reverence for markets is at the core of law and economics, and Mr Posner was conservative enough to earn an appointment from Ronald Reagan. But later in his

## Alaskan detritus

# A load of rubbish

HOMER

Heaps of trash in remote villages are set to grow

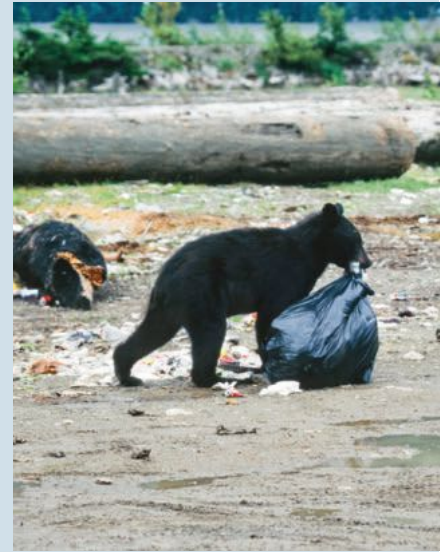
MANAGING rubbish in Alaska’s bush villages—small communities accessible only by boat or aircraft and often hundreds of miles from the nearest highway—is hard. Waste—including freezers, computers and vehicles—piles up with no easy way to remove it. Rural landfills, which are mostly open, unlined and unmanaged, spill across tundra and into nearby rivers, and hazardous materials leach into soil and water. Smoke from burning trash blows into villages, sometimes closing schools. From 2020, funding from the Environmental Protection Agency that has been essential for dealing with rubbish in these remote places will disappear.

Jan Olson is the City Administrator in Hooper Bay, a village of about 1,200 people at the edge of the Bering Sea, where children learn Yupik in school. Mr Olson describes his home as a “hunter’s dream, a gatherer’s dream”. Open tundra stretches for miles. A short distance from the village, residents can fill their larders with moose, seals, whale, walrus, geese, ducks, fish, clams and berries.

Mr Olson, whose office is less than 150 yards from the landfill, estimates that residents junk five to ten refrigerators each year and the same number of four-wheelers. Computers and other electronic waste as well as hazardous materials, such as car batteries and used motor oil, accumulate too. Complicating matters is the fact that more than half of village households—about 6,000 homes across the state—do not have indoor plumbing and instead rely on “honey buckets”, five-gallon buckets lined with a plastic bag and with a loo seat perched on top. Residents dump their buckets by foot or all-terrain vehicle in the landfill. The stench wafts into the nearby cemetery during funerals.

tenure, his ideological tilt shifted. “I’ve become less conservative”, he said in 2012, “since the Republican Party started becoming goofy.” Mr Posner invalidated bans on gay marriage and inveighed against a voter-ID law in 2014. The following year, he struck down a restrictive abortion law in Wisconsin because it was based on “spurious contentions regarding women’s health”. A few months ago, he joined a ruling confirming that sex-discrimination laws protected a lesbian professor who says she was pushed out of her job.

Idiosyncrasies attract varied critics. Michael Dorf, a leftish professor at Cornell, la-



Meet the new garbage man

Research has linked birth defects, premature births and low birth weights—as well as temporary faintness, headaches, and nausea—to the open dumps. Leaching threatens drinking water. Most rural communities burn rubbish regularly. The smoke can contain dioxins, benzene and PCBs. Mr Olson attributes a recent outbreak of skin sores on local children to the fumes from a fire illicitly set at the dump.

Federal funds have been essential in helping people manage solid waste, shipping out hazardous materials for proper treatment, hiring landfill operators and educating local residents. In Hooper Bay, a village where 40% of the residents live below the federal poverty level, the expiration of these EPA grants will leave a big gap. “It’s already impossible to keep up with the junk,” Mr Olson said. “It’s going to get harder.”

ments Mr Posner’s “peevisish” turn in recent years. Ed Whelan, a rightish commentator, calls “The Federal Judiciary” the “worst-edited book that I have ever tried to wade through” and faults the author for endorsing some infamously bad rulings as right for their time. Mr Posner’s pragmatic impulse produced some scattershot results: he has changed his tune on several issues over the years, including same-sex marriage and voter-ID rules. That shows the limits of a method tied to even a brilliant judge’s sense of what works. In the hands of a lesser judge, his approach might bring dodgier results. ■

## Campus life

## Blue on blue

PORTLAND, OREGON

**Arguments over free speech on campus are often seen as an issue of left v right. But the left v left battles can be just as vitriolic**

FRESHMEN crowded the lecture hall at 9am for Humanities 110, the first class of their college careers. Elizabeth Drumm, the head of the programme, made some introductory remarks, her voice quavering. As some faculty members moved to take their places at a panel discussion, three demonstrators emerged from the wings of the auditorium. “We’re protesting Hum 110 because it’s Eurocentric,” one began. “I’m sorry, this is a classroom space and this is not appropriate,” Ms Drumm said, immediately cancelling the lecture. Thus began another academic year at Reed College, a liberal arts college in Portland, Oregon.

Last academic year, a dozen or so students continuously occupied the three-day-a-week lecture series by sitting in front of the auditorium with cardboard signs, sometimes taping their mouths in protest at the absence of non-white voices in the syllabus. One even took to lecturing the freshman class on the podium from an alternate curriculum before the start of each session. But this year, the college’s president sent out an e-mail outlining the school’s dissent policy 16 minutes before the lecture began, warning that the administration would act against potential violations. Reed College students were ranked as the most liberal and the second most studious in *Princeton Review’s* survey of its top 382 liberal arts colleges. That compound of leftist politics and serious scholarship proved unstable last year as activists managed to cow the college’s administration, students and faculty alike.

The protesters argue that the Humanities programme is racist because it ignores many of the world’s great civilisations and because its authors are overwhelmingly male and white. They point out that black students represent less than 3% of the school’s 1,400 students and argue that the administration has not done enough to support them. A good portion of the student body appear to support their goals and tactics.

Assistant professor Lucia Martinez Valdivia, who describes herself as mixed-race and queer, asked protesters not to demonstrate during her lecture on Sappho last November. Ms Valdivia said she suffered from post-traumatic stress disorder and doubted her ability to deliver the lecture in the face of their opposition. At first, demonstrators announced they would change tactics and sit quietly in the audience, wearing black. After her speech, a number

of them berated her, bringing her to tears.

Demonstrators said Ms Valdivia was guilty of a variety of offences: she was a “race traitor” who upheld white supremacist principles by failing to oppose the Humanities syllabus. She was “anti-black” because she appropriated black slang by wearing a T-shirt that said, “Poetry is Lit”. She was an “ableist” because she believes trigger warnings sometimes diminish sexual trauma. She was also called a “gaslighter” for making disadvantaged students doubt their own feelings of oppression. “I am intimidated by these students,” she later wrote in a blog post. “I am scared to teach courses on race, gender or sexuality or even texts that bring these issues up in any way...I’m at a loss as to how to begin to address it, especially since many of these students don’t believe in historicity or objective facts (they denounce the latter as being a tool of the white cisheteropatriarchy).”

A few weeks later, the college invited Kimberly Peirce, the gender-fluid director of “Boys Don’t Cry”, which was widely praised as the first sympathetic portrayal of trans people in cinema. Protesters ripped down posters promoting the event and put up their own posters that said: “Fuck this cis white bitch” (“cis” being shorthand for cisgendered, or people who identify with their birth sex) and “Fuck your transphobia.” When Ms Peirce tried to speak, they shouted her down because they felt she had profited from violence against trans people and because she had cast Hillary Swank, a non-trans actor, as

the lead. The dean of faculty, Nigel Nicholson, later wrote that students came to the session “asking questions designed to indict the speaker...It felt like a courtroom, not a college.”

Earlier in the year, demonstrators presented the administration with a sensible demand, to make more effort to attract and retain black students, and a lot of eccentric ones, including a beefed-up role for students in judging grievances against faculty, and collegewide racial sensitivity training. They also demanded a paid annual staff holiday honouring the day of their initial demonstration.

**Thermidorian reaction**

Many students have said privately that the campus has become a place where they are afraid to express dissenting opinions. Students who disagree with the protesters’ views, on social media, have been denounced as racists by activist leaders. A newly accepted international student was mocked when she asked her future classmates if there were any libertarian groups on campus. White students have complained that they have been told by other students that they are unjustified in speaking about race and identity in class. When one student voiced a dissenting opinion on social media, his classmate threatened to get him fired from his job at the college bookstore. “It’s an environment with limited representation of opinion, and it can be hostile to students who hold other views,” says Yuta Kato, a sophomore.

Yet at Reed College this term there are also signs of a counter-revolution. A professor of Muslim studies refused to lecture in front of protesters and taught his class of 150 students outside, under a tree. Some freshmen have shouted down protesters. One (black) student told them: “This is a classroom. This is not the place. Right now we are trying to learn. We are freshmen students.” The rest of his speech was drowned out by applause. ■



The cisheteropatriarchy at rest

# Lexington | Indispensable, in trouble

Our Lexington columnist bids an anxious farewell



AS LEXINGTON writes this, his 244th and final column on America, a black-and-white photograph looks down from an office wall. Taken in New York in about 1940, it shows your columnist's late father, then a serious young man in his 20s, hard at work for a British government agency tasked with bringing America into the second world war. This mission involved both appeals to high-minded principle and to sentiment—tales of British civilian pluck were a staple—to counter the rhetoric of the America First Committee and other isolationists.

During two postings to Washington, DC, this Lexington has tried to remember that history lesson. America remains an indispensable nation. But understandably, the will to bear that burden cannot be taken for granted. For Americans to remain open to the world, at once leading and profiting from a post-war order that their country in large part designed, both heads and hearts must be won. With each new generation, that work needs repeating.

Enter President Donald Trump. A natural demagogue, he spotted how, after years of the war on terror, America was weary of trying to fix an ungrateful world. He grasped how, at home, millions could conceive of no benign explanation for economic and social changes that worried or disgusted them, and heard no argument from the two main parties that reassured them. He sensed that voters are more than adding machines, weighing the costs and benefits of this stale tax plan or that tired promise of help. He won in part by understanding how much people need to feel that they are useful, respected and heeded. A better man than Mr Trump could have done great things with that insight.

In years of reporting from a total of 46 states, a handful of encounters stand out. They showed how, when Americans think they are arguing about points of ideology or fact (or confected para-facts), they are often wrangling about who is a good person, with a right to be heard.

Take the wilds of eastern Oregon, where ranchers spent the Obama era fearing that vast tracts of the Owyhee Canyonlands would be declared a national monument, exposing them to lawsuits from eco-absolutists bent on banning cattle from public lands. In early 2016 armed anti-government militants occupied a wildlife refuge to challenge the federal government's right to own land at all. Visiting a few months later, Lexington heard much

technical talk about water rights and grazing permits. But deep down this was a scrap about whether ranchers and miners whose great-grandfathers toiled to tame the sagebrush steppes are trustworthy stewards of the land. That row pits the old West against the new West of hikers and environmentalists, or, as one academic puts it, folk with gun racks against those with bike racks. The ranchers, meanwhile, challenged the standing of the cowboy-hatted anti-government zealots claiming to speak for Oregon. A young farmer noted that most came from out of state, adding: "Those people look like us, but aren't us."

Partisans on the left sometimes scoff at conservatives ascribing voter anger to "economic anxiety", arguing that this is really prejudice at work. In real life, differing forms of anxiety cannot easily be separated. In 2012 the state of Wisconsin commissioned a scientific report into why middle-aged men were buying fewer licences to hunt deer. That sounds a dry premise. But tugging at that thread unravelled a vast, tangled skein of male angst. With women gaining economic and social power, the study found, men feel less able to head to the woods for a week's deer camp, supremely confident in their authority as breadwinners. To be good fathers, they feel less able to skip children's sports. "The ladies all hollered at me," one research subject recalled after a deer-related conflict, in tones of baffled hurt.

Mr Trump did not invent partisan divisions. The 2012 presidential elections, a joyless slog, saw President Barack Obama traduce the Republican candidate, Mitt Romney as a heartless plutocrat and thus "not one of us". Republicans leant heavily on slogans that lauded hard-working, taxpaying "makers" and scorning welfare-collecting "takers". Millions of voters were willing to believe that Democrats won office by giving free stuff to the lazy on their dime. But they also growled that Republicans were the party that looked out for bosses, not them. A machine repairman from Waukesha, Wisconsin, encountered during a factory visit by Mr Obama after his re-election, summarised, brilliantly, his moral code of work. "People ought to get off their duffs and get a job, but I'd like it to be a job that pays well," he explained. He trusted neither party to deliver this package in its entirety.

## Deadbeats v deplorables

A focus group of Trump supporters in December 2015 offered early clues that the businessman had found a way to escape voter distrust of traditional politicians. His backers spent three hours excusing their hero of each contradiction or untruth alleged by his foes. In part, this reflected their liking for certain policies: the proposed ban on Muslims, or the border wall. But an unforgettable moment came when the Trump fans were asked about Barack Obama, and responded with furious, vitriolic resentment. Everything we are good at in America, Mr Obama tells us it is a bad thing, said a woman. Another disgustingly compared the then-president to "a disappointed parent". With Mr Trump, it was the opposite. His supporters basked in his approval. He was a fantastically successful man, who validated how they saw the world.

There are plausible scenarios in which Mr Trump, a cynical and undisciplined bully, brings catastrophe to the country that Lexington was raised to love, and where both his children were born. For now consider a disaster that is already certain. Mr Trump has a rare understanding of how change has left millions feeling disrespected, abused and alienated from mainstream politics. Alas, he has used that gift only to divide his country, for selfish ends. This is a tragic waste. ■





Colombia's peace process

## Joining the party

BOGOTÁ

**The FARC guerrillas are set to enter electoral politics. Is Colombia ready for them?**

ON SEPTEMBER 1st thousands of members and supporters of the FARC thronged the central square of Bogotá. At any other time in the past 50 years, such a sight might have meant that Colombia's government had collapsed. But the group was not there to celebrate a military victory for the FARC (Revolutionary Armed Forces of Colombia), a feared guerrilla army. Instead, the fans were hailing the launch of the FARC (Common Alternative Revolutionary Force), a new political party.

Just 20 years ago, Colombia was nearly a failed state. From 1992-99, two-thirds of the world's kidnappings occurred there, and the FARC controlled up to a third of the country's territory. But starting in 2002, the government of Álvaro Uribe unleashed the army against the guerrillas, crippling them militarily. His successor, Juan Manuel Santos, kept up the pressure but also invited the FARC to peace negotiations.

After four years of talks, the two sides struck a deal in 2016. The terms were controversial. Most rank-and-file FARC fighters were granted amnesty, and their commanders were free to run for office. In a referendum on October 2nd voters narrowly rejected the pact, forcing the parties to re-draft it and adopt it in Congress.

Nonetheless, opponents of the accord—led by Mr Uribe, who is now a senator—could not halt its momentum. On August 15th the guerrillas handed over the last of their weapons. The FARC will now take its

fight to the ballot box. And if peace is to last, the rest of Colombia will have to accept it as a legitimate political force.

So far, the FARC's most visible choice has been its defiant name. The initials are synonymous with bombs and abductions. Iván Márquez, a former guerrilla leader, admits that the name is a liability. Nonetheless, he says, "it also represents our history." The FARC maintains its leftist ideals, and insists it has not surrendered. And the way it made the decision reflects its embrace of democracy. Over 1,200 delegates to its founding convention voted on a new name, and "FARC" won with 628 votes.

The FARC has also kept up its combative spirit while funding restitution for its victims. Its list of assets included boots, orange juicers, weapons it had already given up and roads it had built. Rafael Pardo, the minister for post-conflict issues, called the declaration a mockery of the exercise.

### Walking the walk

At the same time, the ex-guerrillas have proved willing to break with their past. Their property disclosure also contained land, cattle, 267,520 grams (8,600 ounces) of gold and \$450,000 in cash, for a total value of \$328m. And both their video ads on social media and the speeches at their convention were devoid of Marxist claptrap. Instead, they focused on issues such as health care and job security.

At the convention, Rodrigo Londoño

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(pictured, left), the FARC's president, said it would campaign "without dogmatism or sectarianism, far from ideological ostentation". Railing against corruption may be the best strategy. A recent Gallup poll found 87% disapproved of Colombia's current political parties, which have been discredited by scandals and infighting—higher than the 84% disapproving of the FARC.

The FARC's transformation may prove even harder for existing parties than it is for the guerrillas. Looking at peace deals between 1975 and 2005, Aila Matanock of the University of California, Berkeley, found that conflicts reignited within five years in 56% of cases which did not include terms for ex-rebels to take part in electoral politics, but only in 21% of those that did. That suggests that turning the FARC into a normal party might help secure the peace. The FARC will not field a candidate in the 2018 presidential election, but does seek a share of power. Mr Márquez says, "We want to be the government or part of it."

So far, however, the FARC's image remains too toxic for most politicians to snap selfies with Mr Londoño. The party invited a wide range of politicians to its convention, but none showed up. And Mr Uribe and fellow opponents of the peace deal continue to criticise its implementation.

Moreover, FARC members fear falling victim to the political violence they have now renounced. Since they began demobilising in January, at least 17 of them or their relatives have been killed. Even though the ELN, a smaller leftist guerrilla force, has agreed to a temporary ceasefire, and the leader of the country's strongest criminal gang has offered to surrender, illegal armed groups continue to operate in Colombia. ►►

**Correction:** On August 19th we said that Newfoundland and Labrador faces a second year of recession. Statistics Canada estimates that its economy grew in 2016. Sorry.

▶ None of the 17 murders has been solved.

The FARC's first political test will be at congressional elections in 2018. The accord grants the party five seats for two terms in both houses of Congress. The FARC will seek to have sympathisers elected in 16 special districts set up by the peace deal, where it may enjoy surprising support. For years, it acted as a de facto state in rural areas with scarce public services. Voters in such regions will probably look kindly on the infrastructure and development projects the FARC extracted in peace talks.

The FARC's convention ended with a concert. People cheered, danced and flew flags with its new rose-and-star logo. Public support for the FARC still makes Colombians uncomfortable. But they are better off with ex-guerrillas wielding instruments in the streets rather than guns in the jungle. ■

### The Canadian-American border

## Delay, delay, delay

WINDSOR, ONTARIO

**The owner of one bridge tries and fails to stop construction of another**

**I**n 1929 Joseph Bower built what was then the world's longest suspension bridge between Detroit, Michigan, and Windsor, Ontario. He called it the Ambassador Bridge to symbolise Canadian-American friendship. But there is nothing neighbourly about the battle between Manuel Moroun, who bought the bridge in 1979, and Canada's government, which wants a rival span built 2km (1.2 miles) away.

The Ambassador Bridge is a glaring bottleneck. More than 10,000 lorries, making up 28% of all goods trade between Canada and America, cross it every day. In Windsor, the bridge disgorges traffic into narrow city streets. "You can drive from Montreal to Miami and only hit 17 stoplights," an old truckers' joke goes. "And all 17 are in Windsor, Ontario." Even a brief bridge closure would be hugely disruptive.

In 2005 Canada unveiled plans for a new bridge named after Gordie Howe, a Canadian ice-hockey hero who played for the Detroit Red Wings. It said the project would create 23,000 jobs, attract investment and save exporters time and money. It would also inflict collateral damage on Mr Moroun: the Howe is expected to slash the Ambassador's toll income by 35-50%.

Mr Moroun has defended the status quo tenaciously. He has argued that Canada reneged on promises to improve road links to the Ambassador. He successfully lobbied for a statewide referendum on the new bridge, only to see Michigan voters support it. His companies refused to sell properties needed for a new customs plaza

until Michigan's government expropriated them. And entities he controls have filed lawsuits against governments at all levels on both sides. On August 29th a Michigan judge dismissed one suit, which claimed the state had illegally spent money on the bridge without legislative approval.

Mr Moroun's litigation has delayed construction by about two years. However, he cannot stall indefinitely. Canada now has all the required approvals for the crossing. An expressway between the site of the new bridge and the highway on the Canadian side was completed last year. When the Michigan state legislature refused to finance its share of the estimated \$4bn cost, Canada agreed to pay the entire amount itself, with the American portion to be paid back later via tolls. Michael Cautillo, the head of the body overseeing the bridge, confidently predicted in August that construction will start by 2018.

Mr Moroun still has lawsuits pending. On September 6th his firm said that Canada had approved the construction of an adjacent span to replace the existing Ambassador Bridge, which would pose a stronger competitor for the Howe. Nonetheless, facing opposition from the auto and trucking industries and from every government with a say, Mr Moroun might decide to sue for peace instead. After talks with both sides last year, Dwight Duncan, chairman of the new bridge authority, suggested the Canadian government buy the Ambassador Bridge. It is safe to predict that Mr Moroun would drive a hard bargain. ■

### Disappearances in Argentina

## Where is Santiago Maldonado?

JUJUY

**A missing-person case looms over midterm elections**

**A** FEW months ago Santiago Maldonado, a 28-year-old craftsman and tattoo artist, moved to Patagonia, motivated by an affinity for the indigenous Mapuche people. On July 31st, according to his brother, he visited a campsite in the province of Chubut, where Mapuches are protesting to demand title to their ancestral land. He intended to participate in a ceremony for Pachamama, an Andean goddess.

But on the morning of August 1st protesters threw stones at a group of military police officers, injuring two of them. In response, 32 officers entered the camp. The police say they did not arrest anyone. But four witnesses have told a judge they saw the officers load Mr Maldonado into a white truck. He has not been seen since.

The case has become a political Rorschach test in a divided country where "disappearances" have a grim history. In the 1970s a right-wing military dictatorship abducted tens of thousands of citizens—no one knows exactly how many. A large number were murdered, often by being thrown out of aeroplanes.

From 2003 to 2015 Argentina was ruled ▶▶



### The big one hits

**With winds reaching 185 miles (300km) per hour, Hurricane Irma—one of the four strongest Atlantic storms in recorded history—slammed into the eastern Caribbean on September 6th. It first struck Barbuda, damaging 95% of buildings. Gaston Browne, the prime minister of Antigua and Barbuda, said the island of 1,600 people was now "barely habitable". On St Martin, Irma destroyed the Caribbean's third-largest airport. The storm's eye then passed north of Puerto Rico and the Dominican Republic. Nine people have been reported dead, and the toll is expected to rise. Forecasting models predict that Irma will veer towards Florida, which has not been hit by a major hurricane in a decade, and local officials have issued a mandatory evacuation order for Miami Beach. Two other hurricanes, Katia and Jose, have formed in the region and will follow Irma.**

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SATURDAY 16 SEPTEMBER  
**COOLIO** LIVE

SUNDAY 17 SEPTEMBER  
**MACY GRAY** LIVE + DJ Set

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RACE NIGHT



SUN 17 SEPT

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▶ by a left-wing couple: first by Néstor Kirchner, who died in 2010, and then by his wife Cristina Fernández de Kirchner. Under both presidents, many members of the dictatorship were brought to justice. In 2015 voters opted for Mauricio Macri, a centre-right former businessman. Mr Macri has been less tolerant of protests that block roads than his predecessors were, and during his term prosecutors have detained Milagro Sala, an indigenous activist, on charges of embezzling public funds. Now that Mr Maldonado has vanished, the president's opponents are on edge.

On September 1st tens of thousands of

people marched in Buenos Aires. They bore Mr Maldonado's bearded, dreadlocked image, beneath a slogan plastered across social media: "Where is Santiago Maldonado?" For Mrs Kirchner, who hopes to win back her old Senate seat at mid-term elections in October, Mr Maldonado's disappearance offers an opportunity to tie Mr Macri's administration to the bleakest chapters of Argentina's past. "I don't want to go back to the times of darkness," she said on September 2nd.

The president has kept mum, while his cabinet has sent mixed signals. The security minister, Patricia Bullrich, has criticised

Mapuche activists for violent provocations and Mr Maldonado's family for failing to aid the police. But Claudio Avruj, the human-rights secretary, says that investigators' "strongest hypothesis points to the police". The government is offering 2m pesos (\$116,000) for information on the case.

Some witnesses say they saw Mr Maldonado trying to cross a river to flee the police, though reportedly he did not know how to swim. Authorities are now searching for him in Chile. His case is sure to dominate headlines until the elections. But his family say they can't bear to see his face on a flag. They just want him back alive. ■

## Bello | Rebuilding the radical centre

### The appeal of Macronismo in Latin America

THE "pink tide" of left-wing hegemony in Latin America has ebbed. Yet rather than a period of strong centre-right government, what has followed in many places is political polarisation. Consider the campaigns for the heavy crop of elections in the region over the next year or so.

These begin with Argentina's legislative contest next month, which features a close battle in Buenos Aires province, the key electoral district, between President Mauricio Macri's centre-right coalition and Cristina Fernández de Kirchner, his unrepentantly populist predecessor. Presidential elections next year in Colombia and Brazil may turn into a struggle between relatively hard left- and right-wing candidates. Mexico's race is shaping up to be a referendum on Andrés Manuel López Obrador, the eternal populist candidate of the nationalist left.

If opinion polls are to be believed, most Latin Americans remain broadly in the political centre. They want a market economy, and better state social provision and public services. Yet in many countries social-democratic parties have moved left, while conservatives still champion the idea of a minimal state. Centrist reformers, strong in the 1990s, are struggling.

This diminished centre features technocrats who lack the popular touch (think, for example, of Colombia's Juan Manuel Santos or Peru's Pedro Pablo Kuczynski) or outfits whose boundless pragmatism has encouraged corruption (exhibit A: Brazil's PMDB party). In all its guises, the centre is falling victim to voters' disillusion with a political class that has lost the idealism bestowed by the democratic transitions of the 1980s and now looks self-serving and out-of-touch.

All this suggests that there is an opportunity for a renovated, radical centre.



Some Latin Americans who believe so are inspired by Emmanuel Macron in France, who formed a new party and almost immediately won the presidency against extremists of both right and left.

To have any chance, Latin American centrists need new ideas. Andrés Velasco, a successful finance minister in Michelle Bachelet's first government in Chile, has made a muscular effort to provide some in a forthcoming book with two colleagues. In 2013 Mr Velasco ran unsuccessfully against Ms Bachelet for the presidential nomination of the New Majority coalition, which under her aegis has veered sharply to the left. He has since set up Ciudadanos, a new centrist party (which takes its name from a similar outfit in Spain).

The authors insist that the centre must define itself not by what it is against but what it is for: a liberal egalitarian ideology that sees freedom not just as non-interference but, in the spirit of Amartya Sen, an Indian economist and philosopher, as the absence of oppressive domination and the opportunity for all to fulfil their potential. Whereas the left emphasises state redistribution, they draw on John Rawls, an Amer-

ican political philosopher, to stress equal treatment for all citizens against the more-or-less-subtle class- and race-based discrimination from which Latin American societies still suffer.

The centre's commitment to gradualism, pluralism and rationality are no match for populists' simplistic emotional appeals. But liberals can offer moral arguments for a free and tolerant society which can generate passion, they insist. Having set out his manifesto, Mr Velasco is standing for Chile's Senate this year; he plans a presidential run in 2021.

Similar efforts are under way elsewhere. In Peru, Julio Guzmán, an economist, is trying to set up a new party. In Colombia Sergio Fajardo, a centrist former mayor of Medellín, is campaigning for the presidency. Centrist candidates may emerge in Brazil, including Marina Silva, who broke with the left-wing Workers' Party and has set up a new party of the centre-left which espouses environmentalism, liberalism and clean politics.

These efforts at renovation face resistance from the political establishment. Mr Guzmán was disqualified, on a legal technicality, from last year's presidential election in Peru when he was in second place in opinion polls. In Chile, Ciudadanos faced a long bureaucratic battle to register as a party, and as a result will run fewer congressional candidates than it might otherwise have done.

The antidote to populism "cannot just be technocratic," write Mr Velasco and his co-authors. Rather, it requires a politics of "radical frankness"; and decision-making that is made palatable to voters by dialogue and constant appeal to the public interest. Mr Macron won despite—or perhaps because—he told the French some things they didn't want to hear. Will Latin Americans warm to that message?



### Kenyan politics

## The rematch

### After judges overturned its presidential election, Kenya is on edge

**I**F AT first you don't succeed, try, try again. That, it seems, is the advice of Kenya's supreme court to its electoral commission. In a shock decision on September 1st, the court ruled that the presidential election held last month, in which Uhuru Kenyatta, the incumbent, beat Raila Odinga (pictured), an opposition stalwart, was "invalid, null and void". The vote, it said, had not been conducted in accordance with the constitution—so it must be redone.

As a display of judicial independence, the court's decision is without precedent, not just in Kenya but across Africa, where it was widely acclaimed. It represents an opportunity—so optimists believe—to build genuine trust in the country's institutions, especially its highest courts. Yet it also plunges east Africa's biggest economy back into uncertainty and creates a new risk of violence. Arguments have already erupted over the timing of the new vote, which the electoral commission says it will hold on October 17th. Many Kenyans fear widespread violence is likelier this time around, especially if the result is closer.

The court has not yet published its full verdict. But in a preliminary statement it said it found "no evidence of misconduct" on Mr Kenyatta's part. Nor did it endorse Mr Odinga's theory that the electronic system used to record the results was hacked. Rather, the judges seem to have decided

that they did not need proof of systematic rigging. That the electoral commission committed "irregularities and illegalities", particularly in the transmission of results from polling stations to tallying centres, was enough to justify a new vote.

The decision surprised nearly everyone. Even before the election results were declared, James Orenge, a senator and close ally of Mr Odinga, announced that "going to court is not an alternative—we have been there before." In the previous election, in 2013, when Mr Kenyatta beat Mr Odinga in a contest that most monitors considered flawed, the loser went in vain to court rather than risk a repeat of the violence that had followed the election in 2007, when around 1,400 people were killed. This time, when the National Super Alliance (NASA), Mr Odinga's group of parties, filed its legal challenge it seemed like a concession to foreign diplomats, who feared more violence.

### Courting controversy

Mr Odinga and his allies were jubilant at the decision. NASA declared that a "new Kenya has been born" and claimed vindication for their view that the election had been stolen. Mr Kenyatta called for the decision to be respected in a speech given in English. But in comments to supporters made in Swahili, he denounced the judges

### Also in this section

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40 Migrants stuck in Libya

41 The last Jews of Egypt

42 Sunnis and Shias getting along

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as *wakora* (crooks) and claimed that their decision was the work of "whites" and "homosexuals". He vowed to "fix" the supreme court if re-elected.

Yet perhaps it should have been less of a surprise than it was. Kenya's election was certainly far from perfect. A week before polling day, Chris Msando, the main technician in charge of the electronic voter-ID system, was found murdered, his body displaying signs of torture. That created suspicion that things might go awry.

Though polling day itself went smoothly, the transmission of results from polling stations was erratic. The results were supposed to have been recorded on 41,000-odd paper forms, one from each station. Yet the electoral commission failed to make many of the forms readily available to the public or to NASA. That could have been because of incompetence rather than foul play—a view shared by many of the Western monitors, who nonetheless stressed that their endorsement of the election was conditional on further analyses. Either way, the supreme court decided, by a verdict of four to two, that the flaws were serious enough to merit a re-run of the presidential contest. The other five sets of elections, including for members of parliament and for governors, were deemed fair.

Organising a better election will be fraught. The original vote cost some \$500m and involved more than 300,000 temporary workers. Now the electoral commission has to repeat it, in a far shorter time, under heavier pressure. After it published its intended date for the new poll, in which only Mr Odinga and Mr Kenyatta would be running (and third-party candidates excluded), NASA accused it of becoming "rogue and unhinged". The alliance has published a list of demands for ▶▶

## Liberian schools

## Classroom experiments

A pioneering education reform makes a promising start

WHEN 14 years of civil war ended in 2003, Liberia was left with decrepit schools. Many children carried Kalashnikovs rather than textbooks. Since then Liberian governments have tried to start afresh. But, in part because of the outbreak of Ebola in 2014, efforts to improve education have made halting progress.

The consequences are grim. Less than 40% of school-age children attend primary school. By the time they are 18, girls are more likely to be married than literate. Just one woman in four who has finished primary school can read a sentence. According to a study published in 2014, more than 40% of girls have been asked for sex in return for better grades, money or school supplies.

One reason for optimism, however, is



Laughing and learning

Partnership Schools for Liberia (PSL), a pilot scheme run by the education ministry with help from Ark, a British education group. Drawing on American charter schools and English academies, last year the ministry delegated the management of 93 public schools to eight independent operators, three of which are private firms. Policymakers from countries such as Ghana, India and Nigeria are watching PSL as they consider trying similar ideas.

Initial results from PSL suggest that would be wise. On September 7th researchers from two think-tanks, the Centre for Global Development and Innovations for Poverty Action, published their analysis of the scheme's first year. On average, pupils at PSL schools spent about twice as much time learning as their peers at ordinary schools—a result of them turning up more often, relatively diligent teaching and longer school days. Some operators did better than others. But overall, pupils at PSL schools made roughly an additional seven months' worth of progress in English and maths compared with children at typical public institutions.

These benefits came at a cost. Liberia's government typically spends about \$50 per pupil per year. PSL schools could dip into a philanthropic pot and spend twice that amount. A few operators then added their own funding. Bridge International Academies, a company that runs 25 schools, spent several times more than most other operators.

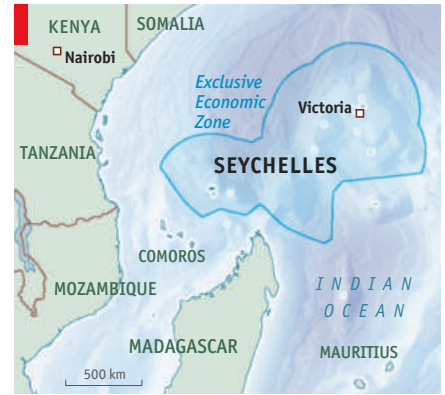
George Werner, the outgoing education minister, expects costs to fall over the next two years of PSL. He hopes his successor will keep the pilot after Liberia's general election on October 10th. That would provide more time for schools to improve—and for pupils to learn.

▶ the new vote, including suspending six senior officials and hiring a new contractor to print ballot papers. If they are not met, it says it will not take part.

Many Kenyans guess that, in the end, the result will be the same—and that Mr Odinga and his allies will still not accept it. Certainly, thanks to the supreme court's decision, NASA will have gained momentum. But for all its flaws, it is still not obvious that the election was rigged by anywhere near the margin of nine percentage points that Mr Kenyatta had over Mr Odinga. (Mr Kenyatta's party easily defeated Mr Odinga's in the parliamentary election, albeit that the opposition split into sepa-

rate parties competing against each other.) In a presidential re-run Mr Kenyatta, who is better funded and organised, is still likely to be the favourite, says Nicholas Cheeseman, a specialist in African elections at the University of Birmingham.

Protests after this year's vote left at least two dozen people dead. But for the most part Kenya has avoided the violence that marred earlier polls. The court's decision is intended to reinforce that progress by building trust in the country's institutions and in the fairness of elections. Yet those high hopes could still be dashed to smithereens. The coming months will jangle Kenyan nerves. ■



## The Seychelles

## Debt relief for dolphins

NAIROBI

An innovative agreement aims to protect the water around the Seychelles

THE Seychelles is an archipelago of 115 mostly tiny islands, whose collective area, at 460 sq km, is only about a third of London's. But the country's granite islands and coral atolls sit within an exclusive economic zone of 1.4m sq km. It is here, in the ocean, that conservationists are working on a new way for small countries to protect their marine environment.

The Seychelles' economy relies on tourism and tuna. These depend on healthy seas. But paying for conservation is a challenge, says Didier Dogley, the environment minister. So last year the country struck a deal with The Nature Conservancy (TNC), an American NGO. It promised to protect 30% of its waters by 2020—half of this area will be off-limits to fishing. In return, TNC bought up \$21.6m of debt owed by the Seychelles to the Paris Club of international creditors. It will allow the country to pay it back at a lower interest rate over a longer period.

Some of the money that the Seychelles saves on interest payments will go into a "climate adaptation trust", which will hand out \$280,000 a year. The first batches will go towards training fishermen to use more sea-friendly techniques, conducting research on fish populations and monitoring the new 400,000 sq km reserve, which will be among the largest in the world. A further \$150,000 a year will go into an endowment that will continue to fund marine conservation in the future.

The complex deal took four years to thrash out. Still, not everyone is happy. Some fishermen worry that their favourite spots will become no-go zones. "The bone of contention is where these areas are going to be," says Rebecca Loustau-Lalanne, an official in the Seychelles' Blue Economy Department, which pursues sustainable ▶▶



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▶ ocean-based development.

The blue economy is a new idea, but like the green economy it is catching on. The World Bank is backing a planned \$15m “blue bond” for the Seychelles, which will fund sustainable fisheries. TNC is planning its own blue bonds, which would underpin deals similar to the one it agreed with the Seychelles. “I can see doing a billion dollars of these deals in a decade,” says Rob Weary, TNC’s financial guru.

More will be needed. Schools of albacore, bigeye, skipjack and yellowfin tuna circulate widely in the western Indian Ocean. Sustainable fishing is a task for every country with a stake. Already Mauritius is looking to copy parts of the Seychelles deal. Madagascar, Mozambique, Tanzania and the Comoro Islands have also shown interest. “It would be good to get everybody on board,” says Mr Dogley.

Healthy seas mean more of the charismatic marine fauna that make the region so attractive to scuba-diving tourists. Debt relief for dolphins makes sense. ■

### South African politics

## Getting nasty

JOHANNESBURG

**The race to lead the African National Congress has turned ugly**

**S**OUTH AFRICA’S ruling party, the African National Congress (ANC), is on the verge of tearing itself apart with “dirty tricks”, says Gwede Mantashe, its secretary-general. As the ANC prepares to elect new leaders at a conference in December, a vicious battle is under way. The fight is broadly between those aligned with the party’s current leader, Jacob Zuma, who is the president of the country, and those who want to break his grip on the ANC.

Mr Zuma would like to see his ex-wife, Nkosazana Dlamini-Zuma, the former head of the African Union, succeed him as leader of the ANC. Cyril Ramaphosa, the deputy president, is her strongest opponent and, he claims, the victim of a “dirty war” by his comrades. Earlier this month his personal e-mails were hacked and leaked to a pro-Zuma newspaper editor, supposedly revealing extramarital affairs with at least eight women.

The story probably did Mr Ramaphosa no serious harm, not least because Mr Zuma has set new standards in that area. He has had several affairs and is currently married to four women. He was acquitted of rape; his accuser fled the country in terror. Mr Ramaphosa, for his part, admitted to having had an affair eight years ago. He has since reconciled with his wife. The other allegations are false, he says.

The public appears more concerned about the shady way in which the e-mails of Mr Ramaphosa, who is running on an anti-corruption platform, were obtained. “We now need to confront the likelihood that state agencies and resources are being abused to promote factional political agendas,” he said.

South Africa has a long and disturbing history of politically motivated dirty tricks. During apartheid, the police sowed divisions by planting false stories in the press. For Mr Ramaphosa, the attacks will bring back memories of his previous bid to lead the ANC. Hoping to succeed Nelson Mandela in 1997, he faced malicious rumours about everything from his work to his sexuality. He lost out to Thabo Mbeki, who would become president.

Mr Zuma has put loyalists in key positions at state security agencies. “They have got every bit of dirty information on everyone,” says Susan Booysen of the University of the Witwatersrand. Some critics of the president have been subjected to death threats; others, smear campaigns. When Mr Zuma fired Pravin Gordhan, the finance minister, earlier this year, he cited a dodgy intelligence report that claimed Mr Gordhan held secret meetings to undermine the government. Mr Gordhan, who sought to curb waste and corruption, was repeatedly threatened with dubious charges. He has remained outspoken—and is now facing renewed legal threats.

The stakes of the ANC leadership battle are high for Mr Zuma. His successor will also be the party’s presidential candidate in 2019 and therefore might eventually be in a position to shield him from prosecution. Mr Zuma faces 783 charges of corruption, which he denies. His next court hearing is this month. Were she to become president, Ms Dlamini-Zuma would be in a position to pardon the father of her children. Few think she will challenge the cynicism that has come to define the ANC under Mr Zuma.

The nastiness is expected to increase as the ANC’s conference draws closer. A recent survey of members shows Ms Dlamini-Zuma lagging behind Mr Ramaphosa and other candidates in popularity. Her supporters may be trying to make up ground in other ways. Thousands of party branches are choosing their delegates for the conference. Critics of the president warn that branches that decide to back candidates like Mr Ramaphosa are being disbanded. In KwaZulu-Natal province, Mr Zuma’s base and home to the largest number of ANC members, disputes have turned bloody. “While Ramaphosa and the six or so other contenders battle the smears against them, something more sinister and insidious is unfolding,” writes Justice Malala, a political columnist. “The December election is being rigged right in front of them.” ■

### Mediterranean migrants

## Stuck on shore

CAIRO

**Why the number of migrants crossing the Mediterranean is falling**

**O**VER the past three summers, tens of thousands of migrants piled into boats to make the perilous journey across the Mediterranean. This summer, though, the sea was unusually empty. Since the European Union and Turkey struck a deal in 2016—in effect closing the eastern route to Greece—Italy has been the main destination for migrants. But the number of arrivals there in July was down by more than half compared with last year. In August it fell even further: fewer than 4,000 people came ashore, against more than 21,000 in August 2016. It was the lowest monthly figure recorded in nearly two years.

No one quite knows why. Italy has provided equipment and training to Libya’s coastguard, which has stepped up patrols. The seas have also been rough. But two militias in the western city of Sabratha, thought to be behind much of the people-smuggling, have a different explanation. They claim that Italy offered them money and equipment to stop migrant boats from setting sail.

Italy denies that it is talking with the traffickers. But it does work closely with Fayeze al-Serraj, the head of the UN-backed government based in Tripoli, the capital. The EU has given him tens of millions of dollars to improve the coastguard and provide new jobs for those involved in trafficking. Mr Serraj, in turn, reportedly struck ▶▶



Libya’s version of catch and release





► deals with the militias and brought them onto the government payroll. “I don’t think anyone came from Europe with a suitcase full of money and gave it to Libyan warlords,” says Mattia Toaldo of the European Council on Foreign Relations, a think-tank. “It’s more complicated than that.”

Any such deal would be unpopular in Libya, because it would strengthen the armed groups that have plunged the country into chaos. But it is unlikely to meet much criticism in Italy, where the arrival of so many migrants has created a political crisis. Over a four-day period in June, rescue boats pulled 12,000 people out of the water. Some mayors have refused to accept new arrivals. Their more welcoming colleagues have been punished at the polls. In April, the mayor of Lampedusa won a UNESCO award for helping migrants. In June, voters on the small island tossed her out of office. She came third out of four candidates, with less than 24% of the vote.

Italy has also tried to seal the far end of the people-smuggling route, in Fezzan, a vast area of desert that borders Algeria, Chad and Niger. It is Libya’s poorest region. Though it has oil wells capable of producing 400,000 barrels per day, residents receive few benefits; producers fly in staff from the north. A large state-run farming complex has fallen into disrepair since the civil war in 2011. With few chances for legal employment, tribes in Fezzan have turned to smuggling. The migrant trade brings in perhaps \$1bn annually.

In April, the Italian interior ministry negotiated a peace deal between two warring groups in the region. In exchange for money, they agreed to stop fighting and work to close the borders. There is little evidence that they have done the latter. With so few Mediterranean crossings this summer, aid agencies believe tens of thousands of migrants are stranded in Libya. Some are kept in detention centres run by militias in the north, or held for ransom in grim “safe houses”. Others stay in the south and find ill-paid informal jobs.

There is one other explanation for the

## The last Jews of Egypt

# Out of the shadows

CAIRO

Muslims in Egypt are trying to preserve its Jewish heritage

**I**N BUT a few years one of the world’s oldest Jewish communities will have disappeared. No more than 20 Jews are thought to remain in Egypt, compared with at least 80,000 before the second world war. Half a dozen live in Cairo—four of them in care homes. But Magda Haroun (pictured), a sprightly 65-year-old, wants to keep their memories alive. She has formed an association, Drop of Milk, dedicated to preserving Egypt’s Jewish heritage. Of its 20 active members, she is the only Jew.

Some members have Jewish fathers who converted to Islam to avoid expulsion under Gamal Abdel Nasser, Egypt’s former dictator, an aggressive Arab nationalist. Others married Jews. Most simply want to preserve Egypt’s pluralist past. “We’re reopening a page of history that was deleted from our textbooks,” says Amir Ramsis, who directed a documentary about Jews in Egypt.

There are 12 synagogues left in Cairo. Many are in poor shape. The group is based in one of them, called Sha’ar Hashamayim (Gate of Heaven), and it plans to turn others into cultural centres. Members talk hopefully of a “renaissance”. Twice a week they will gather to learn Hebrew so that they can catalogue the 20,000 books in the basement of Sha’ar Hashamayim. They want to create an exhibition of Egypt’s Jewish history in the synagogue and to protect other sites, such as the Jewish cemetery in Cairo.

Some do not share the group’s enthusiasm. Egypt has fought four wars against Israel. Even Jews who worked alongside Egyptians against British colonialism were branded enemies of the state and expelled. Some of those who remain prefer to keep a low profile. American Jewish groups believe Egypt’s Jewish heritage would be better protected out-

side the country.

But since the revolution in 2011, Egypt’s leaders have reached out to local Jews. In 2012 a leader of the then-ruling Muslim Brotherhood broke a taboo by calling on those who were expelled to return. In 2015 state television broadcast “The Jewish Quarter”, a soap opera that depicted Jews in a positive light. Last month the antiquities ministry began work on a \$6m project to restore the roof of Alexandria’s synagogue.

Some see the moves as an effort to win over Western governments; others say that they are only happening now because there are so few Jews left. But it might also be that after four decades of relative peace with Israel, Egypt is coming to terms with its Jews.



Let my people be remembered

reduced flow, and it may be the most compelling. “The smuggling business is a business. It’s all about money,” says Claudia Gazzini of the International Crisis Group, a Brussels-based think-tank. The traffickers may have simply found a more lucrative business. Petrol is heavily subsidised in Libya: a litre costs \$0.12 at the official exchange rate and just two cents at the black-market rate. Smugglers can sell it in Europe (or neighbouring Tunisia) at a huge mark-up. The business is thought to be worth \$2bn annually—a sum that dwarfs any aid on offer from Europe.

The western port of Zuwara, once a hub

for the migrant trade, has lately switched to smuggling fuel. Residents complain of petrol shortages because so much of the supply is stolen. Libyan ships are thought to bring the petrol out to international waters, then transfer it to non-Libyan tankers. A team of UN investigators said in June that they had seen “vessels showing suspicious navigational patterns” near the city. But stopping petrol-smuggling is not a high priority for the European navies that patrol the Mediterranean. “It creates a lot less social alarm than the migrants or drugs,” says Mr Toaldo. “You won’t see people complaining about smuggling petrol.” ■

## Saudi Arabia's foreign policy

## Sunnis and Shias: enemies no more?

## The Saudis may be stretching out the hand of peace to their old foes

FROM the forecourt of the Prophet Muhammad's mosque in Medina during the annual *haj* pilgrimage, which ended on September 4th, came the still, small voice of Shias praying. Saudi security guards fanned them helpfully against the heat. At the al-Baqi cemetery nearby, the resting place of many of the Prophet's descendants, Sunni vigilantes and puritans scowled at Shia worshippers but, in contrast with previous years, they held back from beating them with sticks. And as over 2.3m Muslims perambulated around Mecca's great black basalt stone, the Kaaba, Prince Khalid al-Faisal, the province's governor, singled out 86,000 Iranians for a special welcome.

Change may be afoot in Saudi Arabia's hostile relations with Shias and their champion, Iran. For decades the kingdom has been the font of Sunni Islam's anti-Shia dogma. The media issued screeds against the *rawafidh*, or rejectionists, deemed beyond the pale of proper Islam. But this year the oft-troubled *haj* was exceptional for its inclusiveness, and for passing off with no major incident despite a 20% jump in the number of pilgrims. Iran made a point of thanking the Saudis.

On ascending the throne in 2015, King Salman bin Abdelaziz and his young son and defence minister, Muhammad, set their sights on rolling back Iran's influence from the region by force. They waged war on Iran's Houthi allies in Yemen, who had seized control of Sana'a, the capital. They rejected demands for compensation for the hundreds of Iranian pilgrims killed in a stampede in Mecca in 2015. The following year they beheaded Nimr al-Nimr, a rowdy Saudi Shia cleric. They cut off diplomatic relations with Iran and spearheaded a grand military alliance of Sunni states. No more of the old "comatose", consensual politics, said Saudi officials.

Two years on, Prince Muhammad, who since June has been crown prince, may be thinking anew. Rather than confront Iran's various satellites, he is wooing them and their Shia rulers. He has renewed ties with Iraq that had been severed 25 years ago, this month reopening borders for people and goods for the first time since 1990. He sent his chief of staff to Baghdad to sign a deal on intelligence sharing, and brought Iraqi trade delegations to Riyadh, his capital. In June he hosted Iraq's Shia prime minister, Haider al-Abadi. In July he sat smiling in Jeddah, Saudi Arabia's commer-

cial capital, with one of Iraq's fieriest Shia clerics, Muqtada al-Sadr. "Sunni hardline and Shia hardline doesn't build nations or societies," tweeted one Saudi minister.

The kingdom plans to open a consulate in Najaf, the spiritual capital of Shia Islam in southern Iraq, and to lay on direct flights for thousands of Saudi Shias to visit its Imam Ali shrine. "Sectarianism has to wane," says Adel al-Jubeir, the Saudi foreign minister. "The region is calming down." He cites the winding down of the war in Syria, and the throttling of Islamic State's jihadist "caliphate".

Indeed, the Saudis have shifted on Syria, too. Saudi clerics used to urge on Sunni *mujahideen* against the supposedly heretical Alawite clan ruling Syria with their Iranian allies. Now they have toned it down, lest they be accused of abetting terrorism. Prince Muhammad is said to have stopped backing Syria's Sunni rebels and urged their leaders in exile in Riyadh to compromise with President Bashar al-Assad's ghastly regime.

The Saudis are still bombing northern Yemen. But there, too, they are sounding more conciliatory and keener to make a deal. Unusually, they apologised for an air-

raid on Sana'a on August 25th which killed 14 civilians. A Saudi spokesman suggested reopening Sana'a's airport and Yemen's largest port, Hodeida, under UN auspices.

Some Saudi officials say they want to woo back Iran's Arab allies, putting ethnicity above religion, in order to push back Iranian influence. "The more you engage with Iraqis, the less the Iranians will come," says one. "Iraq belongs to the Arab world."

Some observers foresee a rapprochement between Saudi Arabia and Iran, talking of a grand bargain whereby the Saudis might recognise Iran's pre-eminence in the north of the Middle East, including Syria, in exchange for a Saudi free hand in the Gulf states and the Arabian peninsula.

But Mr Jubeir dismisses such talk as "laughable". "When you hear honeyed words from [President Hassan] Rouhani's government [in Iran], we see the aggressive actions of its Revolutionary Guard," says a Saudi official, alleging Iranian-inspired terrorist plots in Kuwait and Bahrain and lamenting Iran's meddling in Yemen.

Any progress will be difficult. The kingdom is wary of being seen to appease Iran. For Shia-dominated Iraq's leaders to embrace the Saudis will not be easy either. Mr Sadr was lambasted at home for meeting Prince Muhammad, just when Saudi forces were levelling Awamiya, a Shia town in eastern Saudi Arabia outraged by Mr Nimr's execution. Some Saudis, for their part, were aghast when the prince congratulated Mr Abadi for defeating Islamic State in Mosul—and clobbering the old part of one of Sunni Islam's greatest and most beautiful cities. ■



## Assad to their rescue

The Syrian army pushed into the eastern city of Deir ez-Zor on September 5th, breaking the three-year-old siege of a government-held enclave by Islamic State (IS). It is a victory for Bashar al-Assad, Syria's blood-soaked dictator, and yet another defeat for the jihadists, whose self-proclaimed caliphate is shrinking fast. American-backed Kurdish and Arab fighters have driven IS out of most of Raqqa, its putative capital, 140km to the west. The group is expected to make its last stand in a ribbon of towns, including Deir ez-Zor, along the Euphrates river.



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Germany

# Agenda 2021

WEIMAR

## Germany's struggling Social Democrats are already looking to the next election

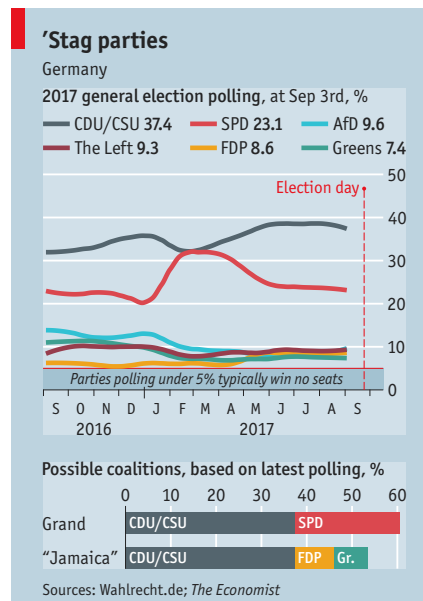
IF GERMANY'S centre-left Social Democrats (SPD) have a future, it probably looks like Carsten Schneider. The dynamic 41-year-old MP grew up in a tough *Plattenbau*, or communist-era tower block, but says he was made by the local school: "That's social democracy," he tells a crowd in Weimar. "The risk of poverty is especially high among single parents," he explains, "and 90% of the time that is single mothers." He goes on to describe how he successfully pushed to raise the age limit for certain sorts of child benefit payments. Polite applause greets him.

Around the corner, amid the sausage stands of Weimar's bustling marketplace, voters seem unappreciative. Asked about the SPD, one woman sipping a beer replies: "They are not so bad...but they bring too little. They don't have enough imagination to get things done." "Too obstinate", adds her neighbour.

The SPD has been in a "grand coalition" with Angela Merkel's Christian Democrats (CDU) for four years. It has achieved rather a lot, including a minimum wage, quotas for women on boards and gay marriage. And in Martin Schulz (pictured), its candidate for the chancellorship, it has a moderate, clubbable leader. But with the Bundestag election on September 24th growing close, the party is scoring only around 23% in the polls; the level of its lowest-ever vote-share, in 2009. Why is it doing so badly?

The scene in Weimar sums up the

party's struggle for distinctiveness. For a start, being in the grand coalition makes it hard to attack the CDU: "The economy's going well, wages are rising, unemployment is lower than ever," conceded Mr Schneider. Here in the state of Thuringia the SPD is a junior partner in a government led by the (relatively pragmatic) local branch of the Left party, a merger of former East German communists and Western social democrats who quit the SPD over its



liberalising "Agenda 2010" welfare and labour reforms. And Weimar is also bespangled with posters of the centre-left Greens and the right-wing, but economically statist, Alternative for Germany (AfD).

There is not just more competition for the traditional social-democratic vote; that vote is also shrinking. In 2000, 37% of German voters were in blue-collar work; today the figure is 19%. In Thuringia, for example, old industries like textiles have given way to laser technology, optics and tourism. The SPD used to come first in the state in Bundestag elections. This time it may come fourth, after the CDU, the Left and the AfD.

When Mr Schulz emerged as the party's chancellor candidate in January—Sigmar Gabriel, the former leader, resigned to become foreign minister—he looked like a credible answer to the SPD's problems. He had folksy appeal, having spent 11 years as mayor of a small town in the Rhineland. He distanced himself from Agenda 2010. He could also offer international gravitas, having until January been president of the European Parliament. That also meant he was unsullied by the compromises of the grand coalition. If anyone could revive what remained of the SPD's traditional base and meld it with urban liberals and middling Merkel voters, it was surely he.

Initially the SPD surged, drawing almost level with the CDU in polls (see chart). Then came three successive state elections at which the party badly underperformed. The last one was North-Rhine Westphalia, Germany's largest state, an SPD stronghold and Mr Schulz's own native *Land*. That seemed to seal his fate.

Despairing, the party has been playing the Trump card, disingenuously reimagining Mrs Merkel's defence spending increases (which they agreed to in government) as an "arms race" designed to please ▶▶

▶ the American president. “Trump is demanding a doubling of our defence budget...Germany should become the top peace power in the world!” Mr Gabriel told the Weimar rally, to cheers. Yet this is not enough for the SPD to differentiate itself from the chancellor. At a debate on September 3rd Mr Schulz placidly nodded along as Mrs Merkel spoke.

Manfred Güllner, head of the Forsa polling agency, reckons the party has focused too much on social justice and should have presented a broader programme for modernising Germany. Others suggest that Mr Schulz’s reluctance to rule out a coalition with the Left at federal level played a role (though doing so did not help previous SPD candidates). One party insider offers perhaps the best explanation: the SPD will struggle to win elections for as long as Mrs Merkel remains in power.

The party will face a choice after the election: try to create another grand coalition or return to opposition. There are few real policy differences between the SPD and Mrs Merkel, and Mr Schulz would surely relish working with her and Emmanuel Macron of France to integrate the euro zone further. But the demoralised membership might well veto such a deal.

Many are looking to the next election, in 2021. Mrs Merkel will probably have gone by then. None of her prospective successors looks particularly strong. And four years back in opposition would give the SPD a chance to renew and bring forward a new generation, including figures like Mr Schneider and Manuela Schwesig, minister-president of Mecklenburg-West Pomerania. For the party, the upcoming vote may be that rare thing: a genuinely good election to lose. ■

## Italy

# Salute!

ROME

## At last, some good news from the battered republic

AT THE end of each summer Italian business leaders, politicians and journalists mingle with foreign guests at the Ambrosetti Forum in the Villa d’Este by the shores of the lovely Lake Como. This year, the breezes off the lake carried something not scented in almost a decade: a whiff of optimism about the Italian economy.

GDP in the second quarter was up by an annual 1.5%, and on September 5th the government’s statisticians said that leading indicators pointed to “a reinforcement of the prospects for growth”. The previous week, they had sounded a less positive note, reporting that the unemployment rate had



risen from 11.2% in June to 11.3% in July. But even that held a kernel of promise. The unemployment rate measures the proportion of jobseekers out of work, and in July some 15,000 Italians became jobseekers. Not all found jobs, which is why the unemployment rate went up. But those who did pushed the total number in work to more than 23m for the first time since 2008. Italians, in other words, seem to be more hopeful that there are at last jobs to be had.

The entrepreneurial can look forward to easier credit too. A state bail-out in July of Italy’s oldest and shakiest bank, Monte dei Paschi di Siena, coupled with the rescue of two lenders in the Veneto region, has left Italy’s troubled financial sector looking healthier. Its well-being should improve as banks start selling off a mountain of bad loans weighing on their balance sheets. Italy’s caretaker prime minister, Paolo Gentiloni, was on hand at the forum to mop up congratulations. His government has also engineered a sharp fall in the number of migrants crossing the Mediterranean from Libya.

Problems nevertheless remain. Even if the new, rosier forecasts prove correct, the Italian economy will still be a drag on the euro zone. Latest figures show the single-currency area growing at an annual 2.2%. Still, the gap between Italy and the euro zone as a whole is narrowing.

A labour-reform package brought in by the previous government of Matteo Renzi relied heavily on providing employers with financial incentives to give workers steady jobs. Those incentives ran out last year. A sharp rise in the proportion of employees on fixed-term contracts points less to labour-market flexibility than to employers relying on easily disposable and under-trained employees. Juvenile unemployment remains a painful 35.5%.

There are external threats too. The strength of the euro is bad news for a country that exports a lot outside the euro zone. When the European Central Bank eventually stops buying government bonds, the cost of refinancing Italy’s huge public debt (a whopping 132.6% of GDP at the end of 2016, one of the highest in the EU) will rise.

Marcello Messori, of LUISS university in Rome, sees the large debt, which also cramps the government’s ability to stimulate the economy, as one of Italy’s two most important handicaps, the other being low productivity. An encouraging number of Italian firms are at the cutting edge of technological innovation. But, he says, their knowledge diffuses only slowly to the rest. In some cases, that is because the bosses of small, often family-run companies are wary of raising capital for innovative investment and so losing control. In others, the resistance comes from big companies that find it easier to seek out cosy arrangements in an economy with a big overlap between the private and public sectors.

How willing Italy’s politicians will be to shake up those arrangements remains to be seen. Unless they can agree on a new electoral law before the general election, which has to be held by next May, the most likely outcome is a hung parliament, with either a minority government or a grand coalition of left and right, neither of which looks likely to pass radical structural reforms. Keep that prosecco on hold. ■

## Human-rights abuses in Turkey

# Bruised and battered

ISTANBUL

## A government that once vowed “zero tolerance” for torture now practises it

THE masked special-ops officers barged into their apartment in Diyarbakir, in Turkey’s south-east, in the dead of a December night, says Tulay Yer-Celik. For the next two hours Mrs Yer-Celik, her month-old son and her mother-in-law listened as the agents beat her husband, Omer, in the next room. The violence ended only when the police arrived. Mr Celik, a journalist for the pro-Kurdish Dicle Haber Agency, one of over 150 news outlets shut down since last year’s bloody, abortive coup, was detained in Diyarbakir for two weeks. He was then transferred to a maximum-security prison near Istanbul, where he remains. His crime, according to an indictment that appeared only in late June, was to have published news stories based on the hacked e-mails of Turkey’s energy minister. He faces a sentence of 16 years.

Turkey’s government, led by President Recep Tayyip Erdogan, proclaimed a policy of “zero tolerance” for torture in the early 2000s. But amid the fallout from last year’s coup and a continuing crackdown against Kurdish militants, tolerance is back. Human-rights groups have cited instances of beatings and torture, including rape and threats of rape, in Turkish detention centres. A UN official who visited Turkey late ▶▶



The iron fist

▶ last year called such abuse “widespread”.

Human Rights Watch, a pressure group, has urged the government to investigate the kidnappings of four people accused of links to the Gulen movement, an Islamist sect believed to have inspired the coup. (The men are among the 110,000 civil servants purged from their jobs since last summer.) One of the four resurfaced in police custody after six weeks. He has since accused security personnel of torturing him. Turkish officials rebuff questions about such cases. “There is no torture in detention centres,” says one.

Similar outrages have come to light in the country’s south-east, where at least 3,000 people have died in clashes between the army and Kurdish militants, and in a string of terrorist attacks, in the past two years. On August 5th security forces responded to the killing of a policeman near Sapatan, a Kurdish village, by forcing dozens of residents out of their homes and beating them in the local square. Of the 36 people detained, many were assaulted with hoses and metal rods at the local police station, according to Kurdish politicians who visited the area days later.

A police officer was later suspended, but investigations into such abuses remain rare. Officials involved in counter-terrorism operations were granted immunity from prosecution last year. Berat Albayrak, the energy minister and the president’s son-in-law, remarked last week that he was tempted to strangle Gulenists whenever he saw them. Only a few years ago, the ruling Justice and Development party could plausibly claim to have done away with torture, notes Andrew Gardner of Amnesty International. “Since 2015 this success has been turned on its head,” he says.

The international response to all this has been feeble. Nine months ago, following a fact-finding mission, the Council of

## Turkish history

# Recalling Manzikert

ANKARA

President Erdogan reaches back a millennium

**I**N A mighty motorcade, Turkey’s president, Recep Tayyip Erdogan, descended on the sleepy town of Malazgirt near the Armenian frontier on August 26th. He came to celebrate a millennium-old victory that Turks hail as the dawn of Muslim domination of these once-Christian lands.

Largely forgotten in the West, the battle of Manzikert in 1071 saw Seljuk Turks, led by King Alp Arslan, crush an imperial Byzantine army said to be twice their size. This Turkic push into Anatolia laid the foundation for the Seljuks’ eventual successors, the Ottomans, who took Constantinople, the Byzantine capital, in 1453 and whose empire at its peak extended from the gates of Vienna to the Indian Ocean.

Mr Erdogan’s commemoration of a 946-year-old battle is a bid to woo Turkish nationalists. Having foiled a coup in July last year and only narrowly won sweeping powers in a constitutional referendum in April, he is eager to find new supporters. At Malazgirt, the modern name for Manzikert, he linked the failed coup to the medieval campaign.

“We faced an assault on July 15th that appeared to be a coup attempt but was actually aimed at enslaving us... [we]

fought the same figures as Alp Arslan,” Mr Erdogan told a crowd of thousands, alluding to wild rumours of Western interference. He was flanked by men posing as soldiers, clad in reproduction chain mail and brandishing scimitars. Other entertainment included displays of horsemanship and archery.

Mr Erdogan, a devout Muslim who often likes to rail against the West, chided his predecessors for “neglecting” Manzikert. He has been dusting off other episodes of martial history, presiding over lavish festivities that include fireworks and a laser show to mark the Ottoman victory of 1453. At Gallipoli, he has exhorted Turks to venerate their final victory before the empire was defeated in the first world war and dismembered by the victors.

“With a Turkish flag in one hand and Islam’s green banner in the other, our victorious forebears entered Anatolia at Manzikert and marched to the middle of Europe with glory and honour,” the president said. Yet historians agree that Alp Arslan never set his eyes on Europe, being more concerned with realms to the south, including Baghdad and Damascus. The priorities of Mr Erdogan today, it seems, still lie in the same direction.



When the Turks rode in

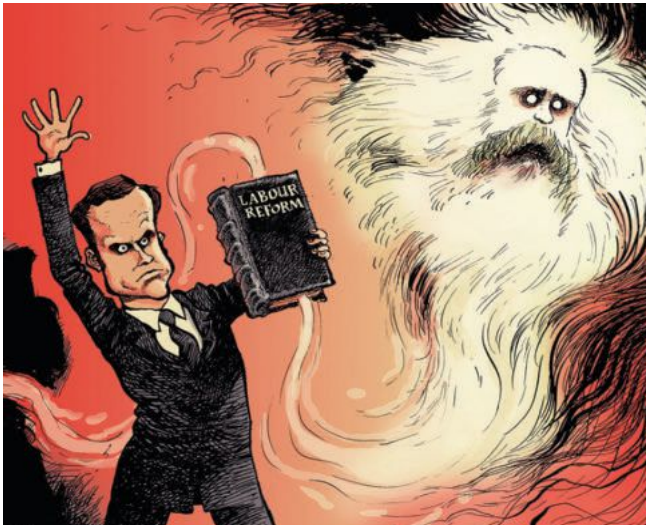
Europe’s Committee for the Prevention of Torture gave Mr Erdogan’s government a detailed report on ill-treatment in Turkish prisons. Turkey has not allowed its findings to be made public. EU politicians, including Angela Merkel, have talked about cancelling accession talks with Turkey, but it has not happened.

Increasingly, the people who are trying to expose the abuses have themselves come under threat. Eight human-rights ac-

tivists, including Amnesty International’s Turkey director and two European nationals, have been behind bars since July on outlandish conspiracy charges. Journalists face similar pressure. When photos of some of the Sapatan villagers appeared on social media, their backs covered with bruises, the local governor’s office insisted that the men had not been tortured. Reports to the contrary, it added, bore the mark of “terrorist propaganda”. ■

# Charlemagne | Exorcising French demons

Emmanuel Macron is trying to change nothing less than France's psychology



**S**TRANGE rituals have been taking place behind closed doors in Paris this summer. While much of Europe basked on the beach, elaborate rites and unfamiliar incantations could be overheard in the French capital. Paranormal activity was detected at unusual hours. In 300 hours of talks, which led to the unveiling last week of 36 reforms to the country's notoriously complicated labour rules, it looked as if President Emmanuel Macron's government and union leaders were simply negotiating a technical overhaul of France's rigid employment law. In fact, they were exorcising some of the country's most troublesome demons.

For decades, the spirit of Karl Marx and his inheritors has hovered over thinking about French labour reform. In 2000, when the Socialist government of Lionel Jospin introduced the 35-hour working week, the underlying idea was to share out existing work and create more jobs. Martine Aubry, the labour minister at the time, described the shorter week as a "project of solidarity towards the unemployed". By working less, the benevolent French were to hand on their remaining tasks to the jobless, in line with Trotsky's call for "all the work on hand" to "be divided among all existing workers".

Over the years, solid worker protection for the French has been entrenched by European labour law. Yet France's 3,448-page door-stopping labour code adds a wedge of other rights, which often seem inspired by the need to constrain bosses from their urge to exploit their workers. Such distrust has persuaded policymakers to favour public spending as a tool to combat unemployment. Directly subsidised jobs are preferred to a proper attempt to ease the rules that deter firms from creating such posts themselves. France operates a menagerie of schemes for subsidising jobs. The names come and go, as governments of the left and right rotate in and out of power: *contrats jeunes*, *contrats d'avenir*, *contrats aidés*, *contrats de génération*. Yet, despite the public subsidy, France's unemployment rate has remained unacceptably high. At 9.5%, it is more than twice that in Germany, and has not dipped below 7% since 1980. The jobless rate for the under-25s is over 20%.

Bold is the French politician who defends the idea that firms might be more willing to hire more staff if redundancy rules were less punitive. "Who could imagine that making redundancies

simpler will favour jobs?" sniffed a group of politicians and intellectuals in *Le Monde*, a newspaper, last year. Unlike its European counterparts, the French Socialist Party never explicitly embraced a more moderate form of social democracy, because it is "haunted by a Marxist superego" argued Manuel Valls, a former Socialist prime minister. France's problem, says a liberal commentator, is that its society has never been *démarxisé*.

Enter the exorcists. On August 31st Edouard Philippe, Mr Macron's prime minister, and Muriel Pénicaud, his labour minister, walked out of their last spirit-chasing session with the unions and into the parquet-floored salon next door to explain their reform plan. The product of all these summer talks, it gives firms more flexibility to negotiate working conditions; it caps court-awarded redundancy payouts for unfair dismissals; it simplifies worker representation in companies; it allows small firms to bypass union agreements; and it makes it easier to hire people just for specific projects. Employers are to be trusted to reach deals with employees. Small firms are to be freed of many constraints. There is no new project to subsidise jobs, and existing such schemes—"the least efficient of all employment policies", said Ms Pénicaud—will be shrunk. Contained in five "ordinances", under an accelerated procedure already approved by parliament, the reform will be written into law next month.

It is a radical turnaround, not just because of the technical changes to labour law that should help firms in France to plan, recruit and budget for a less stable world of work. It also represents a shift in thinking that would have been unimaginable even a year ago. In the summer of 2016, strikes and angry demonstrations obliged the previous French government to force through a far more timid labour reform by decree. This time, their disapproval of the detail notwithstanding, two of the country's three big unions have decided not to join a day of strikes on September 12th. Mr Macron recognises that France cannot stand still while technology dislocates the jobs market. It is people, rather than posts, that need protecting. "For 30 years we've suffered from the sickness of mass unemployment," he said on a recent trip to Austria, where joblessness is 5.4%. "That's the French problem."

## Les revenants

If the young French president is chasing the lingering spirit of Marx from labour-market policy, though, it is not because he seeks to deliver France into the hands of ghoulish unchecked capitalism. A former minister in a Socialist government, Mr Macron knows that he needs to match a liberalised labour market with a modernised welfare system, which can better protect people—rather than jobs—from spells without, or with less, work. This week, for instance, the government announced plans to bring self-employed workers into the unemployment-benefit system for the first time. Mr Macron seeks to turn France not into America or Britain, but a sort of Scandinavia *à la française*.

It was while in Paris in 1843-1845, under the July monarchy, that Marx was first drawn to revolutionary-socialist thought. His ghost will haunt the capital again when France's most powerful, and communist-linked, union holds its one-day strike. It will be back on September 23rd during a day of protests organised by the far left's Jean-Luc Mélenchon, a defender of the Venezuelan regime and an advocate of a top income-tax rate of 100%. Thanks to his well-planned talks, Mr Macron may have banished the spectre of communism from labour reform. But he may still need to face it down on the streets. ■




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**The economy**

## Keeping calm and carrying on

**Against expectations, business investment has held up well since the Brexit vote. Can it last?**

IT WAS sure to slump. Following the Brexit referendum of June 2016, many economists expected that shrinking investment would push the economy into recession. Some saw investment falling by nearly a tenth in 2017, similar to when the financial crisis hit in 2008-09. Foreign direct investment (FDI) was also expected to dry up, especially after Theresa May, the new prime minister, promised a “hard Brexit”, leaving the EU’s single market.

Try telling that to David King of Makar Technologies, a small electronics manufacturer near Inverness. The firm has just one site but in the next 12 months will open new ones in Edinburgh, near Exeter and near Cambridge. It plans to employ 40 people, up from 12 today. Asked how Brexit affects his expansion plans, Mr King’s response is simple: “It doesn’t.”

His is not the only company pressing on with its investments. In July Amazon, the online-retailing behemoth, announced that it would take all 15 storeys of the Principal Place building in Shoreditch as it hires more people to work in research and development. On September 5th Aveva, a software group based in Cambridge, unveiled a merger with the software arm of France’s Schneider Electric. Across the economy in the past year, both business investment and FDI have held up. Given that Remainers and Leavers alike agree that the prospect of Brexit has left Britain in a state

of considerable uncertainty, why do firms of all shapes and sizes seem so chipper?

Each year in Britain the private sector invests about four times as much as the government, in everything from new buildings to computers. Investment is at the root of improvements in productivity and, hence, pay-packets. FDI can be especially useful. Research suggests that when American multinationals take over British firms they bring better technology and management, lifting productivity by as much as 10%. Foreign-owned companies also appear to spend more on R&D than comparable British ones.

Since the financial crisis, business investment in Britain has been lacklustre. In the decade before the crisis it was worth on average 10.7% of GDP; that has since fallen to 9.3%. FDI has been up and down.

By these underwhelming standards, the period since the referendum hardly seems like a disaster. In the second quarter of this year, real-terms business investment was about as high as it was in the same period last year, before the vote. It may be the case, as Peter Mandelson, a Labour peer, argues, that Britain is missing out on additional investment that would have been made in the event of a Remain vote. That is unknowable. Yet it is hard to find much evidence to support the idea. Exclude investment in the extraction of raw materials, which has collapsed because of

low oil prices (see next story), and business investment rose by 1.5% last year.

It is a similar story with FDI. Statistics from Dealogic, a data provider, suggest that foreign mergers and acquisitions of British firms this year represent a tenth of the global total, which is in line with the long-term average. Inward FDI hit an all-time high in the fourth quarter of 2016. Some fear that foreign moneymen are using sterling’s depreciation as an opportunity to asset-strip British firms. Yet there is not much sign of this. Oxford Intelligence, a consultancy, tracks FDI into offices, factories, R&D facilities and the like. In 2016 the number of projects rose slightly on the year before.

**Steady as she goes**

Leavers might claim that the relative strength of investment shows enthusiasm for Brexit among businesspeople. This is hard to square with the surveys before the referendum showing that a majority of British companies of all sizes, as well as virtually all big foreign ones, backed Remain. A recent attempt by the government to get leading British firms to sign a letter backing its Brexit strategy was rebuffed.

Other factors are at play. Wear and tear means that some investment is due each year. If a builder’s van breaks down it needs replacing, Brexit or no. The rate of replacement may have increased as more investment goes into computers and software, says Jonathan Haskel of Imperial College London, because this sort of capital needs updating frequently.

Some projects captured by official statistics reflect decisions taken long before the referendum. Tottenham Hotspur’s gigantic new football stadium, which is due to open next year, represents an investment of hundreds of millions of pounds that received planning permission in 2011. ▶▶

▶ The external conditions facing firms have also encouraged investment. Borrowing is dead cheap. For the first time since the crisis a cyclical upswing in the global economy is under way. Investment intentions have picked up across the world, as Mark Carney, the governor of the Bank of England, pointed out in a recent speech. FDI projects have risen across Europe too.

Nonetheless, with Britain's future relationship with the EU so unclear, it remains puzzling that more firms have not adopted a wait-and-see approach. Since the referendum, one closely watched measure of economic uncertainty, constructed through analysis of newspaper articles, has been well above its post-crisis average.

Yet that measure of uncertainty is uncorrelated with capital investment, according to research by Kristin Forbes, formerly of the Bank of England. Manufacturers in Inverness may not be animated by the same issues as journalists in London. Nine out of ten small and medium-sized firms do not export, so they may not much care whether Britain reaches a trade deal with the EU, or replaces the 50 or so others that it will lose on leaving. Bosses have more urgent things to do than to keep up with the latest twists in the Brussels soap-opera.

Perhaps more surprisingly, it is not just small firms that seem unswayed by Brexit. According to our analysis, eight out of ten company filings made by FTSE 100 firms this year do not even mention Brexit (or related phrases such as "single market"). "There is a huge difference between the political thinking about Brexit as opposed to what takes place in the more practical world of business," says Karina Luper of Oxford Intelligence.

Foreign investors also seem more interested in other things. Chandru Iyer works for Kingston Smith, a firm which has been helping Indian companies set up shop in Britain since the 1980s. He says that Indian investors like Britain's corporation-tax rate, which at 19% is the lowest in the G7. For many foreign investors, Britain is still seen as a safe-ish haven. America has a volatile president, Hong Kong's moneymen are concerned about Chinese meddling and there is turmoil in the Middle East.

The question is how long firms will remain on autopilot. Even those that are not changing their behaviour because of the prospect of Brexit will be affected by its reality in 18 months. The adoption of a restrictive post-Brexit immigration policy, of the sort outlined this week in a leaked document from the Home Office, or the failure to reach any kind of trade deal with the EU, would deprive companies of the people and products they rely on. The resulting economic crunch would affect all firms, including those that feel insulated from the EU. The slump may merely have been deferred. For now, though, British business marches cheerfully into the unknown. ■

## North Sea oil

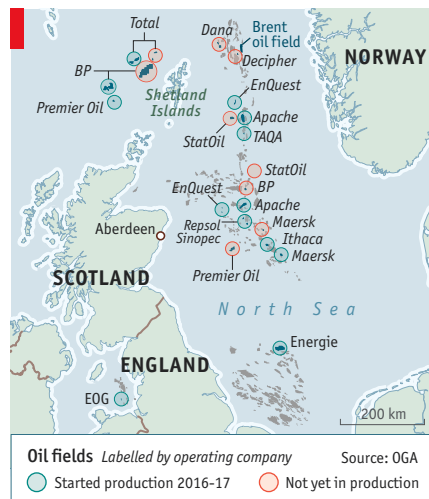
# Wreck and roll

ABERDEEN

**An ageing icon of the oil industry gets a welcome shot of fresh blood**

NOT for nothing is Aberdeen known as the Granite City. Its oil industry is in the throes of three crises, one cyclical, one structural, and one potentially existential. Yet on September 5th, when the industry's stalwarts gathered for a biennial conference on the future of North Sea oil, they put on a brave face. "I'd be a bit wary of piping the last lament," says Robin Watson, boss of Wood Group, a big Aberdeen-based oil-services firm.

The first, cyclical crisis has been caused by the oil-price crash that started in 2014. Costs for exploration and production that had ballooned when oil was above \$100 a



barrel became millstones. Profits plunged, forcing firms to slash costs. Jobs in Britain's maritime oil-and-gas industry have fallen from 460,000 in 2014 to about 300,000. The number of some types of exploration project has fallen to its lowest since 1971. Tax revenues from North Sea oil, which since the 1970s add up to £330bn (\$430bn) in today's prices, have all but dried up.

The structural crisis is one of old age. In its fifth decade, the North Sea basin is now termed "ultra mature" by Wood Mackenzie, an energy consultancy. Others less politely liken it to a maritime used-car lot, with second-hand rigs changing hands at low prices and old bangers being decommissioned or turned into scrap. Simon

Flowers of Wood Mackenzie says that by 2022 the money spent on decommissioning will exceed investment in new sources of growth. In May Royal Dutch Shell removed the 24,200-tonne topside of the first platform to go in the Brent field, which was discovered in 1971. Official estimates say the North Sea's total decommissioning bill may reach £60bn, for which taxpayers are on the hook for about £24bn.

The third, potentially existential crisis relates to the future of oil and gas itself. If oil demand peaks, as some predict it will by 2030, North Sea oil would be unlikely to survive an era of permanently low prices. Unit operating costs to extract oil have halved since 2014, but are still much higher than in parts of the Middle East, the Gulf of Mexico, Africa and even Norway. Though oil and gas will remain vital sources of energy for decades, a reminder of the rise of alternative sources is the proliferation of North Sea wind farms, including one at the nearby Trump International Golf Links, which has irked its owner.

Yet efficiency improvements that are squeezing more oil out of the ground and a flurry of recent deals indicate that there is still hope for the industry, even with oil near \$50 a barrel. For the past three years British oil production has bucked a trend, started in 2000, of falling output. A string of new fields commissioned during the boom years until 2014 are coming on stream (see map).

New money is also flowing in. Shell's sale, announced in January, of \$3bn of North Sea assets to Chrysaor, a firm backed by American private-equity investors, may mark a turning point in which smaller firms take over assets from bigger producers, to work them more intensely. Chrysaor aims to use modern techniques to increase oil recovery from existing wells, as well as preserving critical pipeline hubs to avoid stranding potentially productive wells.

Siccar Point, another firm backed by American private-equity money, is promising to explore and produce oil from the North Sea assets it recently acquired. Hurricane Energy, a small exploration company, claims to have made a surprisingly big discovery west of the Shetland islands, where Shell and BP are also increasing their production.

Deals worth some £4.5bn in the first half of 2017 have helped revive spirits in Aberdeen, as has £2.3bn of government support and a regulator, the Oil and Gas Authority, that has powers to sanction those sitting idly on productive assets. But they are not enough. On September 6th Oil and Gas UK, an industry body, said that unless more investment materialised, oil and gas production could fall sharply again after 2019. Alex Kemp of the University of Aberdeen says that if prices remain around \$50 a barrel, the long-term outlook for North Sea oil is pretty bleak. ■

**Correction:** Last week's story on foreign students, "A costly mistake", contained a mistake of its own. We said that official estimates had put the number of students illegally overstaying their visas each year at more than 90,000. In fact this referred to the gap between the number entering the country and those leaving. Sorry.



# Bagehot | Spies like us

To understand Britain, read its spy novels



**F**EW countries have dominated any industry as Britain has dominated the industry of producing fictional spies. Britain invented the spy novel with Rudyard Kipling's dissection of the Great Game in "Kim" and John Buchan's adventure stories. It consolidated its lead with Somerset Maugham's Ashenden stories and Graham Greene's invention of "Greenland". It then produced the world's two most famous spooks: James Bond, the dashing womaniser, and George Smiley, the cerebral cuckold, who reappears this week in a new book (see page 71).

What accounts for this success? One reason is the revolving door between the secret establishment and the literary establishment. Some of the lions of British literature worked as spies. Maugham was sent to Switzerland to spy for Britain under cover of pursuing his career as a writer. Greene worked for the intelligence services. Both Ian Fleming, the creator of Bond, and John le Carré, the creator of Smiley, earned their living as spies. Dame Stella Rimington, head of MI5 in 1992-96, has taken to writing spy novels in retirement. It is as if the secret services are not so much arms of the state as creative-writing schools.

Another reason is that British reality has often been stranger than fiction. The story of the "Cambridge spies"—Kim Philby, Anthony Blunt, Guy Burgess and the rest—is as far-fetched as it gets. One Soviet mole at the top of MI6 (Philby, who also worked for *The Economist* in Beirut); another even looking after the queen's pictures (Blunt); a cover-up; a dash to the safety of the Soviet Union; larger-than-life characters such as the compulsively promiscuous and permanently sozzled Burgess.

There is also a more profound reason for Britain's success. The spy novel is the quintessential British fictional form in the same way that the Western is quintessentially American. Britain's best spy novelists are so good precisely because they use the genre to explore what it is that makes Britain British: the obsession with secrecy, the nature of the establishment, the agonies of imperial decline and the complicated tug of patriotism.

Britain is honeycombed with secretive institutions, particularly public schools and Oxbridge colleges, which have their own private languages. At Eton, for example, where Fleming was educated and Mr le Carré taught for a while, boys dress in tailcoats and call their teachers "beaks" and their terms "halves". Walter

Bagehot argued (approvingly) that Britain weaves duplicity into its statecraft. The constitution rests on a distinction between an "efficient" branch which governs behind the scenes, and a "dignified" branch which puts on a show for the people.

The British habitually wear masks to conceal their true selves. They put on different costumes for different roles in Bagehot's theatre of state, and keep stiff upper lips to conceal their emotions. Mr le Carré (whose real name is David Cornwell) learned to put on a brave face at school because he was so embarrassed by his father, who was a professional confidence trickster. Greene learned the spymaster's art when, as a pupil at Berkhamsted School, he acted as an informer for his father, the headmaster.

The British establishment is not only a perfect machine for producing secrets and lies. It also produces the mavericks and misfits who thrive in the secret world. Establishment types seem to come in two varieties: smooth conformists who do everything by the rules, and mavericks who break every rule but are nevertheless tolerated because they are members of the club. The first type is sent into the Foreign Office and the second into MI6. The best spy novels are like distorting mirrors in fairgrounds: by exaggerating this or that feature of Establishment Man, they allow the reader to understand the ideal form.

The other great theme in British spy novels is geopolitical decline. How can people who were "trained to Empire, trained to rule the waves", as one of Mr le Carré's characters puts it, bear to live in a world in which the waves are ruled by other powers and statecraft is reduced to providing fuel for the welfare state? Fleming's novels are full of laments about Britain's "crumbling empire" and its dependency-producing state. "You have not only lost a great empire," Tiger Tanaka, a Japanese spy, tells Bond, "you have seemed almost anxious to throw it away with both hands." Mr le Carré once described Britain as a country where "failed socialism is being replaced by failed capitalism". The Circus, as he called the secret service's headquarters, is a physical manifestation of decline: cramped, shoddy, reeking of rising damp, just one hasty repair away from collapse.

## Nobody does it better

Why remain loyal to a country that has made such a mess of things and to an establishment soaked in hypocrisy? Mr le Carré's traitors (like the Cambridge spies who inspired them) betray their country not for money but because they have transferred their patriotism to the Soviet Union. But what makes Britain's best spy novels so good is that they toy with disillusionment only to reject it. For all its faults, they say, Britain is the best of a bad lot. Bond is so besotted with his country that he boasts that "British food is the best in the world". For all his professed Europeanism in the new novel, Smiley is the model of a British gentleman.

And spying provides Britain with a way of reclaiming its greatness, by excelling in the most sophisticated form of foreign policy. The Americans have the money and the bluster, but the British have the brains to spend it wisely and restrain the Americans from going over the top. Felix Leiter, Bond's opposite number in the CIA, admits that Bond is playing "in a bigger league" than he is. Smiley is more subtle than his "cousins" in America. The secret at the heart of the British spy novel is that Britain is much better than it seems. The writers agonise over decline and hypocrisy, only to conclude that the British are cleverer and more civilised than anybody else. A comforting illusion wrapped in a tale of disillusionment: you can't get more British than that. ■

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## Is achieving work-life balance in Japan a fantasy?

From the outside, Japan does not seem like a good place to work. Too often, companies are in the news for the wrong reasons. But things may be set to change.

Meet with business leaders at **Japan Summit 2017** on October 26th in Tokyo to discuss how Japan's corporate chiefs are rethinking company cultures to boost productivity and improve staff well-being.

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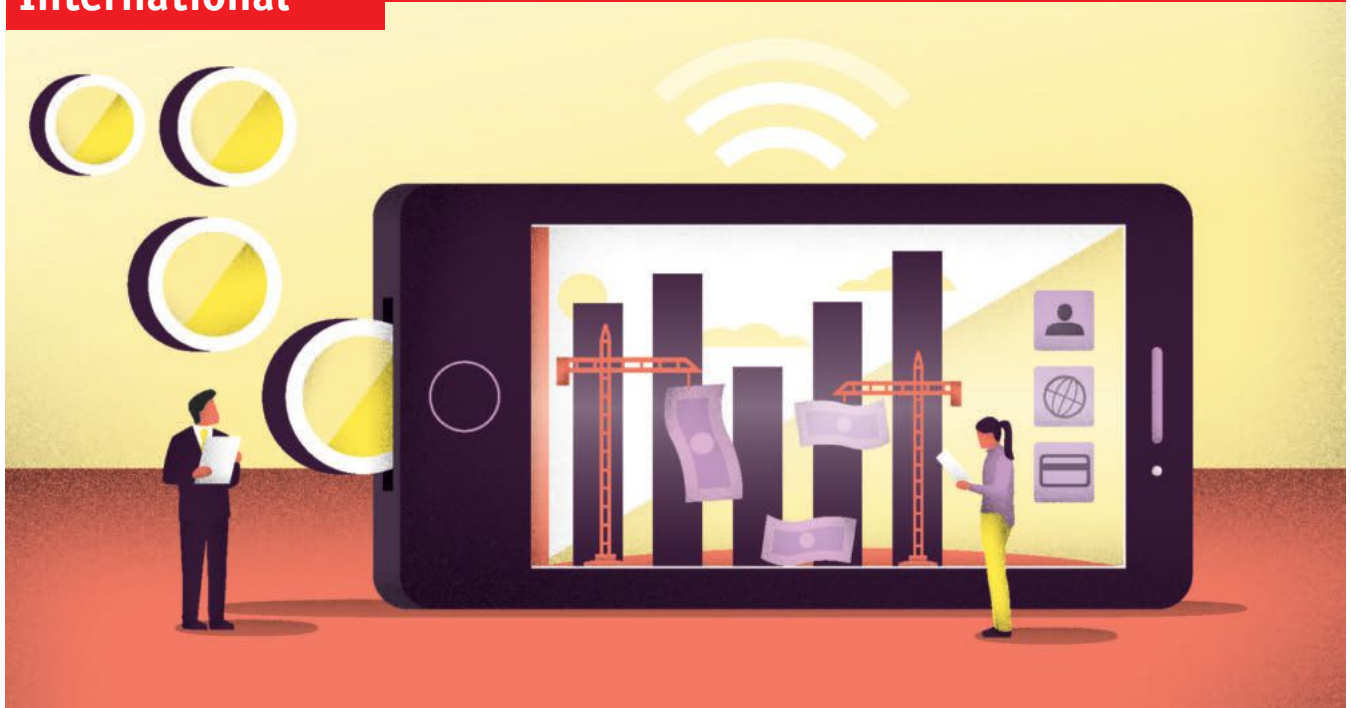


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### Technology and financial inclusion

## Underserved and overlooked

**In rich countries, just as in developing ones, digital technology could make financial struggles easier to manage. Its potential has scarcely been tapped**

**B**ETWEEN 2011 and 2014, according to the World Bank, the number of people in the world with a bank account, either directly or through a mobile-money provider, grew by no fewer than 700m. The global ranks of “unbanked” adults thinned from 2.5bn, 49% of the total, to 2bn, just 38%. Data being collected this year are likely to show further progress, with more people who used to rely on cash and informal, often expensive, means of saving, borrowing and paying for goods and services now connected to formal financial systems.

This rapid advance is far from complete: 2bn is still a big number. Plenty of transactions that could take place more safely and efficiently by electronic means are still conducted in cash. Nonetheless, progress has been remarkable. It is largely the product of a technological revolution—the harnessing of digital technology, in particular mobile phones, to provide financial services in developing countries. The most celebrated example is M-PESA, a mobile-money service used by 27m Kenyans. Although only 2% of people worldwide had a mobile-money account in 2014, in sub-Saharan Africa 12% did, half of whom were not customers of conventional financial institutions.

In rich OECD countries, 90% of adults already had a bank account in 2011. An

even bigger share do now. Clever technology is therefore unnecessary for financial inclusion, at least in this narrow sense. Yet an account only gets you so far. “Inclusion doesn’t denote engagement,” says David Brear of 11FS, a bank-technology consultancy. “Just because you have a bank account, it doesn’t mean you know what an APR [annualised percentage rate] is.”

Financial services can still be forbiddingly expensive, complicated or hard to obtain, especially for people on low or variable incomes, those with patchy credit records, immigrants and refugees. Digital technology can help. Just as it has cut the cost of serving the unbanked in emerging markets, it has made marginalised groups in developed countries cheaper to serve. And just as telecom and internet giants, rather than banks, have led the way in the poor world, financial-technology (“fintech”) startups are in the vanguard in the rich one.

It is not only the poor who find money hard to manage or bureaucracy hard to crack. “In developed countries the challenge is not so much inclusion as financial health,” says Tilman Ehrbeck of Omidyar Network, a philanthropic group that invests in startups in both rich and emerging economies. According to the Centre for Financial Services Innovation (CFSI), a

think-tank in Chicago, 35% of American households that struggle financially make more than \$60,000 a year. Immigrants to Britain, for example, even if they have come from elsewhere in the European Union and have a job, complain that setting up a bank account can take months. Banks typically demand proofs of residence, such as utility or local-tax bills, which new arrivals do not have.

The CFSI estimates that 121m American adults have either credit scores below 600 on credit agencies’ standard scale or no score at all because agencies have little information about them. For such people loans are pricey or inaccessible. Fully 91m have incomes too low, and 54m have incomes too volatile, to use mainstream financial products effectively. The Federal Deposit Insurance Corporation, a bank regulator, reckons that 16m still have no bank account at all, although the number is declining fast, and another 51m are “underbanked”—meaning that they go outside the banking system to meet their financial needs, turning to services such as cheque-cashing or payday loans.

### He that hath not

Americans in these overlapping categories spent \$141bn on fees and interest in 2015, says the CFSI: \$55bn or so went on loans lasting more than two years, including subprime car finance. Subprime credit cards are another big category, and growing fast. Poorer people are likelier than the better-off to use cash. They also spend \$5bn a year on tax advisers, who prepare their returns early and advance them money in anticipation of a rebate.

Banks and fintech startups backed by venture capitalists are spending oodles on ▶▶

▶ bringing finance into the digital age. Until a couple of years ago, says Mr Brear, banks concentrated on cutting costs and simplifying processes. Their digital services are getting slicker, but are aimed chiefly at the broad mass of existing customers rather than poorer new ones. “If you need a lot of help, digital is leaving you behind,” Mr Brear says. (He thinks rich clients, who want personalised help for different reasons, are also missing out.)

Yet digital technology is cutting the cost of serving just about everyone. Amir Hemmat of SABERESPODER (“knowledge is power”) in Los Angeles, which gives Hispanics in America information on education and health care as well as finance, says that a lack of data is a “classic excuse” for denying affordable finance to the less well-off. “I don’t buy that, in this day and age.”

SABERESPODER generates “an enormous amount of data around a hard-to-reach population”, which it uses to finance its operations. Its 930,000 members are paid to complete smartphone surveys. It sells the results (with their permission) to market researchers for companies hoping to sell more to Hispanics. Clients have included Ford, MoneyGram, Nielsen, Sprint and Wells Fargo.

### Computer says yes

Plenty of companies are working away. The CFSI’s Financial Solutions Lab, backed by JPMorgan Chase, America’s biggest bank, incubates eight to ten startups a year. Jennifer Tescher, the CFSI’s chief executive, says it runs the rule over 350 hopefuls annually. One graduate, Propel, helps recipients of food stamps, which are received via government-issued debit cards, to manage their benefits. According to Propel, 70% of cardholders have smartphones, but most check their balances by calling a hotline or (more precariously) by saving grocery receipts. The company’s app shows their balance, lists their transactions and tells them which local shops accept stamps. It recently raised \$4m from investors including Omidyar, the CFSI and Andreessen Horowitz, a Silicon Valley venture-capital firm.

Digital technology has made it easier to collect and sift data—and hence to find creditworthy people among those with “thin” conventional credit files, who might otherwise be denied loans. “There are a lot of 680s among those 540s,” says Arjan Schütte of Core Innovation Capital, a venture-capital fund, referring to credit scores. At the same time, algorithms, like human risk-officers, have to avoid lending to those who cannot afford to borrow. Reckless American mortgage lending not only fed the boom that preceded the financial crisis of 2007-08, but also left borrowers ruined.

Douglas Merrill, a former chief information officer of Google, was prompted to start his firm, ZestFinance, by a conviction that conventional credit scoring was deny-

ing loans to people whose only failing was to have thin credit records (his wife had been among them). Its machine-learning software draws on wider, messier sources of information—eg, whether people provide the same mobile-phone number in different credit applications, or whether they are licensed professionals. A credit-card issuer using it has cut annual losses by a nine-figure sum. RentBureau, a company acquired in 2010 by Experian, a credit-scoring agency, spotted that databases on tenants included only adverse information, such as late payments. Simply noting that rent was paid on time was a straightforward way of thickening a thin credit file.

Immigrants can find it hard to get a bank account at all, let alone credit. Monese, a startup in London, has built a business largely on the frustration of arrivals in Britain from other EU countries. It is not technically a bank but an “electronic money institution” which places its customers’ cash with licensed banks. In effect, however, it offers a standard online bank account, with a debit card, contactless payments and so forth, for a monthly fee, as well as remittances in ten currencies.

Whereas banks insist that new customers present documents physically, Monese asks them to install its app on their smartphones, video themselves and photograph their passport or identity card. It checks identities and issues account details within 90 seconds or so. According to Norris Koppel, the firm’s chief executive, Monese’s software-based verification procedures are more accurate than those of banks, which rely on visual checks of passports and utility bills by branch staff. The two-year-old company has nearly 100,000 active account-holders, mostly other Europeans in Britain. Recently it opened up across the euro area too.

If Europeans free to roam across the single market find banking systems hard to

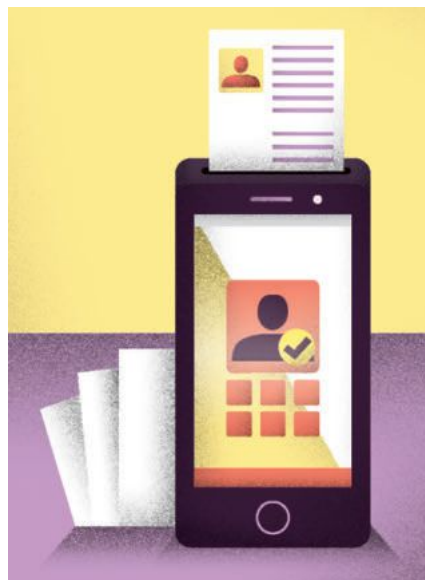
unlock, asylum-seekers and refugees face an even more daunting task. They have little money and may lack documents that banks, wary of know-your-customer and anti-money-laundering rules, will accept. At the same time, easier access to banking should help refugees and hosts alike. “Today’s refugee is tomorrow’s citizen,” says Balazs Nemethi of Taqanu, a startup.

One promising idea is to apply looser identity rules to refugees, in exchange for limited banking facilities—for example, with caps on the amount they can have in an account or on transfers of money. BaFin, Germany’s banking regulator, relaxed the terms in 2015, reasoning that it was easier to keep an eye on formal financial services than on informal ones. Taqanu is working on ways to establish identity using people’s digital footprints, such as the location of their mobile phones or their use of social media, to complement often-patchy formal documentation.

MONI, a Finnish startup, has already provided services to refugees. It offers blockchain-based accounts (launched across Europe this week) which, like those of Monese, can be set up in seconds. They can be topped up from a normal bank account or a credit card. Their facility for instant payments and transfers is handy for lending or giving money to friends and relatives on a tight budget, as well as for settling bills. In 2015 the Finnish government asked MONI to supply accounts and debit cards to refugees, to whom it gives a monthly allowance and a temporary identification card, in a pilot programme.

Antti Pennanen, MONI’s boss, says that around 4,000 refugees in Finland still have active accounts. Their usage has grown now that many more refugees have jobs, can pay bills and so forth. Relatives can send money without needing to entrust cash to the post. MONI is working on providing automated help in dozens of languages through artificial intelligence. The scheme is due to be extended to refugees elsewhere in Europe this month.

Much more could be done, and not just for new arrivals. Ms Tescher laments the slow pace of bank transfers within the United States. Real-time payments would speed up cash flows, encourage electronic payments and squeeze cheque-cashers and payday lenders. Mr Schütte says that American laws restricting the types of information used to assess creditworthiness are too tight for the digital age. He also thinks that the Community Reinvestment Act of 1977, intended to thwart discrimination against African-Americans, is out of date. It forces banks to maintain branch networks in an era when deposits and branches are increasingly poorly matched. Steven Mnuchin, the treasury secretary, is planning an overhaul. Shifting the focus from bricks and mortar to online services would be a good place to start. ■





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### Visual computing

## The facial-industrial complex

BEIJING AND SAN FRANCISCO

### Ever better and cheaper, face-recognition technology is spreading

**T**OURING the headquarters of Megvii in Beijing is like visiting Big Brother's engine room. A video camera in the firm's lobby recognises visitors in the blink of an eye. Other such devices are deployed around the office. Some of the images they capture are shown on a wall of video called "Skynet", after the artificial-intelligence (AI) system in the "Terminator" films. One feed shows a group of employees waiting in front of an elevator with a white frame around every face and the name of each person next to it. Quizzed on the Orwellian overtones of the set-up, Yin Qi, the startup's chief executive, simply remarks that "this helps catch bad guys."

Even if Mr Yin wanted to ponder the implications of the technology, he would not have the time. Megvii is busy building what he describes as a "brain" for visual computing. The firm has come a long way since its founding in 2011 (its name stands for "mega vision"). More than 300,000 companies and individuals around the world use its face-recognition technology, which is called Face++, making it one of the biggest such services. In December Megvii raised \$100m, giving it a valuation of nearly \$2bn and turning it into the world's first billion-dollar startup from might be called the "facial-industrial complex".

Providers in this field sell hardware and software tools to recognise faces and then connect those faces to other useful data. Although the market is fairly small—the most

optimistic estimates put it at a few billion dollars—the technology has started to permeate the wider business landscape. The main reason is that the accuracy of facial recognition is rapidly improving, putting it on the same trajectory as speech recognition, which really took off when accuracy improved by a final few percentage points, to almost 100%. "Most people underestimate the difference between 95% and 99% accuracy—99% is a game-changer," Andrew Ng, a noted AI researcher, has said about speech recognition.

What's more, the smartphone will do for face recognition what smart speakers, such as the Amazon Echo, have done for speech recognition: make it acceptable to consumers. Millions of Chinese already

"swipe" their faces on smartphones to authorise payments. On September 12th Apple is expected to unveil a new version of its iPhone, with technology that can reliably identify the owner's face and then unlock the device, even in the dark. That will come only a few weeks after Samsung presented a new Galaxy Note with a similar but less sophisticated feature.

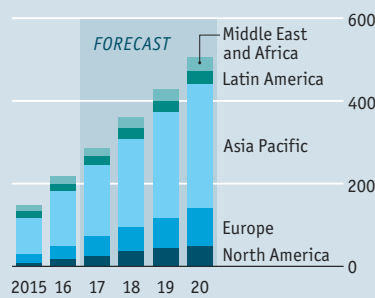
It makes sense to separate facial-recognition technology into two categories: the underlying capability and the applications that make use of it. Megvii's Face++ belongs in the first category, as do similar offerings from SenseTime, another Chinese startup, nTechLab, a Russian firm, as well as Amazon, IBM and Microsoft. All provide face recognition as a cloud-computing service. Megvii's customers can upload a batch of photos and names, and use them to train algorithms, which then can recognise those particular people. Firms can also integrate the recognition service into their own offerings, for instance to control access to online accounts.

Megvii's and SenseTime's services are largely founded on good data. They have access to the Chinese government's image database of 700m citizens, who are each given a photo ID by the age of 16. Chinese government agencies are also valuable customers—more and more of the country's hundreds of millions of surveillance cameras will soon recognise faces. In Shenzhen facial recognition is used to identify jay walkers; names and pictures go up on a screen. In Beijing the municipality has started using the technology to catch thieves of toilet paper in public restrooms (its system also prevents people from taking more than 60 centimetres of paper within a nine-minute period).

Commercial applications, often powered by one of the cloud-computing services, are spreading even faster. On Sep- ▶▶

### Halt, who goes there?

Facial biometrics global revenue by region, \$m



▶ tember 1st Ant Financial, a subsidiary of Alibaba, deployed its “Smile to Pay” system for the first time in a physical store: customers at a healthier version of a KFC restaurant, called KPRO, in Hangzhou, can settle their bill by looking at a screen (see picture on previous page). Xiaomai, a chain of convenience stores, has said it will use facial scans when people enter its stores in order to study their behaviour. Several Chinese banks now let users identify themselves at ATMs with their faces.

The West is further behind. Some industries have long used a basic kind of face recognition, including casinos wishing to turn away notorious gamblers. But it is mainly big online companies that make (cautious) use of the technology. Facebook has gone furthest by having its members tag friends on photos so the firm’s algorithms can recognise them on other pictures. Google employs the technology in order to group pictures that users have uploaded to its photo service. Amazon’s new home speaker, Echo Look, also has a camera, which could presumably be made to recognise faces.

Other firms are testing the waters. Jet-Blue and other American airlines have taken initial steps to match passengers’ faces to passport photos, aiming to eliminate boarding passes. Lloyds Bank is not the only Western bank planning to copy Chinese ones and allow customers to use their faces to log into accounts. Uber, a ride-hailing firm, has a system requiring drivers in India to take a selfie before starting a shift. This should cut down on unregistered drivers impersonating registered ones. Nvidia, a chipmaker, has plans for facial recognition in its new Californian headquarters.

There is potential for products that lift sales, too. Video cameras could, for instance, recognise loyal customers and VIPs who deserve special treatment. They could detect dissatisfaction on shoppers’ faces and dispatch staff to intervene. Walmart, the world’s largest retailer, is said to be working on a facial-recognition system to improve customer service.

Unsurprisingly, perhaps, the spread of these services has already prompted efforts to thwart them. An Israeli startup, D-ID, which stands for “de-identification”, has developed software that slightly alters photos so that algorithms cannot recognise them. This allows people to share pictures of their faces without having to worry that they will be used to identify them. Others have suggest low-tech defences against sophisticated surveillance systems, such as glasses with hallucinogenic patterns on the frame of the specs, or simply wearing masks or make-up.

Yet it is unlikely that such “adversarial attacks”, in the lingo, will keep face recognition from being widely used. Mr Yin of Megvii expects the technology to become a commodity. This is why he has already

set his sights higher. He is directing the firm’s computer-vision brain towards even more complex tasks, such as interpreting human behaviour and recognising objects.

In the long run Mr Yin wants his firm to develop into an “algorithm factory” that offers all sorts of building blocks for computer-vision services, which other firms will be able to combine and recombine in order to come up with ever more sophisticated offerings. Whether Megvii lives up to this ambition or not, the technologies it peddles will only spread. ■



Toys

## Fidget revolution

**Sales might have peaked, but fidget spinners have changed the toy market**

**Y**OU can spin them on your nose, chin, finger or tongue. Some include LED lights; others resemble a ship’s wheel, or even a skull and crossbones. The fidget spinner has three paddle-shaped blades attached to a central, weighted disc containing ball bearings. Flick a blade and it spins—for as long as 12 minutes, if it’s an advanced model from Japan. Originally designed to help calm children with attention-deficit hyperactivity disorder or autism, it swept the world earlier this year as a toy that everyone could play with.

Retail sales have undoubtedly slowed recently, says Mark Austin of *ToyWorld*, a trade publication—good news for the schools that have banned the toys as too distracting for pupils. But the spinner has created a new “fidget” category of playthings. And the global toy industry has learned lessons from its surprising success.

The fad started in America in February. By May, all 20 of the top-selling toys on

Amazon, an online retailer, were either fidget spinners or fidget cubes, a close relation. There have been many such crazes—who can forget the great loom-band mania of 2014?—but none that spread as fast. Frédéric Tutt, an analyst of the global toy market for NPD, a data company, says the spinner took just three weeks to cross the Atlantic and go global. No one knows exactly how many have been sold but NPD estimates that at least 19m were sold in the 12 rich-world countries that it tracks (including America and the biggest European markets) during the first six months of this year. Others put the figure at over 50m.

Big toy retailers, the usual arbiters of what sells, were initially caught flat-footed. Fidget spinners were a plaything that children themselves discovered and shared on social media, particularly on YouTube and Instagram. No person or firm had a patent on spinners, so with no licensing fees to pay, anyone could make them. They are produced in huge quantities in China, often by firms that previously manufactured smartphone accessories. Others were made using 3D printing. That has been a boon for small shops, which have been able to stock these unbranded goods from wherever they can find them.

Andrew Moulsher, managing director of Peterkin, a firm that imports toys into Britain, calls it a “watershed moment” for the business. Big retailers usually plan their inventory as much as 18 months ahead of peak seasons such as summer or Christmas; schedules are often tied to toy-filled films such as the “Star Wars” and “Cars” franchises. This is where most of their attention, as well as their marketing and advertising budgets, goes. So it was easy for big retailers to miss the eruption of fidget spinners online. (Subsequently they reacted as well as they could, says Mr Austin, ordering spinners in by air freight.)

Developing and manufacturing a toy can take even longer than inventory planning—up to three years. But now there is pressure to spot new fads and bring products to market far more quickly. After the fidget spinner, both manufacturers and retailers know they must respond faster to signals from social media. A Californian company, MGA, which was founded in 1979, spotted that children were watching YouTube videos of other youngsters opening presents; to take advantage of this “unboxing” trend, it managed to produce the L.O.L. Surprise! doll, which contains several layers of gifts, in just nine months. It has become another best-seller.

The spinner’s successor may be the roller, an oblong object weighted at either end. Mr Moulsher started importing Japanese Moku rollers into Britain in July and has sold about 40,000. Learning from the fidget fad, he hopes the new school term and a smart social-media strategy will see sales rocket. Teachers, be warned. ■

UTC buys Rockwell

## Dogfight in the skies

**Aerospace suppliers are merging to fight back against planemakers**

WHEN passengers board an aircraft, only a few care whether it was built by Airbus or Boeing, two giants that make all the world's big airliners. Fewer still would recognise the names of the thousands of suppliers that produce the 2m or so parts that go into a modern jet. Surprisingly little of the work is done by Boeing and Airbus. Boeing has outsourced 70% of the parts for its 787 aircraft. The job of assembling Airbus's A380 superjumbo in its Toulouse factory accounts for only 4% of the work required to make it. The balance of power between aerospace firms and their suppliers is causing ructions.

Near hostilities have broken out due to a run of big mergers among parts-makers. On September 4th, United Technologies (UTC), an American conglomerate that makes Pratt & Whitney engines and other aerospace parts, announced that it had agreed to buy Rockwell Collins, an avionics firm, for \$30bn. Although it is one of the biggest-ever mergers in the aerospace business, the deal is just the latest in a series of supplier tie-ups this year. In April, Rockwell Collins itself bought B/E Aerospace, a cabin-interiors specialist, for \$8.6bn. Two months later Safran, a French maker of engines and landing gear, agreed to buy Zodiac, a specialist in aircraft seats, for \$7.7bn.

As usual, the firms' bosses pledge that synergies between the businesses will help fund the deals. UTC wants its merger with Rockwell to produce \$500m in savings, according to its chief executive, Greg Hayes. But the imperative behind these supplier tie-ups lies elsewhere, in the odes of profit they make from planemakers. In the past two years, suppliers made profit margins of between 14% and 17%, compared with 9% for planemakers. The main reason for the divergence is that the huge development costs associated with jetliner programmes are borne by planemakers, not their suppliers. And assembling parts is a relatively low value-added activity.

Confronted with a shrinking number of new orders, as well as pressure from investors, both Airbus and Boeing are adopting a more aggressive stance towards the suppliers. This means trying to push them into offering much lower prices today, in return for future contracts. But that is not all. By outsourcing the most complex parts of their aircraft, Airbus and Boeing lost control of what turned out to be a highly lucrative market for servicing aircraft, with airlines as customers. Rolls-Royce, a British

engine-maker, makes half its sales and all its profits from servicing engines. The pair want this market back if possible. They are trying to make more parts in-house. In July, Boeing set up an avionics subsidiary to make more of its electrical systems itself. Airbus is cutting back its list of suppliers and doing more of its own work.

It is in response to this assault that the supply chain is consolidating, says Jim Harris of Bain & Company, a consultancy. Gaining scale gives suppliers clout with their customers and with their own supply chains. The merged UTC and Rockwell will have annual revenues of \$62bn, not far off

Airbus at \$80bn and Boeing at \$96bn.

Unsurprisingly, Boeing has hit the roof about UTC's acquisition of Rockwell, and has threatened to lobby regulators to stop the deal on competition grounds. Nor is Airbus happy, particularly as problems with Pratt & Whitney's engines are holding up the delivery of dozens of its jets. It worries that a merger will distract UTC from resolving the problem. It is rare to see two firms that have long battled each other team up on the same side, but there is little doubt, according to an adviser to Boeing and Airbus, that they both "have the knives out for their suppliers". ■

The electricity industry's nuclear fears

## HEMP-induced anxiety

**North Korea's threats send a jolt through American utilities**

WHEN North Korea said on September 3rd that it had developed a hydrogen bomb, adding that it could be used for a "super-powerful" high-altitude electromagnetic pulse (HEMP) attack, America's electricity industry was already on alert. Sceptics tend to dismiss as far-fetched the idea that the rogue regime would knock out the electricity grid by detonating a nuclear bomb high in the atmosphere. Regulators have not mandated safety measures. But the utilities are taking it seriously enough.

They are more than a year into a three-year programme, funded by about 60 electricity firms, to understand the potential impact of a HEMP attack on the generation and transmission of electricity, and to find ways to shield the network. Such concerns are not new. In 1962, when America exploded nuclear devices high above the Pacific, electrical damage was found in Hawaii. The industry has also studied analogous space-weather

effects on power systems, such as a geomagnetic storm in 1989 that knocked out power in Quebec.

But North Korea's threat has focused more attention on the matter, says Robert Manning of the Electric Power Research Institute (EPRI), a non-profit organisation that is leading industry efforts. One problem underlined at a Senate hearing in May was the armed forces' reluctance to share intelligence with utilities, and their lack of understanding about how to keep electricity flowing. "We were almost speaking past each other," says Mr Manning. Communication has since improved, he adds.

An EMP has three components, known as E1, E2 and E3, that from high altitude can spread across thousands of miles. The shortest, E1, lasts for nanoseconds, but can damage electronic components such as computers and electricity infrastructure. E2 is similar to a lightning strike, longer than E1 but at a lower amplitude. E3 is the longest-lasting and can affect transmission lines and the transformers connecting output from power stations to the grid.

Some have argued that an attack on America's power grid could lead to a catastrophic blackout lasting months. An EPRI study in February calculated that E3 from multiple detonations was unlikely to cause mass transformer failure. But it sees no cause for complacency and is doing more studies.

Mr Manning says the industry is also looking for ways to shield equipment from electromagnetism, for example by using Faraday cages, metallic structures that block radio waves, to render the threat less effective. In Europe and Israel, experts have long studied HEMP. South Korea and Japan, also in the line of fire, are waking up to the threat too, he says.



When the lights go out

## India and textiles

## Hanging by a thread

PANIPAT

The world's biggest centre for recycling textiles is fading

WHEN the doors open to the warehouse at Ambey Spinning Mills in Panipat, a city 90km from Delhi, it seems as if its contents might tumble out like those of an overstuffed cupboard. Heaps of clothes are piled to the ceiling. Ten women meticulously extract zips, chains and buttons from T-shirts, winter jackets and denims using long blades usually used to chop vegetables. Outside, a teenage boy wields a knife to bash synthetic fibre against a tree stump. In another workshop clothes are shredded, spun into yarn and woven by power looms into blankets. Bullock carts take them for further processing; they are then sent off for sale in India and beyond.

Known as the "cast-off capital", Panipat is home to 150-200 such mills, which take in discarded clothes from Western countries and turn them into recycled cloth. The industry employs around 20,000 people and brings in annual revenues of \$62m, according to Pawan Garg of All India Woollen and Shoddy Mills Association, a trade body ("shoddy" was originally a non-pejorative word for reclaimed fibre).

Panipat's history in textiles began after the Indian subcontinent's bloody partition in 1947, when weavers from the province of Sindh and the districts of Jhang and Multan in Punjab, finding themselves suddenly located in Pakistan, were uprooted and moved to the ancient city. They set up looms to knit coarse, hand-spun cotton carpets, wall hangings and sofa covers (from new wool) that were an instant hit abroad (and qualified as a dowry in marriages in northern India). The city's later emergence as a recycling hub coincided with a slump

in Prato, a small industrial town in Italy with a 1,000-year-old tradition in textiles. In the 1990s Panipat mill owners bought discarded Italian machinery from Prato designed to make cheap shoddy yarn from recycled wool. The industry took off; its annual revenues rose to over \$300m.

Times have since changed. Cheaper and lighter polyester substitutes are increasingly preferred by wholesale buyers such as aid agencies, railways and hospitals, whether Indian or foreign. Such materials need expensive machines that many Panipat mills cannot afford. Rising labour costs have squeezed margins. An erratic electricity supply and frequent machinery breakdowns are more of a scourge than ever. Indian winters are shorter, complains one mill owner, which affects domestic demand for woollen clothing. Most factories in Panipat are working at half capacity.

The business is fragmented, poorly organised and almost wholly unregulated. Had there been basic oversight by the government, some in the business say, standards might have risen. Whatever the reasons, the mills did not invest much of their formerly fat profits into upgrading machinery or workers' skills. That could have helped them find more customers willing to pay a premium for high-quality fabric from recycled yarn, which appeals to environmentally conscious companies.

Panipat may help the planet but also exhibits the least attractive features of the textile business in developing countries: sweatshop conditions for workers, rock-bottom pay, use of child labour and so on. Almost all workers there are contract labourers who earn a tenth of what those in the formal sector are paid. Women receive 120 rupees (\$1.80) a day for manually ripping up around 100kg of garments. Workers manage to sell off baubles and trinkets scavenged from the cast-off clothes but must often share the proceeds with mill owners. Despite the bosses' attention to such details, "there is no money in it anymore," says Mr Garg. ■

## Loyalty schemes

## Forsake all others

If you want loyalty, get big data

THOSE of a cynical bent might think Tom Stuker a glutton for punishment. Over the years, Mr Stuker has flown more than 18m miles (29m kilometres) on United Airlines, a carrier not always renowned for treating its passengers tenderly. Mr Stuker may possess the world's most impressive frequent-flyer account. Over the past half-decade he has averaged over 1m miles a year with United.

Mr Stuker is extreme in his devotion. But engendering customer loyalty is something that nearly all firms strive for. Most fail. The average American household belongs to 28 loyalty schemes. The country is home to 3.8bn scheme memberships in total, according to Colloquy, a research firm, up from 2.6bn in 2012. More than half of these accounts go unused.

Frequent-flyer programmes, introduced in the 1970s, were the first examples of modern loyalty schemes. They proved to be a clever bit of marketing. Flyers value plane seats highly, so a free one feels like a substantial reward. But airlines can give away unsold berths at little incremental cost, because the jet would fly whether they are filled or not. Air miles are also sold to third parties, such as credit-card firms, which then use them to reward their own customers. For airlines, profit margins on frequent-flyer programmes can be 30-40%, says Pranay Jhunjhunwala of the Boston Consulting Group (BCG), a consultancy, compared with 10% on flights in general.

Schemes like these are an example of "earn and burn" rewards, in which customers are rewarded for their purchases at a flat rate, whether a free flight for every 20,000 miles flown or a complimentary mochaccino for every nine swigged. According to Capgemini, another consultancy, nearly all firms with a loyalty scheme use this model.

Because they are so easy to implement, they are often used defensively. Many firms start a programme only because their competitors have one, says Steve Grout of Collinson Group, a loyalty consultancy. But they are so common that they end up generating little fidelity. Often "the market returns to stasis," argued Lena-Marie Rehen of the Ludwig-Maximilians University in a paper published in 2016. Some 77% of earn-and-burn schemes fail in one way or another within the first two years, according to Capgemini.

The best programmes, in contrast, get highly personal. Customers of Starbucks, ►►



Tools of the shoddy trade



▶ for example, are encouraged to pay for their daily dose of caffeine using a smartphone app, which they pre-load with cash. (An estimated \$1.2bn is deposited in Starbucks's loyalty account.) This allows the firm to harvest reams of data on its patrons, including what they drink, at which stores and at what time of day—perhaps even whether it is sunny or raining when they choose a particular beverage. This information is then used to target members of the scheme with individual offers.

If that sounds a touch intrusive, Starbucks's customers do not seem to mind. In its latest results in July, the firm boasted 13.3m active members. Over a third of its sales in America come through its reward programme. Customers tend to be happier handing over personal information when they get personalised offers in return, says Javier Anta, another BCG consultant. Some 97% of purchases at Kroger, an American grocery firm, are reported to be made by loyalty-card holders, who receive individual offers based on their shopping habits. Such data can be among the most valuable things a firm owns. When Caesars Entertainment, a casino group, went bankrupt in 2015, auditors valued its loyalty database at \$1bn, more even than its property on the Las Vegas strip.

If data are the grist for the loyalty mill, then you might assume that the online giants would be running the best schemes. Yet this is not necessarily the case. Take Amazon. "Their philosophy is not good," says one loyalty consultant (who asked not to be identified). "The amount they spend on promotions is insane." Rather than offering across-the-board discounts, he says, Amazon would be much better served by designing and targeting customised promotions for particular shoppers as part of a loyalty scheme.

As Starbucks has shown, many advances in the loyalty industry are driven by mobile technology. For a start, it allows firms to use location information to send well-targeted, real-time offers. And storing scores of cards in an e-wallet, rather than having to wedge them into a purse, encourages shoppers to use them. A quarter of people who abandoned schemes did so because they did not offer a smartphone app, according to Colloquy. Smartphones are also increasing the number of ways in which customers can garner rewards. Some restaurants, for example, offer points for those posting photos of their meals on Instagram, or for "checking in" on Facebook. The only limit, it seems, will be customers' desire to protect privacy.

Airlines, for their part, have been slow to keep up. Still, they have the odd card up their sleeves. In 2011, after Mr Stuker passed the 10m-mile mark, United Airlines named one of its jumbo jets after him. Even Starbucks would struggle to match that level of personalisation. ■



### Mainland microbrews

## All the beer in China

HONG KONG

Consumers are increasingly willing to pay up for craft beer

EVIDENCE unearthed at Mijiaya in Shaanxi province proved that the Chinese have an ancient tradition of making beer. Brewers were operating 5,000 years ago, using grains such as millet and Job's tears (a kind of pearl barley). This year a couple of small-scale brewers lovingly recreated that Neolithic ale. The cloudy, hop-free beverage would challenge even the bravest microbrew devotee. Ladislao Raphael of Moonzen Brewery in Hong Kong describes it as "sour and funky".

Yet Mr Raphael and his fellow craft-beer evangelists are winning converts. The Chinese market, which is the world's largest, is dominated by mass-produced lager. But craft breweries are sprouting up around the country—by 2016 there were around 150, up threefold from 2015. Consumption of their brews has surged by two-thirds over the past five years, figures from GlobalData show, even as overall beer-swilling declines. This mirrors a global pattern: consumers often crave better beers as they get richer. Trend-setters in affluent coastal regions are drinking less but pricier beer.

Many craft breweries are foreign-run, but plenty are Chinese-owned too. It was foreigners who initially provided most business for Great Leap Brewing, a stalwart of Beijing's craft scene, which set up in 2010 in a traditional courtyard down a dusty *hutong* (alleyway). Now 75% of its customers are locals, says Carl Setzer, its American brewmaster. Panda Brew, founded in Beijing by Pan Dinghao in 2013 with basic home-brewing equipment, recently began exporting to Britain.

Distinctive local tastes have become a

feature of the market. Wheat beers are popular, perhaps because they go well with Chinese food and locals like to combine carousing with chewing. Domestic brewers must also make the most of readily available ingredients. Barley in China is mostly poor quality and importing it is costly. Some brewers use exotic items like Sichuan peppers and Oolong tea, which appeal to a sense of local identity.

Doing business in China is rarely hassle-free. Small importers buy craft beer on the grey market and treat it badly, skimping on the cold storage needed to keep it fresh on long journeys to Chinese bars and supermarkets. This risks sullyng craft beer's reputation for quality. Another frowned-on practice is "contract brewing". Small breweries are subject to rules that stop them selling beyond their premises, which they often circumvent by tapping into bigger brewers' capacity. Beverages made this way do not always meet craft-beer standards, but are still sold as such.

Yet as demand for craft beer in America softens from recent highs, China's market still promises much. In March the biggest brewer of them all, Belgium's AB InBev, bought a stake in a Shanghai brewery called Boxing Cat. Beyond megalopolises such as Shanghai, speciality beers are selling well, even though microbrews can cost ten times as much as locally brewed lager. In contrast to the sour-tasting brews of China's distant past, craft beer's future on the mainland looks likely to be sweet. ■

### Infrastructure for electric vehicles

## Charge of the battery brigade

The success of electric cars requires extensive charging networks

A NEW phrase, "range anxiety"—the fear that an electric vehicle (EV) will run out of power before it reaches a charging-point—entered the Oxford English Dictionary in 2013. At the time a Nissan LEAF, the world's best-selling EV, could travel only 120km between charges. A car with a full tank of fuel will travel 650-800km between refills. A motorist relying on batteries has to find a public charger, a rare sight in 2013, or plug in at home to cover the same distance. Range anxiety has not gone away as EVs have advanced. But the problem now feels much more soluble.

Many governments are pushing hard to replace the internal combustion engine (ICE) with cleaner EVs—this summer both Britain and France said that by 2040 new cars completely reliant on petrol or diesel will be illegal. By 2050, half the cars on the road globally, a billion in total, will be bat- ▶▶

tery-powered, reckons Morgan Stanley, a bank. Falling battery costs mean that the total cost of EV ownership will soon hit parity with ICE models.

Surveys show, however, that car buyers' worries about charging—where you can do it, and how long it will take—remain a big impediment to going electric (after high prices). Unless buyers can be reassured about the availability and speed of charging, the EV revolution may progress at the pace of a milk float, not a Tesla in fast-accelerating “ludicrous” mode.

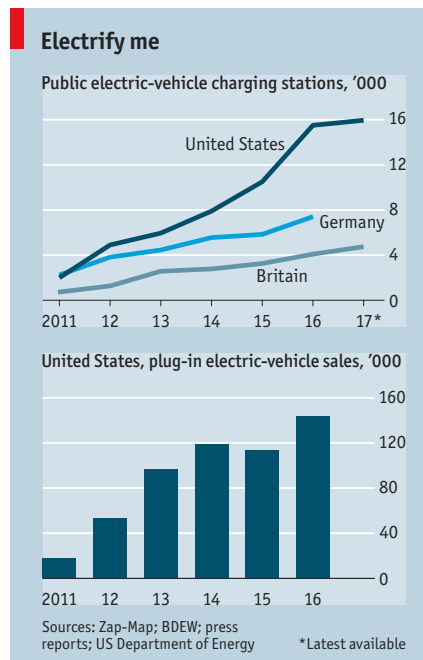
Better EV batteries with greater capacity are helping. A range of 190km or more is now the norm. Nissan's latest LEAF, unveiled on September 6th, will travel nearly 400km between charges. Tesla's Model S, a luxury EV launched in 2012, has a range of 500km, as does its new Model 3, a cheaper car for the mass market.

As ownership of EVs spreads, another reassuring fact is becoming clear: the amount of daily driving that people actually do, combined with an ability to charge at home, mean public charging facilities are rarely needed. Four out of five Europeans drive less than 100km a day. The average daily distance a car covers in Britain, for example, is less than 40km. Americans cover around 70km a day.

So far, most EVs have been bought by better-off motorists, who usually have off-street parking with a socket to plug into. Over 90% of charging is currently done at home, carmakers say. Charging times at home are hardly a difficulty—a standard residential electricity supply and a 3.5kW charger will fill a battery in a smaller car in about eight hours, as its owner sleeps. A special 7kW home charger can recharge a Tesla's larger batteries in eight hours. A car with a smaller battery takes just four.

Yet mass adoption of EVs will mean appealing to the millions of households without garages. Nor can people on long road trips rely on better batteries alone. So far the rate of increase in the number of public charging-points in rich countries has just about kept pace with the growth of EVs, says Sean O'Flynn of Alix Partners, a consulting firm. In America the number of charging-stations grew by more than a quarter, to almost 16,000, in 2016 (see chart). But in most places the system needs to expand to provide enough chargers of the right capacities in the right locations.

Carmakers, governments and commercial charging firms are all investing. Carmakers can differentiate their vehicles by providing souped-up charging. Tesla plans to expand its global network of 145kW “supercharger” stations, to 10,000. These public facilities can replenish the firm's larger batteries to 80%—charged in 40 minutes (for technical reasons, fast chargers cannot top up batteries completely). Several other carmakers are also rolling out their own fast-charging networks, which need ex-



pensive kit but bring charging speeds down to the time it takes to use a conventional fuel pump. Nissan now has a global network of 4,000 fast chargers. Last year Daimler, BMW, Volkswagen and Ford also said they would together install a total of 400 public charging-points in Europe delivering 350kW, which will charge a small car to three-quarters full in four minutes and a big vehicle in 12 minutes.

City and national governments are working on slower roadside charging for drivers who cannot plug in at home. Officials in London recently announced plans for 1,500 new charging-points by 2020. Local authorities there are experimenting with providing low-cost kerbside charging by enabling streetlights to double up as charging-points. France, Germany, the Netherlands and Norway are among the countries that have launched initiatives to improve access to public charging. (The EU is also mulling regulations that will require

all new dwellings to have access to an EV charging-point.) China's government, which is set on remaining the largest market for electric cars, has far bigger plans. This year alone it is installing 800,000 public charging-points, including 100,000 semipublic ones at workplaces and for taxies and commercial vehicles.

Companies that do nothing but provide charging services have their own plans to invest large sums as more EVs hit the road. Pat Romano of Chargepoint, based in California, which runs more charging stations worldwide than any other firm, sees workplace charging as another way of filling the charging gap. He notes that for a few thousand dollars spent on the equipment, plus a cost for electricity that is about the same as the price of a cup of coffee a day, employers can offer workers free charging in the office car park. Commercial firms such as Chargepoint may well come to dominate charging away from the home, if only because they are more focused on it than either carmakers or governments.

Better business models and technology should further increase the availability of charging. Charge, an app that allows owners of home chargers to rent them to the public much like an Airbnb flat, launched recently in Britain. Wireless inductive charging from road to car is already technically feasible, if expensive; that would make sense at taxi ranks when vehicles sit idle, for example. Qualcomm, a chipmaker, has demonstrated technology for recharging a moving vehicle off any road surface, although this way of providing limitless range is still some way off.

So there seems little likelihood that a dearth of infrastructure will hold back the spread of EVs. Some pundits imagine car parks of the future bristling with charging-points as plugging in becomes normal and filling with liquid fuel is regarded as an aberration. Range anxiety may then be remembered only by ageing motorists, along with other quaint old phrases such as “fill it up and check the oil”. ■






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**Chinese industry**

## Great Leap Backward

JINAN

**Capacity cuts fuel a commodity rally and a debate**

STEEL ran in Zhang Cheng's family for three generations. His grandfather mined iron ore. His father got a job in the big state-owned steel mill just outside Jinan, capital of Shandong province. His mother worked in the on-site hospital. And Mr Zhang went to the mill-run school, graduating to a job in its foundry, where, in the heat of the blast furnace, he rolled metal into thin bars for construction. But after nearly two decades in Jinan Steel, he worked his last day there this summer. In the name of "capacity reduction"—a government policy to rein in excess production of steel—the plant stopped operating in July, and Mr Zhang went on the dole.

Since they worked for a state-owned company, the local government has helped him and the 20,000 others who lost jobs find new ones. But it has been a struggle for Mr Zhang, a soft-spoken man. Openings in Jinan are mainly in the service industry—as a waiter in restaurants or an attendant at a station on the new underground. He worries that he does not have what it takes. "I've spent my life interacting with machines, not with people," he says.

That China has persisted in cutting capacity in heavy industry, even at the cost of pushing people out of their jobs, has been one of the biggest but also more controversial trends in the global economy over the past year. It is big because of China's sheer

heft: the country produces nearly as much coal and steel as the rest of the world combined, and even more aluminium and cement. American and European companies have in the past accused China of swamping their markets with cheap metals. But more recently they have benefited as China's efforts to curb production have fuelled a run-up in prices. But then there is the controversy: doubts about whether the capacity cuts are all they are cracked up to be.

The cuts are certainly ambitious. By 2020 the government aims to reduce the country's annual capacity for coal production by 800m tonnes, or roughly 25% of what it made last year; its steel capacity by 100m-150m tonnes, nearly 20% of its output in 2016; and its aluminium capacity by 30% in big production centres. When Mao Zedong launched his catastrophic "Great Leap Forward" in 1958, he insisted that within 15 years China would produce more steel than Britain. China's new campaign amounts to a Great Leap Backward: it wants to eliminate steel capacity equal to 15 times that of Britain.

When the government unveiled its plans last year, the natural response was scepticism. Yes, authorities had taken to talking tough: Li Keqiang, the premier, said that economic reforms would be "like taking a knife to one's flesh". But for years they had promised capacity cuts that never ma-

terialised. With local officials judged to a large extent on their area's GDP growth, they had every incentive to pay lip-service to reducing capacity, while quietly allowing new investment. By the World Steel Association's count, almost half of the steel policies announced by China from 1990 to 2016 were focused on limiting capacity. Yet China's steel mills mushroomed and their capacity-utilisation rate fell from nearly 90% in 2006 to less than 70% a decade later.

Nearly 18 months into the latest bout of capacity cuts, China has made believers of many investors and analysts. The official numbers show it to be well ahead of schedule. And for those who doubt those data, two other indicators—price and profit—show that Chinese heavy industry is much healthier than just a short while ago. Coal and steel prices have more than doubled since the start of 2016. Producers of both, in the red for much of the past half-decade, have seen their fortunes improve markedly. Their profits have surged.

**Demanding questions**

This, however, does not entirely settle the controversy. As in any market, commodity prices are determined by supply and demand. At the same time as China has closed steel mills and halted work at coal mines, demand for their products has strengthened, thanks to a property-market rally and the government's sustained splurge on infrastructure. This suggests that the price rises reflect not just the elimination of unused capacity but also greater use of what had been deemed excessive. The coal industry is the best example. Last year the government ordered mines to cap their production at 276 days, trying to put a lid on supply; this year, it let them increase that to 330 days. ▶▶

▶ In China this has ignited a heated debate about whether the economy is on the cusp of a new growth cycle. Proponents argue that the rebound in industrial profits has allowed companies to repair damaged balance-sheets, and that the cuts in capacity are laying the groundwork for an eventual recovery in investment in production facilities. Others counter that a slowdown in the property market, visible in recent weeks, will spell an end to the recovery in demand, and reveal that current industrial capacity remains more than sufficient. At least some of the run-up in metal prices does appear to be excessive. At a meeting

in August, the China Iron and Steel Association, an industry body, accused speculators of trying to exploit uncertainty about capacity cuts.

This points to a separate concern about the nature of China's capacity cuts: low prices ought to have signalled to companies that it was time to curtail production, but it took top-down orders from the government to get them to act. Wang Tao of UBS, a bank, describes the successes to date as a testament to policy implementation: "It is difficult to say that market behaviour has really changed." In the coal industry, officials are struggling to find the right

balance, aiming to restrain prices after their initial efforts drove them up. "It's like a car fishtailing," says Laban Yu of Jefferies, an investment bank. After skidding a bit, a driver with some luck and skill can get his vehicle straight again.

Clownish as that might sound, there is a chilling subtext for global competitors. Putting a lid on capacity ought also to put a lid on China's exports. But another aspect of China's campaign is to replace outdated plants with more modern ones. In the steel sector, China has already amassed some of the world's most technologically advanced facilities. It is likely to emerge from ▶▶

## Buttonwood | Gone fission

### Why are investors so relaxed about the behaviour of North Korea?

A ROGUE state has tested what may be a hydrogen bomb and has sent a missile over the territory of a neighbouring country. The American president has promised "fire and fury" if threats continue. The Security Council of the United Nations has been locked in debate. This sounds like the plot of a Hollywood thriller or a paperback potboiler in which the world is heading for conflagration.

But international investors are not thrilled, and seem barely disconcerted, by the crisis on the Korean peninsula. Gold has risen a bit, the yield on Treasury bonds has dropped and the MSCI World equity index has fallen since the start of August. However, the moves have not been huge. Even the South Korean stock-market, surely the most sensitive gauge of war risk, is well above its level at the start of the year.

What explains this remarkable insouciance? One possibility is that the markets may simply not be very good at assessing political risk. After all, investors failed to foresee either the result of the Brexit referendum in Britain or the election of President Donald Trump.

Another possibility is that investors have learned in recent decades that geopolitical events—from the September 11th attacks and the invasion of Iraq to countless presidential elections—tend to have only very short-term impacts on the markets. Economic growth and corporate profits are far more important factors. For investors who use algorithms to trade, political risk probably has very little bearing on their calculations.

Go back far enough, however, and it is possible to find political events with huge financial ramifications—after revolutions in their countries, the Russian and Chinese governments defaulted on their debts, for example. A war that engulfed

the Korean peninsula, dragging in China and Japan as well, would surely be one of those "fat tail" events that the models struggle to assess. But a few brave analysts are now trying to contemplate the effects.

Besides the terrible humanitarian cost in both North and South Korea, there could be immense damage in certain industries. The global economy is a lot more integrated than it was during the Korean war of 1950-53. Capital Economics points out that South Korea produces 40% of the world's liquid-crystal displays and 17% of its semi-conductors. If Japan was the target of missile strikes from North Korea, as it might be, the disruption would be even greater. A war with conventional weapons would be bad enough; the lasting impact of nuclear weapons' use would be immense.

The limited reaction of investors to this terrible possibility suggests that they do not believe it will happen and that they feel the heightened rhetoric on both the American and North Korean sides is simply bluster. A recent example was a tweet from Mr Trump on potential trade sanctions. Rabobank, a Dutch bank, says that American counter-threats are not per-

ceived to be credible. "The distinctly limited likelihood of the US cutting all trading links with China should the country continue to do business with North Korea is a case in point," the bank adds.

Just because a war would have disastrous economic consequences may not prevent political leaders from stumbling into conflict, either by accident or because they have other priorities. In 1909, Norman Angell wrote a book called "The Great Illusion" which posited that war between nations would be futile because of their economic interdependence. Five years later, war broke out anyway.

But in the early 20th century, many nations were still ruled by hereditary monarchs, for whom economic issues were not the highest priority. By the late 20th century, most developed countries were ruled by professional politicians who recognised that economic success was their surest route to staying in office. Recent conflicts in Afghanistan and Iraq did not involve the same level of commitment as either the Korean and Vietnam wars, and thus did not have big economic consequences. This may help explain investors' confidence that geopolitics will not interrupt the flow of goods and capital.

It is possible, in an age of populism and greater nationalism (and at a time when American hegemony is being challenged by China), that the calculations of political leaders have changed again, making conflict more likely. But no amount of number-crunching based on past data can properly assess whether this is the case; it is a judgment call. Investors have decided that a Korean conflict will not happen. Cross your fingers that this is one case where the "wisdom of crowds" will be proved right.



▶ this round of capacity cuts with even better steel mills, giving it a bigger share of the high-end market.

The closure of Jinan Steel, where Mr Zhang worked, has been touted in the state press as an example of China's seriousness in cutting capacity. It may in fact be a better example of industrial upgrading. One option the company has given laid-off workers is to move 300km (186 miles) to the east,

to the city of Rizhao, where its parent group, Shandong Steel, just opened a state-of-the-art plant. The expected output of the Rizhao mill is a touch higher than the Jinan mill. Shandong Steel, in other words, appears to be replacing capacity, not cutting it. But that is cold comfort for Mr Zhang: for its new production lines, the company wants younger workers, especially those with university degrees. ■



### Insurance in America

## Under water

### Flood risk is tricky to insure, and state intervention hinders as much as it helps

**T**HOSE who live on America's coasts know to prepare for wrathful hurricanes in late summer—nailing plywood to their windows as the storm approaches. America's property insurers and reinsurers are ready, too, using sophisticated models to track storms and estimate potential losses. But wind is not the only danger from hurricanes. Ask Houstonians who saw their homes inundated by Hurricane Harvey's 52 inches (132cm) of rain in the six days to August 30th. Or those in the path of Hurricane Irma, which, as *The Economist* went to press, was wreaking havoc across the Caribbean. But whereas wind damage is covered under most standard insurance policies in America, flood insurance is a government-run add-on that far from all homeowners buy. As a result, of over \$30bn in property losses in Texas, only 40% may be insured.

The National Flood Insurance Program (NFIP) was set up in 1968, after a series of large losses led private insurers to pull back. Those living within a 100-year flood-

plain (ie, with a 1% annual chance of a flood occurring), as defined by the maps of the Federal Emergency Management Agency, and holding a government-guaranteed mortgage, are obliged to purchase NFIP coverage. Others can buy it as an add-on, but few do. The programme covers only about 5m properties in all of America. In Houston much of the damage occurred outside the floodplain, so many properties may be completely uncovered, and left relying on ad hoc federal relief.

For political reasons, NFIP charges low premiums, pricing out private insurers. But this also means its income does not cover all losses, and it is forced to borrow from American taxpayers. After Hurricanes Katrina in 2005 and Sandy in 2012, the programme is \$25bn in the red. Moreover, the rigid caps it puts on coverage (\$250,000 per private house, \$100,000 for its contents, \$500,000 per business property, and \$500,000 for its contents) do not suit all small businesses and homeowners. Large companies can and do buy private flood

insurance (for which they pay a high price).

Might a private-sector solution be more efficient? One difficulty is that flood risk is tricky to model, and so to insure. As Dan Dick of Aon Benfield, a reinsurance broker, points out, assessing a property's flood risk requires detailed and very localised data on topography. Insurers have, until recently, simply not had access to the right data, or to models sophisticated enough to gauge flood risk properly. That has changed over the past decade as specialised modelling firms like RMS, famous for its hurricane modelling, and JBA have started to offer flood models; Aon also has its own models. Still, private flood insurance remains a tiny part of the market (though last year the NFIP did, for the first time, take out private reinsurance on some of its risks).

Another obstacle is that flooding is very heavily concentrated and owners of high-risk properties are far more likely to seek insurance, making it difficult to spread risks. But other countries show how private insurance markets can play a bigger role. In Britain private insurers include flood coverage as part of standard policies, so risks are distributed across a wider pool of policyholders. But the government intervenes heavily in reinsurance through a body called Flood Re. This is meant to keep insurance affordable even for high-risk areas through mandatory cross-subsidies, financed by a levy on all insurers.

Germany, for its part, has no direct state intervention at all in flood insurance. Its mapping system divides the country into four zones: areas of ten-, 100-, and 200-year floods, and all those beyond. It was developed by the insurance industry, not the government, and allows for more sophisticated risk assessment and pricing than does America's mandated purchasing.

Even so, no country has fully faced up to the thorny questions raised by flood insurance. Pooling flood risk means those in flood-prone areas pay little more than those in dry ones for insurance, which weakens the disincentive to build in such vulnerable areas. Exceptions, such as Flood Re's exclusion of flood-prone houses built after 2009, or NFIP's discounts for communities that take measures to reduce flood risk, are not enough to counter this effect. Meanwhile, losses from floods keep growing: so far, this has mostly been because of higher property values, says Michael Szoenyi of Zurich Insurance, but the trend will continue as climate change increases the incidence of floods.

An alternative approach has been taken by the Netherlands, which, despite its vulnerable position at sea level, does not have generally available flood insurance. The country has focused instead on building robust flood-protection infrastructure. Recurrent floods require more than better insurance arrangements. Dams and dykes may matter more. ■

## Impact investing

## Of humanitarian bondage

A new bond taps private money for aid projects in war-zones

INVESTORS might be expected to run a mile from a deal on offer in a conflict-torn part of Africa. At best, it will pay an annual return of 7%; at worst, 40% of the original investment is lost. But a dozen social investors have pooled \$Fr26m (\$27m) to finance the world's first "humanitarian impact bond", issued by the International Committee of the Red Cross (ICRC). It will pay for three rehabilitation centres to be built and run in the Democratic Republic of Congo, Mali and Nigeria.

The ICRC's obligations are backed by "outcome funders", ie, donors, mostly governments. The bond is an example of "impact investing", in which private investors seek out social and financial returns, and of "blended finance", in which public funds help them to do so. Variants have included a bond aimed at educating girls in India and a World Bank-led initiative to raise money to respond to pandemics. The novelty in the ICRC's bond is that the money raised will be used in conflict zones.

Of the 90m disabled people in the world in need of a mobility aid, the ICRC estimates only 10% have access to adequate rehabilitation. So centres that make wheelchairs, crutches and prostheses, and train people to use them, can have a big impact. The ICRC helps build and run such centres all over the world. But its budgets are set on an annual basis, and it has been hard to plan ahead. Bond markets can help.

The coming three years will be used to build the centres and train staff; by the fourth year they should be operational. In year five comes the reckoning. The efficiency of the new centres will be compared with a benchmark, based on other centres. If the new centres outperform, the social investors will get a return. If the centres do badly, they will lose money (as will the ICRC, which faces a penalty of up to 10% of the bond's value). The balance will be repaid via the ICRC by the donors (although if the centres do disastrously, they have to pay only 50% of the original amount).

Having its own "skin in the game" is a culture shift for the ICRC, explains the organisation's Yves Daccord, who thinks it high time it was more innovative in financing projects. The bond also appeals to donors. Alexander De Croo, Belgium's development minister, likes the focus on results as opposed to the usual stress on inputs. ("You're a good minister if you spend lots and you're a bad one if you spend less.")

This first experiment focuses on rehab



A giant leap for impact investing

centres because results are easy to quantify. Efficiency can be measured by counting devices fitted, adjusting for staff numbers and the different times needed to fit different aids; historical data abound. Independent auditors will check reported efficiency ratios. Mr Daccord dreams of finding ways to channel private capital towards projects that are harder to measure, such as improving water access or hygiene in unstable areas such as Syria and Yemen. He adds that the new instruments should also push the ICRC to collect more data, work more efficiently and apply lessons learnt to its other operations.

The bond's history, however, shows how hard such innovations are. Its size is minuscule against the ICRC's annual budget of \$1.7bn. Yet it took years to get to this stage. One of the greatest obstacles was to convince the outcome funders; even well-meaning Belgium had to change the law to allow more variable, outcome-dependent spending. And public servants balked at paying private investors to profit from the handicapped. "Why don't we just borrow cheaply?" officials asked Mr De Croo.

A similar culture clash is likely among investors. There are easier ways to make a return than investing in conflict zones. But Rebecca Cichon, from Munich Re, an investor, says she is comfortable with the risks, given the carefully modelled probable outcomes. And, she adds, "this is not just about risk and return." But it is too much to hope that many moneymen will change their stripes and forgo the highest returns to bask in a do-gooder's glow. If such bonds are to become more than tiny niche products, it will require a lot more support from official and private donors. And that means becoming less queasy about putting the words "profit" and "human suffering" in the same sentence. ■

## Currency markets

## Fear and favour

Exchange-rate shifts have been helpful to the global economy

STICKLERS for value have plenty of reasons to frown at financial markets. Much feels out of whack, from squashed bond yields to pricey stockmarkets. Yet currency markets, at least, seem to have shifted in line with fundamentals this year. Take the euro, for instance. Since the start of 2017 it has risen by almost 15% against the dollar, to \$1.19 (see chart). That has taken it much closer to fair value by benchmarks such as purchasing-power parity (PPP), the exchange rate at which a basket of goods is worth the same in different countries. The OECD puts the euro's PPP at \$1.33. That is quite a stretch from \$1.04 in January. "The elastic had to snap back," says Kit Juckes of Société Générale, a French bank.

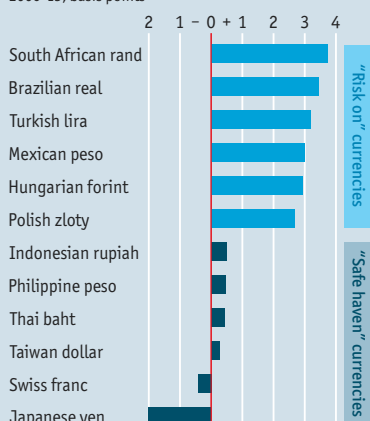
Of course, the euro's revival is a result of more than its being cheap. The anxiety that elections in Europe might bring to power anti-euro populists, such as Marine Le Pen in France, has dissipated. The euro-zone economy has further strengthened, raising the prospect that monetary policy will soon be less accommodating. Even so, the European Central Bank (ECB) seems in no hurry to fulfil these hopes, in part because of the euro's recent surge. The bank's rate-setting council met on September 7th, as *The Economist* was going to press, and was expected to keep interest rates unchanged and to put off a decision on how to "taper" its bond purchases.

The flipside of euro strength is a weaker dollar. It surged in the weeks after the elections in November on a belief that big tax cuts were likely and that a fiscal stimulus of this kind would oblige the Federal Reserve to raise interest rates more quickly than otherwise, pulling capital to America and lifting the dollar. Hopes of tax reform have been dashed. Indeed America's econ- ►►



### Choppiness and change

Impact of a one-point fall in the VIX volatility index on currencies against the \$ 2006-15, basis points



Source: Goldman Sachs

omy has underperformed. The IMF, for instance, revised down its forecasts for GDP growth in July. A series of surprisingly weak inflation figures has made the Fed more cautious about raising interest rates.

All this has hurt the dollar. Since the start of March it has fallen by 6.5% against a broad basket of currencies weighted by their importance to America's trade. This is good news for the world economy. A weakening dollar has also given a recovery in emerging-market economies room to breathe. A weak dollar allows for cheaper borrowing in dollars in global markets. Central banks have been able to cut interest rates without worrying that this will weaken their own currencies and stoke inflation. The global appetite for risk-taking has also helped. When investors are cautious, they cling to "safe haven" currencies, such as the dollar, yen or Swiss franc. But when the volatility index (the Vix, or fear index) falls, the riskier ("risk-on") emerging-market currencies tend to do well, according to Kevin Daly of Goldman Sachs, a bank (see chart).

Can the euro's winning streak against the dollar continue? Fundamentals, such as valuations and current-account balances (the euro-zone's big surplus; America's big deficit), suggest it should. But such factors are often a weak pull on currencies. Other influences will soon tug in the opposite direction, notes George Papamarkakis, of North Asset Management, a hedge fund. The ECB's anxiety about euro strength is one. Another is the Fed's plan to reverse its programme of quantitative easing, or QE, by letting its holdings of bonds tail off. Because one effect of QE was to weaken the dollar, its reversal ought logically to strengthen it. And the euro has already travelled quite far on improved sentiment. Last year it slid because of a fear of Ms Le Pen, says Mr Papamarkakis. "Now there is no fear of anything." ■

### Wells Fargo

## Stick in the mud

SAN FRANCISCO

**A year on, a festering scandal eats away at a still remarkable institution**

ON SEPTEMBER 8th 2016, Wells Fargo's reputation plummeted abruptly from that of America's finest bank to that of yet another dodgy company. It was revealed to have opened an enormous number of potentially unauthorised retail deposit, current (checking) and credit-card accounts. A year on, two questions have yet to be put to rest. How much harm did Wells do to its customers? And how much did the scandal hurt the bank itself?

Wells has not been passive in its response. It has produced report after report on its misdeeds and submitted to investigations by two federal regulators, the Consumer Financial Protection Bureau and the Office of the Comptroller of the Currency. It has purged its chief executive and the head of its retail bank, clawed back executive bonuses, transformed its board and simplified its formerly decentralised structure. It has created a comprehensive process for restitution and settled a class-action suit.

Yet it cannot put the scandal behind it. In July it was reported that up to 570,000 car-loan customers may have been forced to buy unneeded insurance. On August 31st a new report on the initial scandal increased the number of potentially unauthorised accounts from 2.1m to 3.5m (excluding the years from 2002 to 2009, which could not be examined because of changes to the bank's systems). In the latest investigation, an entirely new concern emerged:



another 528,000 potentially unauthorised accounts for online-bill payment.

That is unlikely to be the end of it. The full report was not made public, adding to concerns that other embarrassing problems have been found. The Department of Justice has launched an investigation; New York's attorney-general has requested details about the forced car insurance. Criminal charges are not inconceivable. Nor are fines of almost any magnitude; since the financial crisis America's regulators have proved adept at extracting large payments from financial institutions. Private suits are also on the cards. A husband and wife who were fired have filed suit, alleging they were punished for whistleblowing. Others among the 5,300 sacked over the account-creation scandal may take action, too, claiming they were merely executing orders. And of course customers could also go to court. California's government, for one, may be on the verge of making it easier for them to do so.

Yet the scandal has done remarkably little damage to Wells's franchise. Over the past year, Apple and JPMorgan Chase are the only American firms to have made more money. Wells's return on equity is not particularly high, but that is true for banks in general. Compared with its peers in the industry, it has had good results. Customers have not been fleeing. Deposits have risen and Wells has the leading market share in some businesses that require institutional trust, such as processing automated clearing-house (ACH) payments, which underpin credit-card, payroll and all manner of other transactions.

The scandal forced Wells to dump the strategy seen as the secret of its success—to see a branch as a shop and a financial product as a type of retail good. It now says shareholder returns are only the last of six "core values", after innovation, community service and others. But it still monitors the profitability of client relationships. Despite the distractions of the past year, it has improved the technology in its branches, with cardless ATM withdrawals and automated warnings if accounts fall below a customer-selected level. These are hardly radical innovations but are new to American finance, and they matter to customers.

The direct costs of its troubles have been relatively trivial (though its legal bill may not seem so to lawyers). It is in the process of paying \$1m for refunds and compensation tied to the account openings, \$80m for the unwanted car insurance, \$185m for fines and \$142m to settle a class-action suit. A bit more than 40% that has already been clawed back from various executives. The biggest cost to Wells has probably been paid by its share price. If it traded at an earnings multiple closer to that of JPMorgan Chase it would be worth tens of billions of dollars more. That is the price not so much of shame, as of uncertainty. ■

# Free exchange | The borrowers

## Political leaders must learn to appreciate the virtues of budget deficits

GOVERNMENTS do not always make the best budget managers. Assuming it avoids an accidental debt default, America will run a bigger budget deficit this year than the last, despite a booming economy. Germany runs a surplus—but scrimps on critical investments and annoys its euro-area neighbours in the process. Japan, cowering under a mammoth public-debt pile, is weighing raising its consumption tax, though the last rise strangled a tenuous economic recovery. It is awkward, therefore, that the role of fiscal policy as a recession-fighting tool is only growing. The next downturn will be a painful and dangerous learning experience for many politicians.

When that comes, at some point in the next few years, the initial policy response is easily foreseeable. Central banks, nimbler than parliaments, will again move first. But markets reckon that two years from now the Fed's benchmark rate will remain below 2%, the Bank of England's below 1% and the European Central Bank's close to zero. Rates can only go so negative before people abandon the banking system for cash. So cuts to interest rates will be limited. By contrast, in the relatively mild recession of 2001 the Fed cut rates by more than six percentage points. Central-bank asset purchases will follow, assuming they are not already happening, as they might well still be in Europe and Japan. Their effects will be less powerful than in the past, however. When bond yields are low, as they are likely to be for the foreseeable future, bonds do not look much different from cash; giving banks cash for their bonds consequently does little to boost risk-taking.

If monetary measures do not quickly revive animal spirits, the pressure on governments to act will grow. Some doubtless will. Public spending and tax cuts are popular, after all. But politicians are kept from taking full responsibility for battling recessions by the intellectual baggage of past decades. Some cling to the notion that stimulus is unhelpful, risky and hard.

Such views need updating. Take the notion that fiscal stimulus is ineffectual. In the 1970s, before central banks focused so intently on inflation, efforts to boost the economy through borrowing often contributed more to rising prices than to growth. In the 1980s, the results were little better; hawkish central banks greeted any development likely to jolt prices with an expansion-squelching increase in interest rates. Economists of all stripes argued that the "multiplier" on stimulus—the amount by which a dollar of borrowing raises GDP—is usually low. Households save their higher incomes in expectation of offsetting future tax rises; omni-

potent central banks cancel out the stimulative effects. But studies since the Great Recession tend to find that multipliers are substantially higher than once thought, particularly when monetary policy is constrained. Multipliers in such cases are often closer to two, ie, GDP increases by nearly twice the size of the stimulus.

Nonetheless, big debt piles may heighten politicians' caution about borrowing (see chart). If a borrower's ability to repay is in doubt, he is forced to pay higher interest rates. That raises the cost of servicing debt, presenting governments with an excruciating choice between growth-sapping austerity and default. For many politicians, the financial crisis reinforced this lesson. In late 2009 bond yields on Greek debt began rising, after revisions to budget data revealed that the fiscal picture was bleaker than thought. Yields on the bonds of other peripheral euro-zone economies followed suit, spiking on several occasions between 2010 and 2012.

Yet that crisis has receded, and not because the euro area resolved its indebtedness problem. With the exception of Ireland's, debt levels around the periphery are higher now than at the peak of the crisis in 2012. Yields instead fell as it became clear that the ECB would buy the bonds of troubled countries, either because the survival of the euro demanded it, or to battle deflation. In a world of low interest rates, central-bank asset purchases are likely to become a conventional policy tool, so the appetite for bonds is less likely to dry up. The risk of inflation remains. But in advanced economies higher inflation usually means that firms are operating at capacity; the job of recession-fighting is done. At that point, a dose of austerity is appropriate, if politically unappetising.

### Debt comes for us all

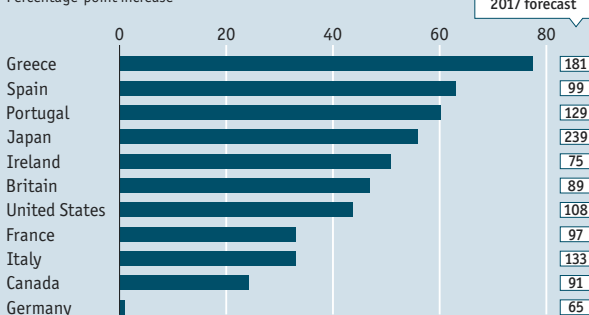
Perhaps most important, recent experience suggests that an aggressive fiscal response to economic weakness can in fact be safer than a more cautious approach. In a paper presented to central-banking luminaries in August, Alan Auerbach and Yuriy Gorodnichenko of the University of California, Berkeley find that bursts of fiscal stimulus need not lead to higher debt-to-GDP ratios or to higher borrowing costs. In some cases, they note, markets revise down their worries about creditworthiness in response to large-scale stimulus. Their work echoes an argument made by Brad DeLong, also of Berkeley, and Larry Summers, of Harvard University. They reckon long periods of limp growth eat away at an economy's productive potential, as investments go unmade, for instance, or as healthy workers drop out of the labour force. Averting such scarring raises GDP in perpetuity, covering the cost of the jolt needed to escape the doldrums.

A third argument about activist fiscal policy—that it is hard to get right—remains. Despite the financial crisis, governments have paid scant attention to the practicalities of fiscal stimulus; ideally, programmes should be automatic and proportionate to the severity of the downturn. Labour tax rates could be linked to unemployment figures, for instance, so that pay packets jump the moment conditions deteriorate. Funding to local governments could be similarly conditioned, to limit painful cutbacks by municipalities. To prevent a scramble for worthwhile, shovel-ready infrastructure projects, governments could make sure to have a ready queue, so spending could easily scale up in a downturn.

To use stimulus effectively, politicians must understand the risks they face and plan accordingly. Sadly, it seems likely to take more nasty recessions to drive the point home. ■

### On borrowed time

General government gross debt as % of GDP, 2007-17 forecast  
Percentage-point increase



Source: IMF





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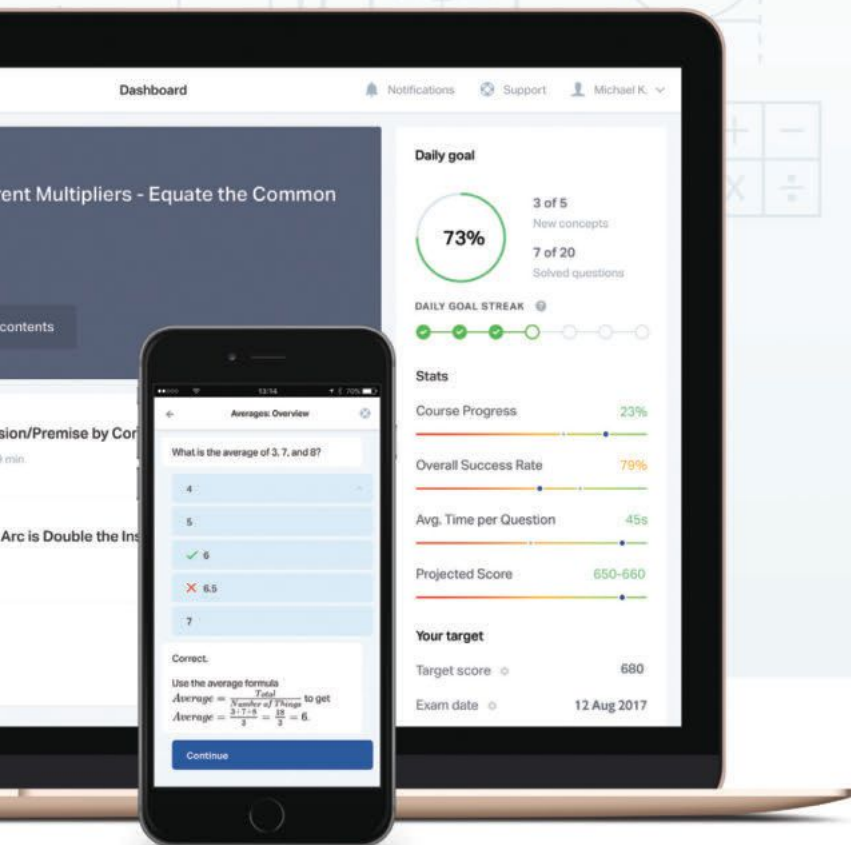
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**Facial technology (1)**

## Keeping a straight face

**In the first of two stories about faces and technology, artificial intelligence is used to spot signs of sexuality**

MODERN artificial intelligence is much feted. But its talents boil down to a superhuman ability to spot patterns in large volumes of data. Facebook has used this ability to produce maps of poor regions in unprecedented detail, with an AI system that has learned what human settlements look like from satellite pictures. Medical researchers have trained AI in smartphones to detect cancerous lesions; a Google system can make precise guesses about the year a photograph was taken, simply because it has seen more photos than a human could ever inspect, and has spotted patterns that no human could.

AI's power to pick out patterns is now turning to more intimate matters. Research at Stanford University by Michal Kosinski and Yilun Wang has shown that machine vision can infer sexual orientation by analysing people's faces. The researchers suggest the software does this by picking up on subtle differences in facial structure. With the right data sets, Dr Kosinski says, similar AI systems might be trained to spot other intimate traits, such as IQ or political views. Just because humans are unable to see the signs in faces does not mean that machines cannot do so.

The researchers' program, details of which are soon to be published in the *Journal of Personality and Social Psychology*, relied on 130,741 images of 36,630 men and 170,360 images of 38,593 women down-

loaded from a popular American dating website, which makes its profiles public. Basic facial-detection technology was used to select all images which showed a single face of sufficient size and clarity to subject to analysis. This left 35,326 pictures of 14,776 people, with gay and straight, male and female, all represented evenly.

### Out of the numbers

The images were then fed into a different piece of software called vGG-Face, which spits out a long string of numbers to represent each person; their "faceprint". The next step was to use a simple predictive model, known as logistic regression, to find correlations between the features of those faceprints and their owners' sexuality (as declared on the dating website). When the resulting model was run on data which it had not seen before, it far outperformed humans at distinguishing between gay and straight faces.

When shown one photo each of a gay and straight man, both chosen at random, the model distinguished between them correctly 81% of the time. When shown five photos of each man, it attributed sexuality correctly 91% of the time. The model performed worse with women, telling gay and straight apart with 71% accuracy after looking at one photo, and 83% accuracy after five. In both cases the level of performance far outstrips human ability to make

this distinction. Using the same images, people could tell gay from straight 61% of the time for men, and 54% of the time for women. This aligns with research which suggests humans can determine sexuality from faces at only just better than chance.

Dr Kosinski and Mr Wang offer a possible explanation for their model's performance. As fetuses develop in the womb, they are exposed to various levels of hormones, in particular testosterone. These are known to play a role in developing facial structures, and may similarly be involved in determining sexuality. The researchers suggest their system can pick up subtle signals of the latter from the former. Using other techniques, the program was found to pay most attention to the nose, eyes, eyebrows, cheeks, hairline and chin for determining male sexuality; the nose, mouth corners, hair and neckline were more important for women.

The study has limitations. Firstly, images from a dating site are likely to be particularly revealing of sexual orientation. The 91% accuracy rate only applies when one of the two men whose images are shown is known to be gay. Outside the lab the accuracy rate would be much lower. To demonstrate this weakness, the researchers selected 1,000 men at random with at least five photographs, but in a ratio of gay to straight that more accurately reflects the real world; approximately seven in every 100. When asked to select the 100 males most likely to be gay, only 47 of those chosen by the system actually were, meaning that the system ranked some straight men as more likely to be gay than men who actually are.

However, when asked to pick out the ten faces it was most confident about, nine of the chosen were in fact gay. If the goal is to pick a small number of people who are ►►

▶ very likely to be gay out of a large group, the system appears able to do so. The point is not that Dr Kosinski and Mr Wang have created software which can reliably determine gay from straight. That was not their goal. Rather, they have demonstrated that such software is possible.

### To calculate the selves of others

Dr Kosinski is no stranger to controversial research. He invented psychometric profiling using Facebook data, which relies upon information in a person's profile to model their personality. The Trump campaign used similar models during last year's presidential campaign to target voters, an approach which has generated criticism.

Dr Kosinski says he conducted the research as a demonstration, and to warn policymakers of the power of machine vision. It makes further erosion of privacy "inevitable"; the dangers must be understood, he adds. Spouses might seek to know what sexuality-infering software says about their partner (the word "gay" is 10% more likely to complete searches that

begin "Is my husband..." than the word "cheating"). In parts of the world where being gay is socially unacceptable, or illegal, such software could pose a serious threat to safety. Dr Kosinski is at pains to make clear that he has invented no new technology, merely bolted together software and data that are readily available to anyone with an internet connection. He has asked *The Economist* not to reveal the identity of the dating website he used, in order to discourage copycats.

It is true that anyone wishing to replicate Dr Kosinski's work to determine intimate traits from faces will face significant challenges in applying laboratory science to the outside world. But they will be helped by ever-growing volumes of data and improving algorithms. "The latter, over time, inevitably win," says Alessandro Acquisti of Carnegie Mellon University, who has shown that an individual's social security number can be discovered using face recognition and online information. For those with secrets to keep, all this is bad news. ■

images that could be matched to real photographs for eight out of ten people. (This fell to a less impressive five out of ten when the test was restricted to those of a single race, which narrows facial differences.) About a year ago, using the same algorithm, the company produced a prediction of what your correspondent looked like at the age of 20 from her genome. The result can be compared below with a photograph of her at that age. Readers can judge for themselves if it is a reasonable likeness.

Critics immediately took to social media to dispute the findings. Jason Piper, a former employee of Human Longevity, argued that "because everyone looks close to the average of their race, everyone looks like their prediction". One thing in Dr Venter's favour, however, is that the findings are based on a relatively small group of people. With machine-learning techniques, the larger the set of data the better the results; working with tens of thousands of genomes could well improve the prediction rate.

Creating pictures of people's faces from their genomes has a number of potential uses, especially in forensic science. It might be possible to reconstruct the face of a perpetrator from any genetic material they have left behind, such as blood or body fluids. That would allow police to "see" the face of suspects in cases of murder, assault and rape. It could also help with identifying unrecognisable victims who have been burned or maimed. Unsolved cases might be reopened if suitable samples were still available.

As Dr Venter is quick to point out, this technology has other implications, among them for privacy. He considers that genomic information must now be treated as personal information, even if it is presented as an anonymised sequence of letters—as is currently the case in some countries. It will, he warns, be possible to ▶▶

## Facial technology (2)

# Making faces

### Researchers produce images of people's faces from their genomes

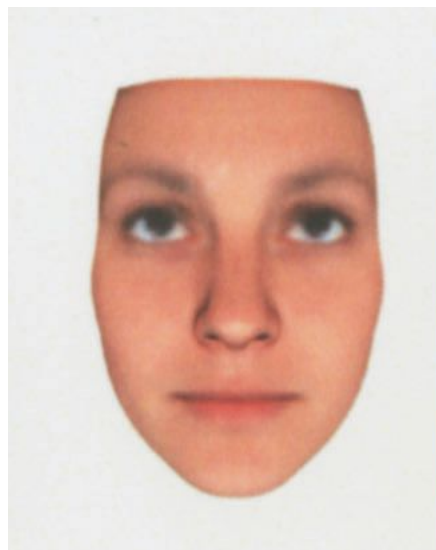
**C**RAIG VENTER, a biologist and boss of Human Longevity, a San Diego-based company that is building the world's largest genomic database, is something of a rebel. In the late 1990s he declared that the international, publicly funded project to sequence the human genome was going about it the wrong way, and he developed a cheaper and quicker method of his own. His latest ruffling of feathers comes from work that predicts what a person will look like from their genetic data.

Human Longevity has assembled 45,000 genomes, mostly from patients who have been in clinical trials, and data on their associated physical attributes. The company uses machine-learning tools to analyse these data and then make predictions about how genetic sequences are tied to physical features. These efforts have improved to the point where the company is able to generate photo-like pictures of people without ever clapping eyes on them.

In a paper this week in *Proceedings of the National Academy of Sciences*, Dr Venter and his colleagues describe the process, which they call "phenotype-based genomic identification". The group took an ethnically diverse group of 1,061 people of different ages and sequenced their genomes. They also took high-resolution, three-di-

mensional images of their faces, and measured their eye and skin colour, age, height and weight. This information was used as a "training set" to develop an algorithm capable of working out what people would look like on the basis of their genes.

Applying this algorithm to unknown genomes, the team was able to generate



What the genes predicted, and what we got

▶ construct a face from the limited genetic data that people currently post online, for example, from DNA-testing services such as 23andMe.

This in turn raises the possibility that people may no longer be willing to have their genetic information included in public sequencing efforts, even though such work can help combat diseases. If facial projections can be made from genomes, then someone's appearance could subsequently be matched to real online photographs. This might mean that people's genetic sequences, and all their flaws, could be connected to their identity in public.

The connection between genes and faces can work both ways. Just as genomes can be used to build up a picture of faces, so facial features are able to reveal genetic diseases. It is reckoned that 30-40% of genetic diseases cause changes to the shape of the face or skull, allowing, in some cases, experienced doctors to diagnose a condition simply by looking at a patient's face. So why not train an app to do that?

### Face healer

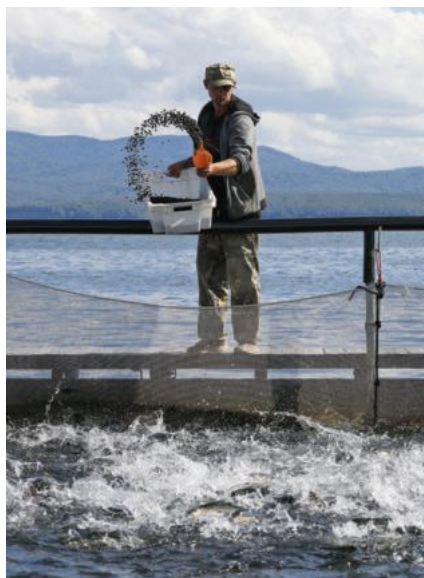
Companies already are. Face2Gene is a smartphone app developed by FDNA, a startup based in Boston co-founded by Moti Shniberg and Lior Wolf. Mr Shniberg's previous venture was bought by Facebook to develop the photo-tagging feature that identifies people in pictures uploaded to the social-media site. The FDNA app allows a doctor to snap a picture of a patient, upload it to the internet (along with the patient's height, weight and clinical data) and let the firm's algorithm produce a list of possible diseases from its online database. The app can access information on 10,000 diseases; facial recognition works for 2,500 of them, so far.

Each diagnosis comes with a probability score that reflects the chances of the app being correct. It also lists any genetic mutations known to cause the disease, which can help with an analysis of a patient's condition. Dekel Gelbman, FDNA's chief executive, estimates that the app is being used by doctors and researchers in 130 countries. The patients' data are stored securely, anonymised and encrypted.

As with Dr Venter's work, the deeper the pool of data available to facial researchers, the more valuable it becomes. Christoffer Nellaker of the University of Oxford has set up a website called "Minerva & Me", where both the healthy and those with diseases can upload pictures of themselves and provide consent for their images to be used for studies. He is also setting up a network, the Minerva Consortium, to encourage artificial-intelligence researchers to share their data.

Maximilian Muenke of the National Human Genome Research Institute in Bethesda, Maryland and Marius Linguraru of the Children's National Health System in

Washington, DC, and their colleagues are trying to broaden things out, too. They have published a series of studies using facial-recognition algorithms that were trained with photos of African, Asian and Latin American patients to identify different genetic diseases with accuracies of more than 90%. In many poor countries, expensive antenatal tests to identify genetic diseases are not available. A baby with Down's syndrome, for example, is usually identified before birth in Europe and America, but in poor countries many are not diagnosed before they are a year old. The researchers intend to produce an app that will help doctors to identify dozens of the most common syndromes using a smartphone. ■



### Fish farming

## Feeding-time worries

### Antibiotic resistance in fish farms is passed on from fish food

THE mucky sediment below fish farms usually teems with antibiotic-resistant bacteria. The presence of such bacteria is a cause of increasing concern because resistance can limit the ability to fight diseases, but it is also not that surprising: pisciculturists have a long history of dosing fish they are breeding and rearing with antibiotics. But some scientists suspect there is more to it than that. One group, led by Jing Wang of Dalian University of Technology in China, has found that the problem is also linked to what the fish are being fed.

Dr Wang knew from previous reports that fish farmers who had not used antibiotics for years, or had never used them at

all, still had sediment in their marine farms carrying bacteria with many of the genes associated with drug resistance. The genes had to be getting into the bacteria somehow; one possible pathway was through antibiotic-resistance genes in fish food mingling in various ways with bacteria in the sediment.

Working with a team of colleagues, Dr Wang set up an experiment to find out if that was the case. As they report in *Environmental Science and Technology*, the researchers obtained five commonly used fishmeal products and subjected each one to a detailed genetic analysis. This revealed the presence of 132 drug-resistance genes, suggesting that heavy antibiotic use on the fish products which are themselves ground up into fishmeal formulations, was behind the transfer of genes.

But that, too, was not as straightforward as it seemed. Further analysis revealed that of the five products, the one with the highest concentration of residual antibiotics was a fishmeal from Russia. It contained 54 nanograms of antibiotics per gram of food, although it had only eight resistance genes present. In contrast, a fishmeal from Peru had just 16 nanograms of antibiotics per gram of food, but carried a disturbing 41 resistance genes.

The next step was to discover whether mixing resistance genes from fish food into bacteria-rich sediments would allow the resistance traits to transfer over. To test this out, the team set up microcosms of fish farms in flasks containing 300 millilitres of seawater and 200 grams of sediment. The microcosms were incubated and gently shaken periodically for 50 days and then had a small amount of the Peruvian fishmeal added to them, or were left untouched to function as controls. The researchers regularly collected bacterial samples from the sediments for a further 50 days and analysed them.

The results were clear. Although the control microcosms started with some resistance genes present (as there is bound to be in nature) the number did not increase. In contrast, the number of resistance genes present in the microcosms exposed to the Peruvian fishmeal increased tenfold.

The discovery of fish food as a source of resistance genes migrating into oceanic bacteria is worrying, and the researchers say more work is needed to determine if these resistance traits can find their way into the human food chain. But, says Dr Wang, the Russian fishmeal, which clearly came from fish that had been given a lot of antibiotics before being ground up yet did not contain much resistant genetic material, points to a solution. This is to concentrate on processing methods that destroy the DNA in fishmeal with heat and chemicals. That should rid fish feed of much of its cargo of resistance genes before the food is packed and shipped. ■

## Astronomy

## So long, and thanks for the postcards

After more than a decade exploring Saturn, the Cassini space probe faces a fiery end to its mission

ON SEPTEMBER 11th, around 1.2bn kilometres from Earth, *Cassini*, a robotic spacecraft that has been orbiting Saturn for 13 years, will make a final flypast of Titan, Saturn's biggest moon. Since April the NASA craft has been conducting a series of long, looping orbits that take it between Saturn itself and the innermost of the planet's famous rings. After passing Titan, *Cassini* will dive back towards Saturn, but this time, it will not return. On September 15th, at about 1pm London time, it will kiss the outer edges of Saturn's atmosphere and begin to tumble, losing contact with Earth. A few minutes later it will burn up as a shooting star, bringing down the curtain on a long and dramatic mission to an under-explored corner of the solar system.

*Cassini* is not the first spacecraft to visit Saturn. *Pioneer 11* flew past in 1979 on its way to the outer solar system, as did the two *Voyager* space probes a few years later. But it is the first to stick around. Since its arrival in 2004 it has discovered six new Saturnian moons, and seen evidence of another coalescing among one of the planet's rings. It has peered at a storm that rages at Saturn's south pole, akin to the Great Red Spot on Jupiter, and investigated the vast hexagonal cloud formations, far larger than the Earth, which swirl around the north pole. Shortly after its arrival it deployed another probe called *Huygens*, a robotic laboratory run by the European Space Agency, that landed on the surface of Titan.

Even now, *Cassini* is in good working order. The three radioisotope generators on ship, which use the slow decay of a lump of plutonium to provide it with electricity, could keep working for decades to come. But the craft would soon run out of rocket fuel, which would mean its trajectory could no longer be controlled. There were plenty of ideas about what to do when that happened; one was to put it into a stable orbit high above Saturn where it could continue making observations for years.

The suicide mission was chosen for two reasons. One was that it would provide a great deal of valuable science. The other was that it would remove the risk that the probe might, in the distant future, collide with one of Saturn's moons, potentially contaminating it with hardy microbes that might have survived the journey from Earth. That may seem fastidious to the point of paranoia. But thanks to *Cassini*'s efforts, scientists now count one of Sat-

urn's moons as among the most promising places in the solar system to look for life.

That moon, called Enceladus, is a tiny ball of ice just 500km across. Its frozen surface reflects much of the dim sunlight that shines upon it, giving a surface temperature of around -200°C. That does not sound very enticing. But in 2005 *Cassini* spotted plumes of water vapour shooting into space from the moon's southern pole (the plumes are thought to be the source of one of Saturn's many rings). The vapour seems to be welling up from an ocean beneath the moon's icy shell. Exactly how it is kept liquid is a mystery, but friction generated by Saturn's potent gravity, which kneads and flexes the moon's core as it orbits its giant parent, seems to be at least part of the answer. Measurements taken by *Cassini* suggest the ocean covers the entire moon to a depth of perhaps 30-40km.

#### Water world

As far as terrestrial biochemists know, liquid water's peculiar properties make it a necessity for life, so subterranean oceans are seen as places worth examining. NASA is planning a mission to Europa, a moon of Jupiter, for just such a reason. But water is not enough by itself. You also need a variety of chemical raw materials to support the reactions necessary for life, and a source of energy to run them.

Thanks to *Cassini*, scientists know that Enceladus has both. When the probe analysed the plumes in 2008 it found traces of relatively complicated organic molecules that might serve as precursors to life. More recently, in April, it discovered traces of hydrogen in Enceladus's plumes.

The best current theory to explain the origin of life on Earth is that it began at the

bottom of the ocean, in hydrothermal vents—chimney-like outcrops that form when mineral-laden water seeps through hot rocks at the ocean floor. Those early cells would have used hydrogen as an energy source (some modern microbes can perform the same trick). That Enceladus seems to have all the ingredients necessary for a repeat performance has, for astrobiologists at least, transformed it into the most exciting destination in the solar system.

But Enceladus is not the only Saturnian moon with intriguing similarities to Earth. Another trove of spectacular science was provided by the *Huygens* lander, which set down on Titan on January 14th 2005.

If Enceladus is a tiddler among moons, Titan is a whopper. Its radius of 2,575km makes it bigger than the planet Mercury. It is also the only moon in the solar system with a thick atmosphere, too dense for Earth-bound telescopes to penetrate. But, thanks to photographs taken by *Huygens* as it plunged through that atmosphere, Titan is known to be one of only two bodies in the solar system (the other being Earth) with free-standing liquid on its surface.

Like Enceladus, Titan is a chilly place, and so those liquids are hydrocarbons rather than water. But, like water, they evaporate into Titan's atmosphere, from where they fall as rain. These rains produce geological features that are rare elsewhere in the solar system: streams, rivers and tributaries carving valleys and laying down deltas before flowing into large lakes. Besides Titan, only Mars and Earth have similar features. And while Mars's rivers and lakes have been dry for hundreds of millions of years, Titan's are still wet today.

The smorgasbord of science provided by *Cassini* and *Huygens* has led astronomers to sketch a clutch of follow-up missions, including one to fly a sample of Enceladian water to Earth, and another to drop a robotic boat onto Titan's lakes. None has yet been given the green light. The long journey (*Cassini* took more than six years to reach Saturn) means that none could arrive before the end of the next decade at the earliest. But astronomers' appetites have been thoroughly whetted. ■



On a mission to the end



John le Carré

## George Smiley returns. Really?

The old master, in perhaps his final venture, is as enigmatic as ever

SO GEORGE SMILEY is back at last. That, at any rate, is the marketing come-on for John le Carré's 24th novel, two decades after the wily old spymaster is generally reckoned to have crept into well-deserved if mysterious retirement. Since the collapse of the Soviet Union and the defeat of Smiley's relentless adversary, Karla, Mr le Carré has been exploring other juicy themes, including the arms trade, Islamic *jihad*, the war on terror, the wickedness of pharmaceutical and mining companies in Africa and skulduggery in Latin America.

The moral ambiguities in the conduct of the cold war and the blurry nature of treachery—the leitmotifs of his earlier novels—have given way to a bristling anger, even rage, over what Mr le Carré sees as the turpitude of the West, especially of America, in a horrid new world order where Smiley has no place. The quizzical mole-catcher and agent-runner, played unforgettably by Alec Guinness in 1979 (pictured), would surely no longer feature in the author's new cast of characters.

But not quite. In "A Legacy of Spies" the reader is taken back to one of Mr le Carré's earliest novels of espionage, "The Spy Who Came in from the Cold", in which Alec Leamas, a heroic agent, and his lover, Liz Gold, an idealistic British communist, are murdered as they try to escape westward over the wall after a botched mission into East Berlin. Half a century on, in this

**A Legacy of Spies.** By John le Carré.  
Penguin Viking. 264 pages. \$28 and £20

new age of litigation which the author plainly deplores, the hapless pair's hitherto unheralded children have somehow clubbed together to take the British intelligence service to court, demanding an apology, compensation, justice, revenge. Smiley was in charge of that operation. Will he now be hauled back to face the charge of sacrificing innocent people for a supposedly higher cause? Is Smiley, mentioned cryptically like a will-o'-the-wisp as the narrative unfolds, even alive? And if so, will he get his just deserts, whatever they may be?

The protagonist of "A Legacy of Spies" is Peter Guillam, trustiest of Smiley's operators in the field, who has long since retired to a farm in Brittany. Guillam is called up by his old bosses in London and their lawyers to help them cover their backs. Presumably they want him to take the rap, as the bitter descendants of his fallen colleagues, egged on by a parliamentary committee, demand explanations and vengeance for the sins of the intelligence service committed for a cause that the new generation can barely remember, let alone understand or sanctify.

Flashbacks from Guillam's memory and documents culled from the dusty archives help to replay the events leading to

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the deaths of Leamas and Gold. More harrowing still, Guillam is forced to recount the exfiltration of a beautiful East German agent who was forced to leave behind her six-year-old son. Guillam and she had had a brief but passionate affair (which he refuses to disclose to the secret service's lawyers) before she was found hanged in the wood near a supposed safe house in the English countryside during her debriefing.

The narrative is spasmodically gripping, with Mr le Carré at his old best in full flow. His ear for dialogue is as acute as ever. His wit and humour (qualities of his that are too seldom recognised) are as sharp. No one is better at conveying the wrinkles of British class distinction in speech and manner. The cross-questioning of Guillam by the modern spy service's supremely ghastly lawyers is hilarious and horrifying. If the tale of double-cross and subterfuge is occasionally confusing and implausible, that is the nature of the beast.

Yet one queries the purpose of this latest yarn. The moral ambiguity can never be better told than in Mr le Carré's earliest novels. And what of Smiley? Has he truly come in from the cold war? Has he achieved some kind of fulfilment? Of course not. Guillam needs the old man's succour and support to clear his name. He tracks Smiley down to a library in Freiburg, where the elderly spy seems to be delving into some abstruse historical puzzle, maybe pertaining to the Holy Roman Empire. Reflecting Mr le Carré's own preferences, he is culturally comfiest in Germany.

Smiley in old age, like Mr le Carré, is angry. Over dinner with Guillam, he asks plaintively what the long game of espionage was all for. "Was it all in the great name of capitalism? God forbid. Christendom? God forbid again... Was it all for England, then? There was a time, of course ►►

▶ there was. But whose England? Which England? England all alone, a citizen of nowhere?" he says, in a mocking swipe at a recent phrase of Britain's current prime minister. "I'm a European, Peter," says Smiley. "If I had a mission—if I was ever aware of one beyond our business with the enemy, it was to Europe. If I was heartless, I was heartless for Europe."

But is this really Mr le Carré's last word, voiced through his fictional alter ego? Perhaps. The author, after all, is 86 next month. Only a year ago he wrote his own beguiling memoir, "The Pigeon Tunnel", a companion piece—in some respects a riposte—to Adam Sisman's magisterial biography. If this is truly the denouement of the mystery of George Smiley and indirectly of Mr le Carré himself, there is something odd about it. It does not have the feel of closure. ■

### The future of Asia

## Brothers in arms

**Asia's Reckoning: China, Japan and the Fate of US Power in the Pacific Century.** By Richard McGregor. *Viking*; 396 pages; \$28. Allen Lane; £20

**T**O TWIST the old Anglo-American saw, China and Japan are two countries separated by a partly shared (written) language and culturally much else. Yet these two nations are among the great unreconciled of the 20th century's warring parties. Worse, they are moving further apart.

China and Japan have been regional rivals for at least a millennium, but began to cross swords only in the late 19th century. Before then, they had shared art, writing, Confucianism and Buddhism but otherwise stood apart, albeit sometimes a tad sullenly, with most Japanese rulers refusing to pay tribute to Chinese emperors in the manner expected of other neighbours. But then from 1895 until 1945 they were repeatedly at war—constantly, in the official Chinese account—and it is the legacy of that half-century that sours relations today.

The funny thing, as Richard McGregor shows in this well-documented account of the post-war triangular relations between China, Japan and America, is that after 1945 there was initially little tension between the two. Mao Zedong's China waived reparations claims and made no real fuss about territorial issues.

It was only in the 1980s that friction over interpretations of 20th-century history and Japan's willingness or otherwise to apologise for it started to heat things up, reaching boiling point at various times during the succeeding decades. After the Com-

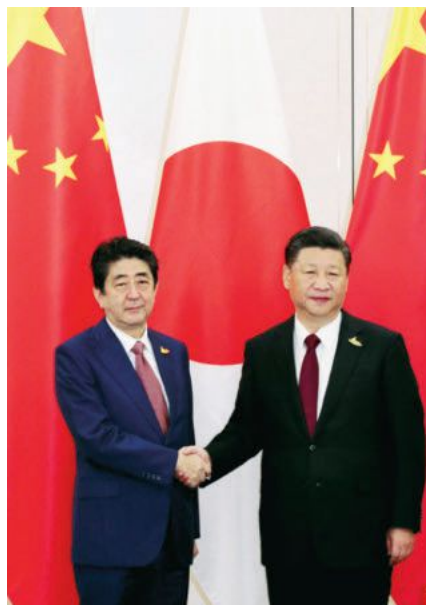
munist Party's scare over the Tiananmen protests in 1989, demonisation of Japan played a central role in Chinese nationalism, even as the claim that the Japanese might revert to their pre-war militarism has become less and less plausible. And hostility to China, along with revisionist views of history, have played growing roles in Japanese nationalism, too.

What to make of this? Are these, in the old Maoist phrase, just paper tigers or could they become real ones again? Mr McGregor is well placed to answer. He was born in Sydney and has worked as a journalist (for the *Australian* and the *Financial Times*) in both Tokyo and Beijing, and he speaks both languages. This gives him access to a range of archives and memoirs beyond the reach and nuanced comprehension of most other scholars.

His narrative of relations and contacts between the leading politicians and policy-makers in both countries, and of America's interplay with the two, makes for a compelling and impressive read. One notable feature is how often the Americans, from Henry Kissinger to Barack Obama, seem to find their close Japanese allies more irritating and harder to understand than their Chinese counterparts, even as a rising China is coming to be seen as America's greatest 21st-century challenger.

There is however a weakness with this narrative approach. Rather as television news often overlooks events and ideas if there is no video footage to go with them, so this very archive-led book tends to sacrifice analysis and the bigger picture.

A prime and very current example is North Korea. Between 1910 and 1945, the Korean peninsula was a Japanese colony. The Korean war of 1950-53 brought Chinese and American forces into combat, leading to a much hotter unreconciled set of rela-



Manners maketh men

tionships than the Sino-Japanese one. Yet tensions over and with both Koreas, and strategic concerns about the peninsula, get fewer mentions because they do not feature much in the archives of bilateral or trilateral relations. That is fair enough, but it makes this a history book, not a work of contemporary analysis.

If there is to be war in East Asia, North Korea's latest nuclear test on September 3rd suggests it is more likely to break out in Korea than over the small set of rocky islets in the East China Sea that China and Japan use to nuzzle each other or over the commemoration of war criminals in the Yasukuni Shrine in Tokyo. Moreover, if the Chinese were to do the logical thing to avert a nuclear exchange by invading North Korea or forcing regime change there, which would put the North under their own nuclear umbrella, this would do more to swing the strategic balance in the region away from America and Japan and towards China than any other act. That would be Asia's truest "reckoning". ■

### Sport (1)

## On your marks, get tech

**Game Changer: The Technoscientific Revolution in Sports.** By Rayvon Fouché. *Johns Hopkins University Press*; 264 pages; \$29.95

**A**TLETES have always sought an edge. Ancient Greeks at the original Olympics wrote jinxes against their rivals on lead strips and ate raw testicles before events. Cyclists in the Victorian era dabbled with cocaine. The Boston Red Sox, a baseball team, are under investigation for illegally relaying signals to players using an Apple Watch. The great fallacy of sport, according to Rayvon Fouché, a professor at Purdue University and a former competitive cyclist, is that people treat it as "the last bastion of meritocracy". In fact, as his new book "Game Changer" demonstrates, "it is really about how to garner and exploit the largest legal or illegal competitive advantage possible."

Hiring a psychologist is an increasingly popular option (see next review). But for those willing to cheat, the obvious source is performance-enhancing drugs. Mr Fouché claims that traditional anti-doping tests, which examine urine samples for banned substances, are obsolete. Just 0.5% of the competitors at the Athletics World Championships in 2011 failed tests; an anonymised survey published in August found that more than 30% of them admitted to having used illegal drugs in the year before the competition. ▶▶



▶ In the past decade sporting authorities have widely adopted “athlete biological passports”, which look for sudden changes in the blood or urine but rarely provide incontrovertible proof. Evidence of how easy it is to hoodwink them has come from Bryan Fogel, another cyclist-turned-commentator, whose documentary “Icarus” was released by Netflix last month. The film follows the doctor who masterminded Russia’s state-sponsored steroids programme, which was eventually busted in 2015, and shows the World Anti-Doping Agency’s incredulity as each layer of the deceit is gradually revealed.

Yet Mr Fouché contests the “perception that the most prominent technoscientific changes within sport have been pharmaceutical”. Much of the gain in performance can be explained by vastly improved equipment. Pole-vaulters are propelled by carbon-fibre rods; golf balls by titanium clubs. The author devotes a chapter to the body-length polyurethane suit manufactured by Speedo, a swimwear company. More than 130 world records were toppled in the 18 months after it was launched in February 2008.

“Game Changer” argues that the physical differences between competitors “may

become so infinitesimal that athletic performance may cease to determine the outcomes”, and thus that technological advances are gradually eroding sport’s authenticity. The common solution has been to prohibit them. FINA, swimming’s governing body, banned full-length suits in July 2009. Anti-doping, too, has been a check on scientific enhancement. But doping is regulated with good reason. Erythropoietin (commonly known as EPO), a blood-thickening drug, was linked to the deaths of 18 cyclists in the five years after its initial clinical trials in 1986.

Sporting administrators have to draw ▶▶

## Johnson | Google a photoshopped hoover

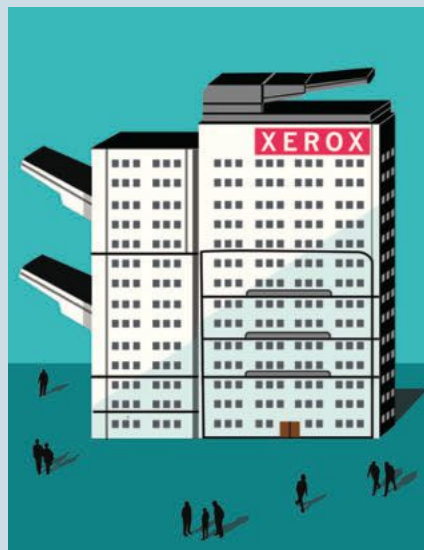
Companies don’t want you to take their brand names in vain. But they can’t do much to stop you

WHAT else could you call a photocopier? If you answer “a Xerox machine”, you are one of the many people for whom the brand name and the generic item are one and the same. Like many brands that have gone generic, xerox is often lower-case and used as a verb. There are many more of these than people realise: aspirin was once Aspirin, a trademark of Bayer, which was forced to give it up as part of Germany’s reparations after the first world war.

Most “universalised” brand names are really only regional. Visitors to the American South are amused to find that its most famous brand is used generically: “You want a coke? We have Mountain Dew, Sprite....” And a vacuum is universally a hoover in Britain: look for “hoover” via a search engine (quick, name one) in Britain and you will be offered hoovers by Dyson, Russell Hobbs and others besides the eponymous company (which, though Americans have not universalised its brand, was founded in Ohio).

Brands go generic all around the world. What Americans call a Kleenex, Germans call a Tempo, and what they call a Band-Aid is a Hansaplast in Greece and Turkey. In Mexico or Brazil, those who want Scotch tape (as Americans call clear plastic tape) or Sellotape (as it’s known in Britain) need to know to ask for Durex. But of course Durex is better known in other countries for making what Italians call a Goldone—a condom.

You would think that having your brand reach universal status would be an occasion for champagne in the boardroom, a sign of total market domination. You would be wrong. What linguists sometimes call “genericisation” of brand names has a grimmer name among marketing types: “genericide”. Companies that see their trademarks go generic may



be unable to renew them. So Google does not want you to use the phrase “to google a hoover”—unless you specifically mean that you used Google’s search engine, and not, say Bing. When the Swedish Academy added *ogooglebar* to its list of new words, meaning “unable to be found with a search engine”, Google hassled the company to change the definition to mean “unable to be found with the Google search engine”, and to include a notice that Google was a registered trademark. The Academy dropped the word from its list instead. That, of course, made *ogooglebar* a sensation. Foreign coverage of the flap almost uniformly favoured the Swedes.

Other trademark-holders are touchier than Google. Adobe, maker of Photoshop, publishes an elaborate list of thou-shalt and thou-shalt-nots, even dictating the grammatical uses of its famous trademark. First on that list is “Trademarks are not verbs”. The company wants you to say not

“The image was photoshopped” but “The image was enhanced using Adobe® Photoshop® software.” Adobe’s injunctions go on to get confused. “Trademarks must never be used in possessive form,” the list continues, so you should not write “Photoshop’s new features are impressive.” This is presumably because Adobe believes that “Trademarks are not nouns,” including Photoshop. But this is nonsense: “Photoshop” is used as a noun endlessly on Adobe’s own website.

Legally, Adobe’s grammatical diktats are not worth a photoshopped image of its CEO riding a unicorn. They are not part of any contract, nor are they covered by trademark law. That is about commerce, not intellectual, public or casual speech. It can stop you from selling image-editing software called Photoshopped, but not from calling an edited image “photoshopped”, or even a “shoop”, as some internet denizens jokingly do.

But company lawyers have a tendency to fight harder than they need to. Siva Vaidhyanathan of the University of Virginia writes in “Intellectual Property: A Very Short Introduction” of a man in 1990 who filed for a trademark on his red, white and blue assortment of “Stealth Condoms”, with the tag-phrase “They’ll never see you coming.” Northrop, the maker of the B-2 “stealth bomber”, sued to stop him, claiming that the man had purloined and even harmed the reputation of their trademark. He went bust.

Companies have deep pockets and can outlast opponents in a lawsuit, right or wrong. Adobe’s rules for “Photoshop” have no force; the instructions actually say “you should”, not “you must”, but the page is formatted to look intimidatingly legal. Even without the force of law, Mr Vaidhyanathan says, it has the same effect: “If it chills speech, it chills speech.”

► lines somewhere. They are often blurred, temporary and unpopular. Mr Fouché considers the examples of Oscar Pistorius, an amputee runner whose prosthetic legs might have given him an advantage at the Olympics, and Caster Semenya, a female runner who was accused of being a man. The IAAF, athletics' governing body, allowed both to compete after extensive testing but left no definitive precedent for future cases. Authorities are hasty to ban innovations that change the balance of a sport, and prone to dithering, as has happened with the constantly changing specifications in college baseball for aluminium bats, which give hitters more distance. Doping policy is equally erratic. Russian hackers have leaked hundreds of "therapeutic-use exemptions" (TUES): certificates that allow athletes to take steroids for medical purposes.

With his "sporting publics" and "dominant narratives", Mr Fouché is clearly writing for academics. Casual fans will be far more entertained by Mr Fogel's Orwellian tale of doping doublethink. Nonetheless, Mr Fouché makes important points about sport's growing grey areas. Athletes strive for the Olympic motto: *citius, altius, fortius*, or "faster, higher, stronger". They ought to compete *ceteris paribus*—another Latin phrase, beloved of economists, which means "with all else being equal". But that, as any wily Ancient Greek wrestler could have told you, is a fantasy. ■

## Sport (2)

# Help for heroes

**On Form.** By Mike Brearley. *Little, Brown*; 416 pages; £20

**D**URING the Australian cricket team's tour of England in 1981, Ian Botham and Bob Willis were both hopelessly out of form when the third Test match began. They couldn't do a thing right. Yet both eventually produced extraordinary performances that still seem miraculous today.

Mike Brearley, the captain, gave one of them a robust teasing and the other gentle encouragement; both responded in astonishing fashion. This established Mr Brearley's myth as a miracle-worker, a Gandalf figure in English cricket. Most people would be happy with that. But now Mr Brearley examines the question of form in serious and exacting detail.

He is not just writing about form in cricket, but in "every area of life that calls for skill and freedom". Do not expect a simple answer, because Mr Brearley is not, in any sense, a simple man.

He abandoned a career as a philosophy



**Hit man**

lecturer to play cricket for Middlesex and went on to become a psychoanalyst: in other words he abandoned abstract thought to look for solutions. His own Test match record as a batsman was, in his own word, poor. But as he scored a century for Middlesex against Yorkshire in 1973, he realised that "being in peak form is a time not for basking but for developing." He explores how people can boost performance "under the aegis of a kinder self" and brings in a broad range of references: Tolstoy, Freud, Wittgenstein, Zinedine Zidane, Dennis Lillee, Plato, Brueghel the Elder, an India tree-surgeon called Tina, Proust, Gramsci and a Hungarian psychologist called Mihaly Csikszentmihalyi who specialises in studying mental focus.

Each is taken with equal seriousness as a source of wisdom. Cricket and philosophy, literature, football and art are all, he believes, valid pursuits that can lead people towards a deeper and more meaningful life. It comes back to psychoanalysis. Mr Brearley was a sportsman first, but it is psychoanalysis that dominates his heart and mind. For him understanding the self is the key to absolutely everything—and it is here that he reveals himself a golden meanie: Captain Goldilocks trying to steer the best route with a team and its captain.

He chivvied his two cricketers out of self-doubt but not into over-confidence. He writes about the balance between the horse, representing instinct and talent, and the snaffle, representing various forms of discipline. Balance is the key, but how to get the balance right between the individual and the team?

Alas, there is no single answer: just a million ways of looking for one. Unless you are Don Bradman, the greatest cricketer ever to pick up a bat. When he was asked what he did when he was out of form, he said: "I can't answer that... When I played, I was never out of form." ■

## Fiction

# Irish song

**Solar Bones.** By Mike McCormack. *Soho Press*; 224 pages; \$25. *Canongate*; £20

**T**HE Angelus bell rings out on the first page of Mike McCormack's novel, "Solar Bones". It is the Catholic devotion that commemorates the mystery of the Incarnation. That mystery, the idea of a spirit made flesh, haunts this remarkable book. Taking place in the course of an hour on All Souls' Day, when the dead return to walk the Earth, and set in the stark, lovely landscape of County Mayo on Ireland's west coast, it is a story told in one single running sentence. It is broken by breath and by paragraph indentation, but never by the full stop of finality. Yet it would be quite possible to be swept into this book's homely, poetic narrative and not notice this device at all.

Mr McCormack is a well-established writer in his native Ireland. But it was only when "Solar Bones", brought out in the first instance by Tramp Press—a three-year-old independent publisher based in Dublin—won the Goldsmiths prize last year that the book gained wider recognition. The novel has now been longlisted for the 2017 Man Booker prize and is about to be published in America. The Goldsmiths prize rewards fiction which pushes against the bounds of convention, and this novel fits that bill, though its artifice is subtle and natural.

Its narrator is Marcus Conway, a civil engineer of a very ordinary kind: no grand structures for him, but simply the highways and buildings of his Mayo home. And yet he is still concerned "with scale and accuracy, mapping and surveying so that the grid of reason and progress could be laid across the earth, gathering its wildness into towns and villages by way of bridges and roads and water schemes and power lines".

These serial commas are the mark of the novel, whether its narrator considers his work—a topic that is all too rarely covered in 20th- and 21st-century fiction—or his love for his wife Mairead, and their grown son and daughter. Even illness and suffering can be rendered beautiful by close observation, by the tenderness of affection. Marcus's life is an ordinary one in much the way that the life of Leopold Bloom, his literary predecessor, is ordinary. It is the vivid attention to detail, both in "Ulysses", James Joyce's masterpiece, and in "Solar Bones", which make both these novels resonate like that evening bell.

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3. Document uploaded and available for sale from 17 hrs. on : **17<sup>th</sup> Aug. 2017**.
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## Economic data

% change on year ago

	Gross domestic product			Industrial production	Consumer prices		Unemployment rate, %	Current-account balance		Budget balance	Interest rates, %	Currency units, per \$	
	latest	qtr*	2017 <sup>†</sup>		latest	latest		2017 <sup>†</sup>	latest 12 months, \$bn			% of GDP 2017 <sup>†</sup>	% of GDP 2017 <sup>†</sup>
United States	+2.2 Q2	+3.0	+2.1	+2.2 Jul	+1.7 Jul	+1.9	4.4 Aug	-449.3 Q1	-2.4	-3.4	2.08	-	-
China	+6.9 Q2	+7.0	+6.8	+6.4 Jul	+1.4 Jul	+1.8	4.0 Q2 <sup>§</sup>	+157.3 Q2	+1.5	-3.9	3.64 <sup>§§</sup>	6.52	6.68
Japan	+2.0 Q2	+4.0	+1.6	+4.7 Jul	+0.5 Jul	+0.5	2.8 Jul	+187.8 Jun	+3.6	-4.5	nil	109	102
Britain	+1.7 Q2	+1.2	+1.5	+0.3 Jun	+2.6 Jul	+2.7	4.4 May <sup>††</sup>	-99.8 Q1	-3.4	-3.6	1.09	0.77	0.74
Canada	+3.7 Q2	+4.5	+2.6	+10.0 Jun	+1.2 Jul	+1.7	6.3 Jul	-45.0 Q2	-2.6	-2.1	1.95	1.22	1.28
Euro area	+2.2 Q2	+2.5	+2.0	+2.6 Jun	+1.5 Aug	+1.5	9.1 Jul	+372.7 Jun	+3.2	-1.3	0.36	0.84	0.89
Austria	+2.2 Q2	-1.0	+2.2	+4.5 Jun	+2.0 Jul	+1.9	5.4 Jul	+6.4 Q1	+2.1	-1.0	0.57	0.84	0.89
Belgium	+1.5 Q2	+1.7	+1.7	+4.0 Jun	+1.9 Aug	+2.1	7.6 Mar	-4.2 Mar	+0.7	-2.1	0.68	0.84	0.89
France	+1.7 Q2	+1.9	+1.6	+2.6 Jun	+0.9 Aug	+1.2	9.8 Jul	-25.3 Jun	-1.2	-3.1	0.65	0.84	0.89
Germany	+2.1 Q2	+2.5	+2.1	+2.5 Jun	+1.8 Aug	+1.6	3.7 Jul <sup>†</sup>	+270.6 Jun	+8.0	+0.7	0.36	0.84	0.89
Greece	+0.7 Q2	+2.2	+1.0	+1.6 Jun	+1.0 Jul	+1.3	21.7 May <sup>†</sup>	-1.0 Jun	-1.3	-1.4	5.50	0.84	0.89
Italy	+1.5 Q2	+1.5	+1.3	+5.3 Jun	+1.2 Aug	+1.3	11.3 Jul	+50.3 Jun	+2.4	-2.3	2.02	0.84	0.89
Netherlands	+3.3 Q2	+6.2	+2.6	+3.3 Jun	+1.3 Jul	+1.2	6.0 Jul	+68.4 Q1	+9.9	+0.6	0.47	0.84	0.89
Spain	+3.1 Q2	+3.5	+3.1	+3.4 Jun	+1.6 Aug	+1.9	17.1 Jul	+21.2 Jun	+1.5	-3.3	1.53	0.84	0.89
Czech Republic	+3.4 Q2	+10.3	+4.5	+3.2 Jul	+2.5 Jul	+2.4	2.9 Jul <sup>†</sup>	+1.4 Q1	+0.9	-0.1	0.89	21.9	24.0
Denmark	+1.9 Q2	+2.5	+2.0	+2.3 Jun	+1.5 Jul	+0.9	4.3 Jun	+26.4 Jun	+8.2	-0.6	0.49	6.23	6.62
Norway	+0.2 Q2	+4.7	+1.9	+2.8 Jun	+1.5 Jul	+2.1	4.3 Jun <sup>††</sup>	+16.6 Q2	+7.0	+4.2	1.56	7.77	8.19
Poland	+4.6 Q2	+4.5	+3.7	+6.3 Jul	+1.8 Aug	+1.8	7.1 Aug <sup>§</sup>	-2.5 Jun	-0.4	-2.2	3.19	3.56	3.86
Russia	+2.5 Q2	na	+1.7	+1.0 Jul	+3.3 Aug	+4.2	5.1 Jul <sup>§</sup>	+33.6 Q2	+2.7	-2.1	8.13	57.4	64.6
Sweden	+3.9 Q2	+7.1	+3.1	+5.3 Jul	+2.2 Jul	+1.7	6.6 Jul <sup>§</sup>	+22.5 Q2	+4.5	+0.3	0.61	7.95	8.47
Switzerland	+0.3 Q2	+1.1	+1.3	+2.9 Q2	+0.5 Aug	+0.5	3.2 Jul	+73.6 Q1	+9.6	+0.2	-0.12	0.95	0.97
Turkey	+5.0 Q1	na	+4.0	-3.6 Jun	+10.7 Aug	+10.3	10.2 May <sup>§</sup>	-34.3 Jun	-4.4	-2.0	10.72	3.43	2.93
Australia	+1.8 Q2	+3.3	+2.3	+0.8 Q2	+1.9 Q2	+2.1	5.7 Jul	-21.8 Q2	-1.4	-1.8	2.55	1.25	1.30
Hong Kong	+3.8 Q2	+4.1	+3.1	+0.2 Q1	+1.9 Jul	+1.6	3.1 Jul <sup>††</sup>	+14.9 Q1	+4.1	+1.0	1.42	7.83	7.76
India	+5.7 Q2	+4.1	+7.0	-0.1 Jun	+2.4 Jul	+3.6	5.0 2015	-15.2 Q1	-1.2	-3.2	6.51	64.1	66.5
Indonesia	+5.0 Q2	na	+5.2	-1.4 Jun	+3.8 Aug	+4.2	5.3 Q1 <sup>§</sup>	-14.2 Q2	-1.7	-2.4	6.64	13,333	13,127
Malaysia	+5.8 Q2	na	+5.2	+4.0 Jun	+3.2 Jul	+3.9	3.4 Jun <sup>§</sup>	+8.1 Q2	+2.2	-3.0	3.88	4.24	4.08
Pakistan	+5.7 2017**	na	+5.7	+3.5 Jun	+3.4 Aug	+4.2	5.9 2015	-12.1 Q2	-3.8	-4.5	8.10 <sup>†††</sup>	105	105
Philippines	+6.5 Q2	+7.0	+6.5	+8.1 Jun	+3.1 Aug	+3.0	5.7 Q2 <sup>§</sup>	-0.4 Mar	+0.3	-2.8	4.57	51.1	46.6
Singapore	+2.9 Q2	+2.2	+2.9	+21.0 Jul	+0.6 Jul	+0.9	2.2 Q2	+59.0 Q2	+18.4	-1.0	1.99	1.35	1.35
South Korea	+2.7 Q2	+2.4	+2.9	+0.1 Jul	+2.6 Aug	+1.9	3.5 Jul <sup>§</sup>	+82.1 Jul	+5.6	+0.9	2.28	1,136	1,105
Taiwan	+2.1 Q2	+0.5	+2.3	+2.4 Jul	+1.0 Aug	+0.5	3.8 Jul	+70.7 Q2	+12.6	+0.2	1.00	30.1	31.4
Thailand	+3.7 Q2	+5.4	+3.3	+3.7 Jul	+0.3 Aug	+0.8	1.2 Jul <sup>§</sup>	+44.9 Q2	+11.9	-2.5	2.13	33.1	34.7
Argentina	+0.3 Q1	+4.3	+2.6	-2.5 Oct	+21.5 Jul <sup>†</sup>	+24.6	9.2 Q1 <sup>§</sup>	-16.8 Q1	-3.3	-6.1	na	17.2	15.0
Brazil	+0.3 Q2	+1.0	+0.6	+2.5 Jul	+2.5 Aug	+3.7	12.8 Jul <sup>§</sup>	-13.8 Jul	-0.8	-8.1	8.84	3.12	3.24
Chile	+0.9 Q2	+3.0	+1.2	+3.3 Jul	+1.7 Jul	+2.4	6.9 Jul <sup>§††</sup>	-5.6 Q2	-1.9	-3.0	4.32	620	666
Colombia	+1.3 Q2	+3.0	+1.7	-1.9 Jun	+3.9 Aug	+4.0	9.7 Jul <sup>§</sup>	-11.9 Q1	-3.7	-3.3	6.72	2,921	2,890
Mexico	+1.8 Q2	+2.3	+2.1	-0.3 Jun	+6.4 Jul	+5.8	3.2 Jul	-17.6 Q2	-1.9	-1.9	6.86	17.8	18.4
Venezuela	-8.8 Q4~	-6.2	-9.0	+0.8 Sep	na	+667	7.3 Apr <sup>§</sup>	-17.8 Q3~	-1.1	-19.5	10.08	10.1	9.99
Egypt	+4.3 Q1	na	+3.7	+33.0 Jun	+33.0 Jul	+22.8	12.0 Q2 <sup>§</sup>	-18.0 Q1	-5.9	-10.8	na	17.6	8.88
Israel	+4.0 Q2	+2.7	+3.5	+0.9 Jun	-0.7 Jul	+0.4	4.1 Jul	+11.7 Q1	+4.1	-2.6	1.70	3.55	3.75
Saudi Arabia	+1.7 2016	na	-0.5	na	-0.3 Jul	+1.1	5.6 2016	-1.0 Q1	+0.5	-8.2	3.68	3.75	3.75
South Africa	+1.1 Q2	+2.5	+0.6	-2.7 Jun	+4.6 Jul	+5.3	27.7 Q2 <sup>§</sup>	-7.9 Q1	-3.2	-3.2	8.43	12.8	14.1

Source: Haver Analytics. \*% change on previous quarter, annual rate. <sup>†</sup>The Economist poll or Economist Intelligence Unit estimate/forecast. <sup>§</sup>Not seasonally adjusted. <sup>††</sup>New series. ~2014 \*\*Year ending June. <sup>†††</sup>Latest 3 months. <sup>††††</sup>3-month moving average. <sup>§§§</sup>5-year yield. <sup>†††††</sup>Dollar-denominated bonds.

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## Markets

	Index Sep 6th	% change on		
		one week	Dec 30th 2016	
			in local currency	in \$ terms
United States (DJIA)	21,807.6	-0.4	+10.3	+10.3
China (SSEA)	3,545.5	+0.6	+9.1	+15.7
Japan (Nikkei 225)	19,358.0	-0.8	+1.3	+8.5
Britain (FTSE 100)	7,354.1	-0.2	+3.0	+8.6
Canada (S&PTX)	15,059.8	-0.5	-1.5	+7.0
Euro area (FTSE Euro 100)	1,178.2	+0.9	+5.9	+19.8
Euro area (EURO STOXX 50)	3,433.8	+0.9	+4.4	+18.0
Austria (ATX)	3,219.0	+0.5	+22.9	+39.0
Belgium (Bel 20)	3,890.6	+0.4	+7.9	+21.9
France (CAC 40)	5,101.4	+0.9	+4.9	+18.6
Germany (DAX)*	12,214.5	+1.8	+6.4	+20.3
Greece (Athex Comp)	811.7	-1.5	+26.1	+42.6
Italy (FTSE/MIB)	21,814.6	+1.4	+13.4	+28.2
Netherlands (AEX)	516.5	+0.7	+6.9	+20.8
Spain (Madrid SE)	1,021.2	-1.0	+8.2	+22.3
Czech Republic (PX)	1,025.0	-0.4	+11.2	+30.2
Denmark (OMXCX)	914.7	+0.2	+14.5	+29.4
Hungary (BUX)	37,878.9	-0.1	+18.4	+35.1
Norway (OSEAX)	819.3	+1.9	+7.2	+18.8
Poland (WIG)	64,768.3	-0.3	+25.1	+46.9
Russia (RTS, \$ terms)	1,106.7	+2.1	-4.0	-4.0
Sweden (OMXS30)	1,541.3	+0.3	+1.6	+15.9
Switzerland (SMI)	8,859.5	+0.1	+7.8	+14.6
Turkey (BIST)	109,611.8	-0.7	+40.3	+44.0
Australia (All Ord.)	5,752.9	+0.3	+0.6	+11.5
Hong Kong (Hang Seng)	27,613.8	-1.7	+25.5	+24.4
India (BSE)	31,662.0	nil	+18.9	+25.9
Indonesia (JSX)	5,824.1	-0.8	+10.0	+11.1
Malaysia (KLSE)	1,772.5	nil	+8.0	+13.7
Pakistan (KSE)	41,390.0	+0.2	-13.4	-14.2
Singapore (STI)	3,232.5	-1.0	+12.2	+19.9
South Korea (KOSPI)	2,319.8	-2.2	+14.5	+22.2
Taiwan (TWI)	10,547.9	-0.2	+14.0	+22.2
Thailand (SET)	1,621.3	+0.5	+5.1	+13.4
Argentina (MERV)	24,164.9	+2.9	+42.8	+30.9
Brazil (BVSP)	73,412.4	+3.6	+21.9	+27.2
Chile (IGPA)	25,416.5	-1.2	+22.6	+32.2
Colombia (IGBC)	11,281.8	+3.7	+11.6	+14.8
Mexico (IPC)	50,515.6	-1.3	+10.7	+28.1
Venezuela (IBC)	266,926.1	+18.4	+742	na
Egypt (EGX 30)	13,317.9	-0.7	+7.9	+10.9
Israel (TA-125)	1,265.7	+0.3	-0.9	+7.0
Saudi Arabia (Tadawul)	7,306.1	+0.7	+0.9	+1.0
South Africa (JSE AS)	55,480.2	-1.2	+9.5	+16.2

## The Economist poll of forecasters, September averages (previous month's, if changed)

	Real GDP, % change				Consumer prices % change		Current account % of GDP	
	Low/high range		average		2017	2018	2017	2018
	2017	2018	2017	2018				
Australia	2.0/2.8	2.4/3.2	2.3	2.7 (2.8)	2.1 (2.2)	2.3	-1.4 (-1.5)	-2.1
Brazil	0.2/1.2	1.5/3.1	0.6 (0.5)	2.1	3.7 (3.8)	4.2 (4.3)	-0.8 (-1.0)	-1.4
Britain	1.4/1.7	0.7/1.7	1.5	1.3 (1.2)	2.7	2.6 (2.7)	-3.4	-3.0 (-2.9)
Canada	1.7/3.1	1.5/2.4	2.6 (2.4)	2.0	1.7 (1.8)	1.8 (1.9)	-2.6	-2.3
China	6.7/6.9	6.3/6.9	6.8 (6.7)	6.5 (6.3)	1.8 (1.9)	2.2 (2.3)	1.5 (1.6)	1.5 (1.6)
France	1.4/1.8	1.5/1.9	1.6 (1.5)	1.7	1.2	1.2	-1.2 (-1.3)	-1.1
Germany	1.8/2.3	1.5/2.4	2.1 (1.9)	1.9 (1.8)	1.6	1.5	8.0	7.6
India	6.4/7.5	7.0/7.9	7.0 (7.1)	7.5 (7.6)	3.6 (3.9)	4.4 (4.6)	-1.2 (-1.1)	-1.5
Italy	1.2/1.5	0.9/1.5	1.3 (1.2)	1.1 (1.0)	1.3	1.1	2.4 (2.1)	2.1 (1.8)
Japan	1.2/2.0	0.6/2.0	1.6 (1.4)	1.3 (1.1)	0.5 (0.6)	0.8 (0.9)	3.6	3.6
Russia	1.3/2.0	1.4/3.3	1.7 (1.5)	1.9 (1.7)	4.2 (4.1)	4.2 (4.1)	2.7 (2.5)	2.1 (2.2)
Spain	2.9/3.2	2.3/2.9	3.1 (3.0)	2.7 (2.5)	1.9	1.3 (1.4)	1.5 (1.7)	1.7 (1.6)
United States	2.0/2.3	1.9/2.9	2.1 (2.2)	2.3	1.9	2.0	-2.4 (-2.5)	-2.5 (-2.6)
Euro area	1.9/2.2	1.6/2.2	2.0	1.8	1.5	1.3	3.2	3.1 (3.0)

Sources: Bank of America, Barclays, BNP Paribas, Citigroup, Commerzbank, Credit Suisse, Decision Economics, Deutsche Bank, EIU, Goldman Sachs, HSBC Securities, ING, Itau BBA, JPMorgan, Morgan Stanley, Nomura, RBS, Royal Bank of Canada, Schroders, Scotiabank, Société Générale, Standard Chartered, UBS. For more countries, go to: [Economist.com/markets](http://Economist.com/markets)

## Other markets

	Index Sep 6th	% change on		
		one week	Dec 30th 2016	
			in local currency	in \$ terms
United States (S&P 500)	2,465.5	+0.3	+10.1	+10.1
United States (NAScomp)	6,393.3	+0.4	+18.8	+18.8
China (SSEB, \$ terms)	347.8	+1.2	+1.8	+1.8
Japan (Topix)	1,592.0	-1.0	+4.8	+12.3
Europe (FTSEurofirst 300)	1,469.8	+0.8	+2.9	+16.3
World, dev'd (MSCI)	1,959.1	+0.6	+11.9	+11.9
Emerging markets (MSCI)	1,083.2	-0.4	+25.6	+25.6
World, all (MSCI)	478.0	+0.5	+13.3	+13.3
World bonds (Citigroup)	957.8	+0.7	+8.4	+8.4
EMBI+ (JPMorgan)	842.3	+0.5	+9.1	+9.1
Hedge funds (HFRX)	1,250.1 <sup>3</sup>	+0.4	+3.9	+3.9
Volatility, US (VIX)	11.6	+11.2	+14.0 (levels)	
CDSs, Eur (iTRAXX) <sup>1</sup>	54.5	-3.4	-24.4	-14.6
CDSs, N Am (CDX) <sup>1</sup>	59.2	-0.2	-12.7	-12.7
Carbon trading (EU ETS) €	6.7	+13.0	+2.0	+15.3

Sources: IHS Markit; Thomson Reuters. <sup>1</sup>Total return index.

<sup>2</sup>Credit-default-swap spreads, basis points. <sup>3</sup>Sep 5th.

Indicators for more countries and additional series, go to: [Economist.com/indicators](http://Economist.com/indicators)

## The Economist commodity-price index

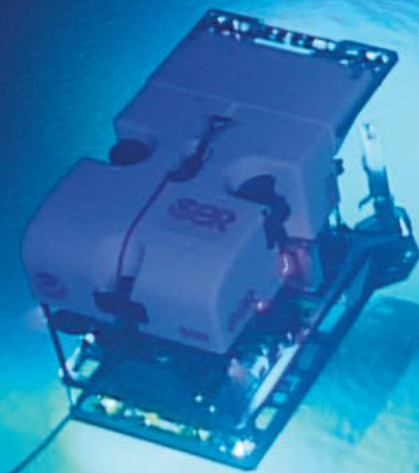
2005=100

	Aug 29th		Sep 5th*		% change on	
	Aug 29th	Sep 5th*	one month	one year		
<b>Dollar Index</b>						
All Items	144.9	147.4	+1.4	+9.5		
Food	145.9	148.6	-3.0	-3.4		
Industrials						
All	143.9	146.1	+6.6	+27.6		
Nfa <sup>1</sup>	132.9	135.8	+4.6	+9.9		
Metals	148.6	150.5	+7.4	+36.0		
<b>Sterling Index</b>						
All items	203.6	205.7	+0.9	+12.9		
<b>Euro Index</b>						
All items	149.9	153.7	-0.1	+3.2		
<b>Gold</b>						
\$ per oz	1,270.2	1,336.5	+6.5	-0.3		
<b>West Texas Intermediate</b>						
\$ per barrel	46.4	48.7	-1.0	+8.5		

Sources: Bloomberg; CME Group; Cotlook; Darmann & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. <sup>\*</sup>Provisional <sup>1</sup>Non-food agriculturals.

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## Barbed humour

**Richard “Dick” Gregory, an American comedian, dietician and civil-rights campaigner, died on August 19th, aged 84**

**R**ACISM is no laughing matter. But ridicule can erode it. Until Dick Gregory broke into the mainstream, American black comedians had only two choices, playing to black audiences, or being the butt of white performers’ jokes.

That changed at the Playboy Club in Chicago in January 1961. The young man took the wrong bus, and ran 20 blocks in shoes cold-proofed with cardboard to get to his first big break, only to be told to collect his fee and go. The audience was a convention-load of frozen-food industry types: male, Southern and white. An uppity black man would be jeered, or worse.

But he was well prepared. A jealous redneck kicked in his front teeth when he was nine, as punishment for merely touching a white woman’s leg as he shined her shoes. His mother, a hardworking housemaid, kept the vital family telephone hidden in a cupboard: welfare cases weren’t allowed such luxuries. But amid the hunger and humiliation, she had taught young Dick that laughing was a better way out of difficulty than crying. Once a man laughs with you, he can’t laugh at you.

His early wisecracks were lame and desperate. His bed was so crowded that he needed a bookmark to keep his place when he got up to pee. His home was so poor that the rats slept six to a bed too. But

the gags improved, polished hard when a far-sighted officer assigned him to army entertainment during his military service.

So he pushed the Playboy Club manager aside and walked on stage. He greeted the instant catcall of “Nigger” warmly, claiming (fictitiously) that each such insult earned him a \$50 bonus. And his nearby restaurant had the same name, so the publicity was especially welcome.

### The power of laughter

That cracked the ice for the rest of his wry, self-deprecating routine. “A white waitress told me: ‘We don’t serve coloured people here.’ I told her: ‘That’s all right, I don’t eat coloured people. Bring me a whole fried chicken.’ Three white boys—Klu, Kluck and Klan—said, ‘Boy, we’re giving you fair warning. Anything you do to that chicken, we’re gonna do to you.’ So I picked up that chicken and I kissed it.”

The planned 50-minute gig lasted twice as long, ending with an ovation and a three-year contract. “From that moment on the Jim Crow school of humour was dead,” *Newsweek* wrote. Mr Gregory played the same trick with “Nigger”, his autobiography, which in 1964 earned him a whopping \$200,000 advance. He dismissed his mother’s objections to the title: “Whenever you hear that word, you’ll know they’re

advertising my book.” He hated the “N-word” euphemism, arguing “let’s pull it out of the closet, let’s lay it out there, let’s deal with it, let’s dissect it”.

Stardom came only on his own terms. He declined repeated invitations to appear on the “Tonight” show, then the peak of American television fame, where blacks were expected to perform standing and leave promptly. He insisted on being allowed to sit, and chat with the host. His fee soared from \$250 a week to \$5,000 a night.

But his “monster”, as he called his inner flame, led him elsewhere, to civil-rights marches and demonstrations. He made light of the jailings and beatings, which paled against the suffering of others: “You ain’t never seen nothing in your life until you see a five-year kid get hit by a grown man with a brick.” He did not care that protesting derailed his career. Humour was no more going to solve the country’s race problems than it could cure cancer.

He decried bigots as “Whitey” while insisting that the struggle was not black against white, but right against wrong. For all America’s evils and faults, “you can still reach through the forest and see the sun. But we don’t know yet whether that sun is rising or setting for our country.”

His later political career was notable in its ambitions, though scanty in its achievements. He ran against Richard Daley for mayor of Chicago in 1967, and a year later as a write-in presidential candidate. A former college athletics star, he became grotesquely fat, until he adopted hunger strikes as a weapon of protest. The first was against the Vietnam war (he shunned solid food for 30 months). His later fasts related to causes ranging from apartheid to the Equal Rights Amendment, drug abuse, Native American rights, nuclear power, police brutality, prison reform, the hostages in Iran—and Michael Jackson’s innocence on child-abuse charges.

A newfound vegetarianism became a crusade and then a business, with clients including John Lennon and Muhammad Ali. The treatments were unorthodox, involving copious draughts of vegetable juice and thrice-weekly enemas. His diet drinks were profitable rot too, but at least the other advice—a daily mile-long walk, and a single balanced evening meal—was beneficial. He treated his own cancer with diet, herbs and mysterious gadgets, gloating when it went into remission.

The crankery extended to conspiracy theories, of varying merits. He co-authored a book suggesting FBI complicity in the murder of his friend Martin Luther King. He also believed the Moon landings were faked, as were the official accounts of the crack cocaine epidemic and the terrorist attacks of September 11th 2001. Disarming the powerful with laughter was one thing. Trusting their truthfulness was another. ■

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