

The Economist

JULY 1ST-7TH 2017

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Video: the next frontier in fake news

Trump's America

A SPECIAL REPORT ON A DIVIDED COUNTRY





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On the cover

Donald Trump was elected to shake Washington out of its paralysis. Instead he is adding to America's problems: leader, page 11. Those who hope that American politics will eventually return to normal may face a long wait. See our special report after page 42. Fresh from visiting the Oval Office, an American CEO sends an e-mail to his top lieutenants: Schumpeter, page 60. The upper middle class are the main beneficiaries—and the principal cause—of inequality in America, page 73

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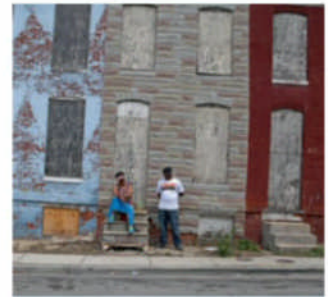
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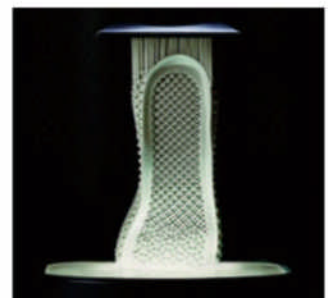
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Principal commercial offices:

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Tel: +44 20 7830 7000

Rue de l'Athénée 32
1206 Geneva, Switzerland
Tel: +41 22 566 2470

750 3rd Avenue, 5th Floor, New York, NY 10017
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Politics



Less than a year after taking power after his predecessor was impeached, Michel Temer, the president of **Brazil**, was accused by the country's chief prosecutor of taking bribes. Mr Temer denied the accusation, describing it as a "fiction". He is the first sitting head of state in Brazil to face criminal charges. A supreme court judge will now rule on whether congress should consider putting Mr Temer on trial.

In **Venezuela** the armed forces were put on high alert after a helicopter dropped grenades on the supreme court, which has been criticised by the opposition for rulings that have kept President Nicolás Maduro in power. The helicopter was reportedly piloted by a dissident member of the special police force. Some in the opposition said it was a government stunt to detract Venezuelans from their woes or provide an excuse for yet more oppression.

Cristina Fernández de Kirchner, a former president of **Argentina**, decided to run for senator in October's legislative elections, heading a new alliance called Citizen Unity.

Evan almighty

Police in **Zimbabwe** again arrested Evan Mawarire, a pastor and pro-democracy activist, after he addressed university students. Mr Mawarire sparked protests last year after he posted a video on social media calling for the government to reform.

An independent audit in **Mozambique** found that \$500m was missing from the

\$2bn that government-backed firms borrowed to set up a tuna-fishing company.

The number of people registered to vote in **Kenya's** presidential election in August has increased by 36% to almost 20m people compared with the vote in 2013. A large turnout in the bigger cities may improve the chances of opposition parties whose main strongholds are in Nairobi, the capital, and Mombasa.

Leaked reports showed that Saudi Arabia and the United Arab Emirates have demanded that **Qatar** shut down Al Jazeera, a broadcaster based in the country, or face further sanctions on top of the existing blockade. Arab autocrats detest Al Jazeera, which criticises them ferociously.

Iraqi forces advanced deep into the Old City in Mosul, and may soon liberate the whole city from Islamic State.

A rocky reception

Xi Jinping arrived in **Hong Kong** for his first visit since becoming China's leader in 2012. Mr Xi will attend celebrations marking the 20th anniversary on July 1st of Chinese rule over the territory, as well as the swearing-in of Hong Kong's new leader, Carrie Lam. Pro-democracy activists are staging protests.

A **landslide** triggered by heavy rain buried a village in the south-western Chinese province of Sichuan. More than 80 people died or are missing.

Mongolians voted in the first round of a presidential election. The run-off, to be held on July 9th, will pit the speaker of

parliament against a businessman from the outgoing president's party.

A court in **South Korea** found Choi Soon-sil, a confidante of former president Park Geun-hye, guilty of soliciting favours for her daughter, who won admission to a prestigious university despite a poor academic record. The court also found several of the university's administrators guilty of colluding with Ms Choi.

Authorities in **Myanmar** brought criminal charges against three journalists and two drivers for meeting an ethnic militia at odds with the central government. Myanmar's leader, Aung San Suu Kyi, had met representatives of the same group just recently.

Cardinal George Pell, **Australia's** most senior priest, who is also the Vatican's treasurer, was charged with sexual assault in Melbourne. Speaking in Rome, Cardinal Pell said he was innocent and would take time off from his duties in the Holy See to fight the charges.

On second thought

Republican leaders in the Senate postponed a vote on their **health-care bill** to repeal Obamacare, as support from their own party started to drift away. The dissenters were perturbed by an analysis of the bill by the Congressional Budget Office, which suggests that 22m people would lose health insurance.

The **Supreme Court** said it would hear arguments about Donald Trump's ban on visitors from six Muslim countries later this year. Until then, the court decided the ban could go into effect, but only for individuals who lack a "bona fide relationship" with the United States. This means most family members, students and employees will be allowed in.

Please don't go

As the Brexit negotiations began, Theresa May, **Britain's** prime minister, outlined the proposed legal rights for the estimated 3.2m EU citizens

living in the country under a new "settled status", and said "We want you to stay." Michel Barnier, the EU's chief negotiator, said the goal should be to ensure that Europeans in Britain get the same level of protection as under EU law.



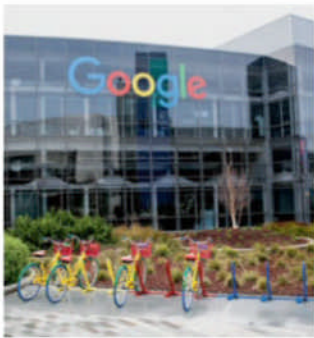
More than two weeks after an election left her short of a majority in Parliament, Mrs May struck a "**confidence and supply**" deal with the Democratic Unionist Party of Northern Ireland to prop up her Conservative government. She agreed to make an extra £1bn (\$1.3bn) available to Northern Ireland as part of the deal, prompting criticism from other parts of the UK. The DUP's support gives Mrs May a slim working majority of 13.

After losing a swathe of seats at the election, Nicola Sturgeon, **Scotland's** nationalist first minister, conceded that another referendum on independence should be put off until after the Brexit talks.

Dozens of companies around the world were hit by a **cyber-attack**. Ukrainian firms, including banks, the state power distributor and Kiev's airport, were among the first to be targeted. Unlike last month's WannaCry virus, some experts think the attack's motive may be sabotage, not profit.

Angela Merkel, **Germany's** chancellor, abandoned her opposition to gay marriage. Mrs Merkel signalled that she would allow lawmakers from her ruling Christian Democratic Union a free vote on the issue, opening the door for Germany to give full legal equality to same-sex couples, which most Germans favour. ▶▶

Business



Google was fined €2.4bn (\$2.7bn) by the European Union's competition commissioner for using its dominance in search to promote its shopping service over those of its rivals. The company will appeal against the decision, arguing that the EU did not include the likes of Amazon in its definition of the "relevant market" and did not prove that its search rankings had a detrimental effect on its rivals. Other rulings on Google's Android operating system and its advertising business are expected soon in the EU.

When in Rome

Italy's state-backed rescue of two **failing banks**, Banca Popolare di Vicenza and Veneto Banca, was criticised for failing to adhere to the nascent EU banking union. Under a deal, another bank, Intesa Sanpaolo, is to absorb the prime assets of the two failed lenders, but the government is using taxpayers' money to protect Intesa from any losses. That contrasts with Santander's recent bail-out of a bank in Spain, for which it launched a €7bn (\$8bn) share sale to fund the takeover.

Britain's loss-making **Co-operative Bank** struck a £700m (\$900m) deal with investors to keep it alive. This involves the bank raising equity from hedge funds through a holding company that will have a 68% stake.

The Federal Reserve said that all 34 financial companies passed its latest round of **stress tests**, the first time that has happened since 2011, when the

Fed began evaluating whether big banks have adequate capital to weather a financial storm. Those banks are now free to provide shareholders with a bonanza of increased dividend payouts and share buy-backs, after years of complaints from investors about the industry's meagre returns.

The yields on government bonds in the **euro zone** jumped and the euro rose to its highest level against the dollar this year after Mario Draghi hinted that the European Central Bank was ready to begin unwinding its stimulus measures. In a speech the ECB's president focused on the region's improving economy, and notably the pivot from "deflationary forces" to "reflationary ones".

The Bank of England raised its "counter-cyclical" **capital buffer** for banks to 0.5% of risk-weighted assets, increasing to 1% later this year. It had reduced the buffer to zero in its package of emergency measures to shore up the British economy following the vote to leave the EU. But it is now concerned about the rapid rise in **consumer lending**, as households turn to credit to supplement stagnant wages.

South Africa's central bank filed a legal challenge against the recommendation of the country's public ombudsman that it should replace its mandate of maintaining price and currency stability with one that seeks "meaningful socio-economic transformation". The South African Reserve Bank argues that its current mandate is crucial for growth.

Lumbered with penalties

America slapped a second round of **tariffs** on softwood from Canada, escalating their trade dispute over the product. But the latest batch of duties won't come into effect until September; America, Canada and Mexico are due to start negotiations on crafting a new NAFTA in August.

Following a decade of safety recalls of cars fitted with its airbags, **Takata** filed for bankruptcy protection. At least 17 deaths have been attributed to the airbags worldwide. The bankruptcy paves the way for the Japanese manufacturer to sell its assets, except for its airbag business, to a rival firm based in Michigan. But car-makers, such as Toyota and Fiat Chrysler, will now find it difficult to recoup from the company the costs that they have incurred.

A private-equity firm offered \$7bn to take over **Staples**, a retail chain selling office supplies, in the biggest leveraged buy-out so far this year. In 2016 an attempt to merge Staples with Office Depot, a rival, was thwarted on antitrust grounds.

Nestlé launched a \$21bn share buy-back and said it would focus new investment on coffee, bottled water, pet care and infant nutrition. The announcement came amid shareholder gripes about the lack of growth at the Swiss foods group and after an activist investor criticised it for being "stuck in its old ways".

Health and strength

An investment fund controlled by Mikhail Fridman, one of Russia's richest men, agreed to buy **Holland & Barrett**, a British retailer of health supplements, for £1.8bn (\$2.3bn). It is the first purchase made by Mr Fridman's new L1 Retail fund, and a bet that the market catering to health-conscious consumers will grow. Holland & Barrett is a staple of the British high street, tracing its roots to Samuel Ryder, of the golfing cup, who opened his health-foods business in 1920.

Other economic data and news can be found on pages 78-79



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A divided country

Donald Trump was elected to shake Washington out of its paralysis. He is adding to America's problems



JULY 4th ought to bring Americans together. It is a day to celebrate how 13 young colonies united against British rule to begin their great experiment in popular government. But this July 4th Americans are riven by mutual incomprehension: between Republicans and Democrats, yes, but also between factory workers and university students, country folk and city-dwellers. And then there is President Donald Trump, not only a symptom of America's divisions but a cause of them, too.

Mr Trump won power partly because he spoke for voters who feel that the system is working against them, as our special report this week sets out. He promised that, by dredging Washington of the elites and lobbyists too stupid or self-serving to act for the whole nation, he would fix America's politics.

His approach is not working. Five months into his first term, Mr Trump presides over a political culture that is even more poisonous than when he took office. His core voters are remarkably loyal. Many businesspeople still believe that he will bring tax cuts and deregulation. But their optimism stands on ever-shakier ground. The Trump presidency has been plagued by poor judgment and missed opportunities. The federal government is already showing the strain. Sooner or later, the harm will spread beyond the beltway and into the economy.

From sea to shining sea

America's loss of faith in politics did not start with Mr Trump. For decades, voters have complained about the gridlock in Washington and the growing influence of lobbyists, often those with the deepest pockets. Francis Fukuyama, a political theorist, blamed the decay on the "vetocracy", a tangle of competing interests and responsibilities that can block almost any ambitious reform. When the world changes and the federal government cannot rise to the challenge, he argued, voters' disillusion only grows.

Mr Trump has also fuelled the mistrust. He has correctly identified areas where America needs reform, but botched his response—partly because of his own incontinent ego. Take tax. No one doubts that America's tax code is a mess, stuffed full of loopholes and complexity. But Mr Trump's reform plans show every sign of turning into a cut for the rich that leaves the code as baffling as ever. So, too, health care. Instead of reforming Obamacare, Republicans are in knots over a bill that would leave millions of Mr Trump's own voters sicker and poorer.

Institutions are vulnerable. The White House is right to complain about America's overlapping and competing agencies, which spun too much red tape under President Barack Obama. Yet its attempt to reform this "administrative state" is wrecking the machinery the government needs to function. Mr Trump's hostility has already undermined the courts, the intelligence services, the state department and America's environmental watchdog. He wants deep budget cuts and has failed to fill presidential appointments. Of 562 key positions identified by the *Washington Post*, 390 remain without a nominee.

As harmful as what Mr Trump does is the way he does it. In the campaign he vowed to fight special interests. But his solution—to employ businesspeople too rich for lobbyists to buy—is no solution at all. Just look at Mr Trump himself: despite his half-hearted attempts to disentangle the presidency and the family business, nobody knows where one ends and the other begins. He promised to be a dealmaker, but his impulse to belittle his opponents and the miasma of scandal and leaks surrounding Russia's role in the campaign have made the chances of cross-party co-operation even more remote. The lack of respect for expertise, such as the attacks on the Congressional Budget Office over its dismal scoring of health-care reform, only makes Washington more partisan. Most important, Mr Trump's disregard for the truth cuts into what remains of the basis for cross-party agreement. If you cannot agree on the facts, all you have left is a benighted clash of rival tribes.

Til selfish gain no longer stain

Optimists say that America, with its immense diversity, wealth and reserves of human ingenuity and resilience can take all this in its stride. Mr Trump is hardly its first bad president. He may be around for only four years—if that. In a federal system, the states and big cities can be islands of competence amid the dysfunction. America's economy is seemingly in rude health, with stockmarkets near their all-time highs. The country dominates global tech and finance, and its oil and gas producers have more clout than at any time since the 1970s.

Those are huge strengths. But they only mitigate the damage being done in Washington. Health-care reform affects a sixth of the economy. Suspicion and mistrust corrode all they touch. If the ablest Americans shun a career in public service, the bureaucracy will bear the scars. Besides, a bad president also imposes opportunity costs. The rising monopoly power of companies has gone unchallenged. Schools and training fall short even as automation and artificial intelligence are about to transform the nature of work. If Mr Trump serves a full eight years—which, despite attacks from his critics, is possible—the price of paralysis and incompetence could be huge.

The dangers are already clear in foreign policy. By pandering to the belief that Washington elites sell America short, Mr Trump is doing enduring harm to American leadership. The Trans-Pacific Partnership would have entrenched America's concept of free markets in Asia and shored up its military alliances. He walked away from it. His rejection of the Paris climate accord showed that he sees the world not as a forum where countries work together to solve problems, but as an arena where they compete for advantage. His erratic decision-making and his chumminess with autocrats lead his allies to wonder if they can depend on him in a crisis.

July 4th is a time to remember that America has renewed itself in the past; think of Theodore Roosevelt's creation of a modern, professional state, FDR's New Deal, and the Reagan revolution. In principle it is not too late for Mr Trump to embrace bipartisanship and address the real issues. In practice, it is ever clearer that he is incapable of bringing about such a renaissance. That will fall to his successor. ■

Free speech

Hands off Al Jazeera

The Arab world has one big freewheeling broadcaster. The Saudi regime wants to silence it



IRONY is not dead in the Middle East. In April Saudi Arabia, a land where women may not drive, or leave the country without the written permission of a male “guardian”, or appear in public without an all-enveloping cloak, was elected to the UN’s committee on women’s rights. Now that same monarchy, where the government censors everything from political dissent to risqué Rubens paintings, and where a pro-democracy blogger named Raif Badawi has been sentenced to 1,000 lashes and ten years in jail, is trying to shut down the only big, feisty broadcaster in the Arab world, Al Jazeera. This is an extraordinary, extraterritorial assault on free speech. It is as if China had ordered Britain to abolish the BBC.

Al Jazeera is based in Qatar, a tiny, wealthy Gulf state that the Saudis, Emiratis, Bahrainis and Egyptians are subjecting to a heavy-handed blockade. Qatar’s sins, in Saudi eyes, are manifold. It is friendly with Iran (though so are Oman and Dubai, which are not subject to the same strictures). It harbours dozens of people the Saudis do not like, including some with close links to groups affiliated to al-Qaeda. And it owns Al Jazeera.

Last week news leaked that Saudi Arabia is demanding the closure of Al Jazeera as part of the price for lifting the blockade. The Qataris have only a few more days to comply or face unspecified further action.

You can see why the Saudis would like Al Jazeera to go dark. Unlike other Middle Eastern broadcasters, which in place of news tend to emit a wearisome stream of unexamined government announcements and fawning footage of princes and presidents embracing each other, Al Jazeera, which was set up in 1996, tries to tell viewers what is actually going on. During the Arab spring of 2011 it offered a platform to the region’s prot-

esters, including the Muslim Brotherhood, which went on to form a short-lived government in Egypt, and to challenge incumbent regimes in other states as well. Arab autocrats found this both alarming and infuriating.

Some in the West dislike Al Jazeera, too. When it broadcast Osama bin Laden’s tape-recorded messages from his cave in Afghanistan, many concluded that it was not reporting a big news story so much as promoting terrorism. In 2004 the new government in Iraq, still under the thumb of the American-led coalition that had ousted Saddam Hussein the previous year, closed Al Jazeera’s Baghdad office for a month; in 2016 Iraq’s government closed it again, for a year, for supposedly stirring up sectarianism and violence by reporting on it unsparingly.

Drawing a veil over it

All these bans were wrong. Al Jazeera is not a perfect news organisation, but it strives to offer a variety of viewpoints: government and dissident, domestic and foreign. One of its slogans is: “The opinion and the other opinion”. Granted, it has a large blind spot in the shape of Qatar itself, which never receives the sort of criticism the channel routinely hands out to others. There is also a distinction to be drawn between Al Jazeera’s English-language service (started with the help of many staff poached from the BBC) and its Arabic version, which is more biased in support of political Islam, more tolerant of extremism and closer to being a mouthpiece for the Qatari government. Saudi Arabia and the UAE want to close both of them. Yet on any fair accounting, Al Jazeera performs a valuable service by adding to the supply of news and views about the Middle East. It would be absurd to argue that the Arab world’s problem was too much information or too free a flow of ideas. The opposite is closer to the truth. Saudi Arabia should stop trying to extend its harsh brand of censorship to its neighbours; indeed, it should stop bullying them entirely. ■

China

What Hong Kong can teach Xi Jinping

The former British colony should be a place to experiment with political reform, not stifle it



WHEN Britain handed Hong Kong back to China 20 years ago, many politicians in the West suspended disbelief. Here was a prosperous society, deeply imbued with liberal values, being taken over by a country that, less than a decade earlier, had used tanks and machineguns to crush peaceful protests by citizens calling for democratic reform. If they were worried, the British officials who attended the handover ceremony tried not to show it. China, after all, had promised that Hong Kong’s way of life would remain unchanged for at least 50

years under a remarkable arrangement that it called “one country, two systems”. Even the last British governor of Hong Kong, Chris Patten—an outspoken critic of China’s Communist Party—called that rain-soaked day “a cause for celebration”.

This week China’s president, Xi Jinping, is to join the festivities marking the anniversary on July 1st of the start of Chinese rule—his first trip to the territory since he took power in 2012. He will also attend the swearing-in of a new leader there, Carrie Lam. But many people in Hong Kong will be less than delighted by his presence. Mr Xi is no friend of its freedoms. On his watch, Chinese officials have become far more insistent on the “one country” part of the formula: it is the party, not Hong Kong’s people, that has the final say. In deference to Mr Xi, ►►



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streets are being cleared of protest slogans; demonstrators will be kept at a distance. At the time of the handover, this newspaper expressed the hope that Hong Kong would help “change China” politically. The opposite is happening.

Wishful thinking?

In 1997 there were grounds for optimism, despite the crushing of the Tiananmen protests. In fits and starts, China was evolving in a way that could make it more amenable to democratic reform in Hong Kong. It was keen to join the World Trade Organisation, and thus, it seemed, to embrace free-market principles. It was reasonable to expect that a private sector and a middle class would arise in China and begin to demand more freedom. In villages the party was experimenting with more democracy. Would these efforts encourage similar ones in urban areas, too, Chinese liberals wondered? In 1998 a newly appointed (and refreshingly reformist) prime minister, Zhu Rongji, suggested they might indeed. “Of course I am in favour of democratic elections,” he said.

Twenty years on, Chinese officials no longer bother even to talk about political reform. Under Mr Xi, the party has been tightening its grip. A huge new middle class has emerged, armed with the internet. But, fearing the potential power of well-informed and interconnected citizens, the party is striving to keep them in check—beefing up the police and deploying armies of censors to scrub the internet clean.

At the time of Hong Kong’s handover, China was at least

prepared, occasionally, to release a dissident or two in order to heal the rift with America caused by the massacre in Beijing in 1989. No longer. Its economy is far bigger and its army far stronger than it was. It shrugs off the West’s concerns about its human-rights abuses. Witness its brutal treatment of Liu Xiaobo, an intellectual whose demand in 2008 for democratic reform secured him an 11-year jail sentence (and later, a Nobel peace prize). This week it emerged that Mr Liu was being treated for advanced liver cancer (see page 38). Only the prospect of his death, it appears, persuaded the authorities to send him to hospital from his prison cell.

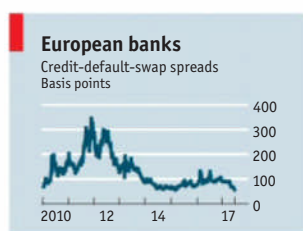
It may seem far-fetched that such a China might grant Hong Kong more freedom. Sure enough, everything the country has done of late suggests the opposite—from sending agents to abduct people from Hong Kong, to issuing a ruling to ensure that legislators sympathetic to the idea of Hong Kong’s independence cannot take up their posts. But Mr Xi should take a good look at Hong Kong and consider mainland China’s future.

The city’s young people feel alienated from the elite by an ossified political system and deprived of a voice by a lack of full democracy. That makes it unstable, as was evident during weeks of student-led protests in 2014 and in rioting early last year. The mainland has lots of Hong Kongs in the making. China needs a chance to experiment with a way of defusing unrest that does not make people more sullen: democratic reform. One country, two systems makes Hong Kong the perfect opportunity. Mr Xi should seize it. ■

European banks

Senior moment

Europe’s framework for dealing with troubled banks is working, but has one big drawback



IF ONE goal has animated the reform of finance since the crisis of 2007-08, it has been a desire to spare taxpayers from having to pick up the bill for bank failures. Regulators have introduced stress tests to see how banks stand up to shocks; America’s latest round of tests concluded this week (see page 64). They have forced banks to fund themselves with more equity and to issue layers of debt that are earmarked for losses in the event of severe trouble. They have even asked banks to draw up plans for their own dismemberment in the event of failure.

The first real tests of this post-crisis machinery were always going to happen in Europe, which has been damagingly slow to face up to the sorry state of its banks. One such trial occurred early in June, when the European Central Bank (ECB) declared that Banco Popular, a big Spanish lender, was failing or likely to fail. In that instance, the machinery purred. A new European agency, the Single Resolution Board (SRB), took charge. Popular’s shareholders and junior bondholders lost their money; another Spanish bank, Santander, raised its own cash to fund the purchase of Popular; taxpayers watched from the sidelines; and regulators hailed a textbook bank resolution.

The latest test was more reminiscent of Heath Robinson. On June 23rd the ECB handed out the same “failing or likely to fail” verdict to two midsized lenders in Italy, Veneto Banca and

Banca Popolare di Vicenza. But this time the outcome was very different. The SRB determined that the pair did not pose a threat to financial stability, and handed them to the Italian authorities to deal with under national insolvency procedures. Instead of senior bondholders taking losses, as would otherwise have happened, taxpayers have again found themselves on the hook. Public money will subsidise the purchase of the two banks’ good assets by Intesa Sanpaolo, a big Italian rival. As much as €17bn (\$19bn) of state funds could be at risk, although the actual bill is likely to be lower (see page 61).

It’s the political economy, stupid

What conclusions should be drawn from these divergent outcomes? Optimists see the fruits of reform in both episodes; pessimists fulminate that promises to protect taxpayers are broken after the Italian deal, and that hopes of moving towards a true banking union are dead. The reality lies somewhere in the middle.

Europe’s post-crisis reforms have yielded genuine progress. First, the ECB’s supervisory powers over euro-zone banks are welcome. National regulators were prone to look the other way when banks wobbled; the ECB, which took on the powers in 2014, has waited too long to flex its muscles but is a more credible judge of financial trouble. Second, junior bondholders can now be certain that they will be wiped out when banks get into deep trouble (something that was not always guaranteed during the crisis). New instruments such as “contingent ▶▶

convertible” bonds, which are explicitly designed to force losses on their owners in bad times, are doing their job.

There is a third reason to be hopeful. Italy has long assumed an ostrich-like posture on the non-performing assets clogging up its banks, estimated at €349bn (gross) by the Bank of Italy. One reason for the delay has been a politically charged quirk of Italian finance: the fact that retail investors are big owners of Italian bank debt. Imposing losses on creditors is less attractive when the effect is to wipe out the savings of ordinary citizens. The liquidations, and an earlier rescue of Monte dei Paschi di Siena, a bigger bank, have avoided this outcome. That infuriates many, who equate wriggle-room in the rules on resolution with licence to ignore them. But a cleaner banking system results. This week a measure of default risk in Europe’s banks fell to its lowest level since at least 2010. And the problem of retail-owned bonds is fading as they mature.

But the cases of Popular, Monte dei Paschi and the two mid-sized Italian banks have also revealed that the big shortcoming

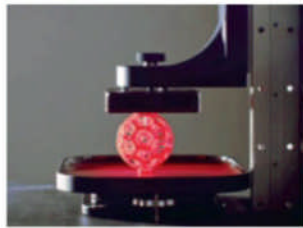
in Europe’s resolution framework is an unwillingness to impose losses on senior creditors, who rank above shareholders and junior bondholders in banks’ capital structures. Sparing them pain is wrong in principle. There is no reason why such investors should be free from risk. And it will exacerbate worries in Germany and elsewhere that a full banking union, complete with a European deposit-guarantee fund, is a way to spend taxpayers’ money, not protect it.

Yet handing out losses from a bank failure is an inherently political judgment. That is why ordinary depositors are protected. The reluctance to hit senior investors reflects a genuine fear of sparking wider contagion, perhaps even panic. Financial regulators ought to acknowledge this dilemma and be pragmatic in response. They should make sure that banks issue equity and layers of explicitly at-risk debt to institutional investors in large enough quantities to minimise the chances of having to bail in anyone else. Do that, and taxpayers will benefit even more from the post-crisis overhaul. ■

Additive manufacturing

Printing things everywhere

3D printers will shape the factory of the future



MANUFACTURING advances often take time to catch on. Only later does their real significance become apparent. The flying shuttle, invented in 1733 by John Kay, a British weaver, allowed the production of wider pieces of cloth. Because its movement could be mechanised, the shuttle later became one of the innovations which paved the way for the Industrial Revolution. In 1913 Henry Ford brought motoring to the masses by making his Model T on a moving assembly line; but it was Ransom Olds, a decade earlier, who had come up with the idea of an assembly line to boost production of the Olds Curved Dash. Throughout the 1980s factory bosses scratched their heads over Taiichi Ohno’s Toyota Production System and its curious methods, such as the just-in-time delivery of parts. Now it is the global benchmark for factory efficiency.

What, then, to make of the potential of Chuck Hull’s invention in 1983 of “stereolithography”? Mr Hull is the co-founder of 3D Systems, one of a growing number of firms that produce what have become known as 3D printers. These machines allow a product to be designed on a computer screen and then “printed” as a solid object by building up successive layers of material. Stereolithography is among dozens of approaches to 3D printing (also known as additive manufacturing).

Printing has become a popular way of producing one-off prototypes, because changes are more easily and cheaply made by tweaking a 3D printer’s software than by resetting lots of tools in a factory. That means the technology is ideal for low-volume production, such as turning out craft items like jewellery, or for customising products, such as prosthetics. Dental crowns and hearing-aid buds are already being made by the million with 3D printers. Because it deposits material only where it is needed, the technology is also good at making lightweight and complex shapes for high-value products rang-

ing from aircraft to racing cars. GE has spent \$1.5bn on the technology to make parts for jet engines, among other things.

But sceptics still rule the roost when it comes to goods made in high volumes. They say that 3D printers are too slow and too expensive—it can take two days to create a complex object. Unlike the techniques pioneered by Kay, Olds and Ohno, additive manufacturing will never revolutionise mass production. Such scepticism looks less and less credible.

Some of the new methods of 3D printing now emerging show that its shortcomings can be overcome (see page 19). Adidas, for one, has started to use a remarkable form of it called “digital light synthesis” to produce the soles of trainers, pulling them fully formed from a vat of liquid polymer. The technique will be used in a couple of new and highly automated factories in Germany and America to bring 1m pairs of shoes annually to market much more quickly than by conventional processes. A new technique called bound-metal deposition has the potential to change the economics of metal printing, too, by building objects at a rate of 500 cubic inches an hour, compared with 1-2 cubic inches an hour using a typical laser-based metal printer.

Layers of meaning

As in previous manufacturing revolutions, factories will take time to be transformed. The dexterity of human hands still beats the efforts to introduce the fully automated production of clothing, for example. But automation is spreading to every production line in every country, and 3D printing is part of that trend. As wages in China rise, some of its mass-production lines are being fitted not just with robots but the first 3D printers, too. And as global supply chains shorten, bosses will want to use additive manufacturing to tailor products to the demands of local consumers. The full consequences of the technology’s spread are hard to predict. But when they do become clear, Mr Hull’s name may well be bracketed with the likes of Kay, Olds and Ohno. ■

London's fire tragedy

"Death in the city" (June 24th) listed the failures in fire safety that probably compounded the devastation at Grenfell Tower in London. There was one significant omission: the toxicity of smoke from construction materials. Smoke is the biggest killer in fires, responsible for more than half of fire-related deaths. Reports from the first inquests into the deaths at Grenfell Tower show that smoke inhalation and toxic fumes were a significant cause of death.

An increasing number of combustible products are used in buildings but there is no way of knowing in advance which products are likely to be more or less toxic when they catch fire. We must make it obligatory for construction materials to be tested for the toxicity of smoke, with the results subsequently labelled on the products. However, the latest indications from the European Commission are that it will shy away from making such measures mandatory. That would be a grave error. The tragedy at Grenfell has shown that the risk-free option is the only option when it comes to fire safety.

JULIETTE ALBIAC
Managing director
Fire Safe Europe
Brussels

Kensington is not rotten because it is rich, it is rotten because, individually and collectively, we have not made the effort to ensure that policies are fair ("Embers still glowing", June 24th). The families in Grenfell work in jobs this city needs. This economy is based upon underpaid labour. Compassion flowed towards Latimer Road after the fire, but thousands of us felt helpless as we witnessed dazed men and women milling around in the hot sun and smoky, poisonous air, while they waited for news about loved ones.

Yet in a number of enclaves in Kensington it is considered impolite to criticise the council. The reality is that few of us bother to vote to elect the

councillors who make the decisions. Right now, ordinary residents need to demonstrate more than momentary compassion and show some long-term grit by staying in touch with local issues and our councillors. We need to apply pressure and not tolerate excuses. We must hold our elected officials to account.

CAROL GROSE
London

Elections without polls?

There was an important element missing in your analysis of the difficulties in forecasting election results ("Democracy's whipping boys", June 17th). Which is that the polls themselves must have some effect on how people vote. Some people won't bother to vote because they live in a safe seat, whereas others may make an effort to vote if polls suggest the result in their constituency will be close. Then, by extension, small or new parties may not get support if the big parties dominate the polls and potential voters think their vote will therefore be wasted on the newcomer. One can't help wondering what voters would do if they went into a polling booth knowing nothing about the likely outcome.

JONATHAN STONEMAN
Dartford, Kent

Chinese law

Your article about China's new cyber-security law ("Going its own way", June 3rd) missed two key points. First, multinationals with operations in China need to abide by the laws of their home countries as well as China's. Complying with casually drafted Chinese regulations can give rise to liability at home, sometimes even criminal liability. Companies discovered this to their cost when they decided to comply with China's requirement to share lists of names of HIV-positive employees, breaking American, British and European laws in so doing.

Second, law firms and security consultants should not be advising on how to deal with the cyber-security law

without input from China's less vocal but more knowledgeable IT professionals, who know how such laws are enforced in practice. Compliance work in China is important, but blind compliance is counter-productive and usually increases risk.

NICOLAS GROFFMAN
Harrison Clark Rickerbys
London

The perils of predictions

I found *The Economist's* self-flagellation over its past mistakes in predicting future events to be refreshing, unique and admirable (Free exchange, June 10th). However, I do think it is time for you to update your list of sins beyond the oft-mentioned forecast from 1999 of \$5 barrels of oil, lest your readers believe your track record has improved of late. Might I suggest your prediction from 2015 that Donald Trump will not win the Republican presidential nomination ("El Donald", July 25th 2015)?

DEREK STEELBERG
Chicago

Your list of fallacies from the past omitted perhaps *The Economist's* most glaring error of all. In June 1913, the *entente cordiale* between Britain and France was described as "the expression of tendencies which are slowly but surely making war between the civilised communities of the world an impossibility" ("Neighbours and friends", June 28th 1913). Not quite.

MATTHEW REES
McLean, Virginia

Taiwan's diplomatic ties

Regarding Panama's decision to break diplomatic ties with Taiwan ("War by other means", June 17th), during my two terms as president of Taiwan we maintained a diplomatic truce with mainland China by relying on a political consensus reached in 1992, which states "one China, respective interpretations." My successor, President Tsai Ing-wen, has refused to accept this consensus, which Beijing sees as a breach of mutual trust

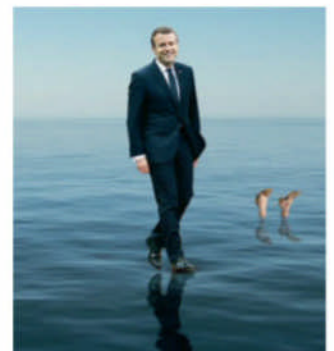
because it considers the consensus as the core foundation of cross-strait relations.

Because of the consensus Taiwan's international status has been greatly enhanced. Other than the 22 diplomatic allies we have kept intact, we were able to attend the World Health Assembly under my administration after an absence of 38 years, and were invited to the annual conference of the International Civil Aviation Organisation after 42 years. The number of countries or territories that gave Taiwanese citizens visa-free or landing visa status tripled from 54 to 164. These are tangible benefits.

Panama will probably not be the last to cut diplomatic ties with Taiwan. But it is not too late for President Tsai to mend fences with Beijing by recognising the 1992 consensus. After all, Taiwan's constitution from 1947 is a one-China statement from which the consensus was derived.

MA YING-JEOU
Former president of Taiwan,
2008-16
Taipei

Not much holding him up



Armed with a lowly 35.3% turnout in the second round of the French legislative elections, Emmanuel Macron is not walking on water, he is skating on thin ice ("Europe's saviour?", June 17th).

JULIAN LAGNADO
Strasbourg ■

Letters are welcome and should be addressed to the Editor at The Economist, 25 St James's Street, London SW1A 1HG
E-mail: letters@economist.com
More letters are available at:
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Director, Executive Education

The Wits Business School is an internationally recognised business school based in Africa's economic heartland, Johannesburg. It has almost 50 years of experience in business education and spearheaded innovation, teaching and research excellence in South Africa. The WBS is accredited by leading international organisations such as the Association of MBAs (AMBA) and the Global Admissions Council (GMAC). The WBS is the only business school in Africa to have been admitted to the Partnership in International Management (PIM), a student exchange programme for international study at over 60 leading business schools around the world.

The Wits Business School is looking to recruit, for a period of 5 years (renewable), a **Director Executive Education** who will be based on the Parktown campus in Johannesburg. This is a strategic leadership role within the Wits Business School, which is part of the Faculty of Commerce Law & Management of the University of the Witwatersrand.

The key responsibilities and objectives of this role will include:

- In alignment with the overall strategy of WBS, develop and execute a competitive strategy for Executive Education that is aligned, relevant, sustainable and impactful and will grow WBS reputation, both locally and across borders
- Design, customise and position WBS executive education offerings to specifically cater to the needs of clients in South Africa and Africa
- Build strong sustained partnerships with corporations and institutions to strengthen the reputation, standing and impact of Executive Education at WBS
- In collaboration with the Academic and Marketing Director, successfully design programs and market WBS as the premium provider of executive education
- Collaborate with a diverse team of Academics and Administrative support build on the values and culture of collaboration and accountability

The successful candidate will have:

- A solid academic background (preferably a Master's) and 10 years of work related experience
- Deep understanding of South Africa's and Africa's business environments.
- A passion for business and Executive education
- International experience a plus

The University of Witwatersrand retained the services of executive search firm Egon Zehnder. Applicants are to send their detailed CVs, cover letter, and references to Johannesburg@egonzehnder.com

Applications that meet the criteria must arrive by email no later than midnight on the 15th July 2017. Only suitable candidates will be contacted by Egon Zehnder for further interviews and referencing. Should you not receive any correspondence after two weeks of sending your application, please consider your application unsuccessful.

SCULPTING GLOBAL LEADERS

The University is committed to employment equity. In accordance with our Employment Equity goals and plan, preference will be given to suitable applicants from designated groups, as defined in the Employment Equity Act, 55 of 1998 and subsequent amendments thereto.



The OECD is a global economic forum working with 35 member countries and more than 100 emerging and developing economies to make better policies for better lives. Our mission is to promote policies that will improve the economic and social well-being of people around the world. The Organisation provides a unique forum in which governments work together to share experiences on what drives economic, social and environmental change, seeking solutions to common problems.

Director for Environment

www.oecd.org/env

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The OECD Environment Directorate (ENV) provides relevant and timely information, analysis and advice to support governments in identifying and implementing the environmental policies needed to support a cleaner, more resource-efficient and low-carbon green growth path. It currently comprises approximately 110 staff members working across a broad range of issues such as: green growth, climate change, biodiversity, water, eco-innovation, resource productivity and waste, environmental policy tools and evaluation, safety of chemicals, biotechnology and nanomaterials, and linkages between environment and tax, agriculture, energy, transport, development assistance, trade and investment policies.

We are looking for a dynamic and visionary Director to provide leadership and strategic direction to leverage the comparative advantage of the Environment Directorate, ensuring high relevance and impact of its work and alignment to the 21x21 strategy of the Secretary General. As a key member of the Senior Management team of the Organisation, s/he will be responsible for advancing the Strategic Objectives of the Secretary-General in ENV's areas of work, operating closely with its Committee, Working Parties and Expert Groups. S/he will provide intellectual leadership, and in line with the New Approaches to Economic Challenges, will ensure that the OECD is at the forefront of policy thinking in the environment domain. S/he will also promote horizontal work, particularly the Inclusive Growth Initiative, but many others, and foster co-ordination and joint work with other areas of the Organisation, collaborating closely with the Office of the Secretary General and with the OECD Sherpa and her office.

The breadth and the complexity of the policy issues for which ENV is responsible, call for a highly motivated executive with an excellent understanding of environment issues, political processes, and effective institutional settings. S/he should be someone who thrives in a multidisciplinary work environment, exhibits innovative strategic thinking and political sensitivity and should have a proven track record of managing a complex programme of work and budget.

Full details can be found at www.oecd.org/careers/vacancies ref. 11502. Applications from OECD member country nationals should be submitted online by **9 July 2017, midnight**.



Wits Business School, Director

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The Wits Business School is looking to recruit, for a period of 5 years (renewable), a **Director** who will be based on the Parktown campus in Johannesburg. This is the top leadership role within the Wits Business School, which is part of the Faculty of Commerce Law & Management of the University of the Witwatersrand.

The key responsibilities and objectives of this role will include:

- Provide the academic vision and intellectual leadership to enable the Wits Business School to maintain and grow its position of excellence
- Drive the execution of the strategy of WBS to become the business school of choice in Africa by 2020
- Lead and manage an experienced executive team as well as around 40 academic professionals
- Manage the school in all its dimensions: financial, human resources, administration and relations with the University
- Create a culture of collaboration with accountability for managing resources and increasing reach
- Build strong partnerships with iconic corporations and institutions in South Africa, Africa, and the rest of the world to strengthen the reputation, standing and impact of WBS

THE CANDIDATE

A politically astute, experienced, inspirational and resilient leader, the Executive Director will have the professional standing and experience so as to command the respect and trust of members of the school, the University, and the business community. Ideally, s/he will have experience at the highest management level, including financial management, within an academic institution or a respected corporation. The successful candidate will have:

- A solid academic background (preferably a PhD) and 10 years of leadership experience
- Deep understanding of South Africa's and Africa's business environments.
- A passion for business and business education
- International experience

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WitsBusinessSchool@egonzehnder.com

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PRESIDENT
 Narxoz University

Founded in 1963, Narxoz University is a distinguished private institution of higher education in Almaty, Kazakhstan's business and banking centre. Narxoz was the first elite school established for the study of Economics in Kazakhstan and one of Eurasia's education legacies. Narxoz graduates rank among Kazakhstan's most successful leaders in government, business and banking. The University continues to focus on teaching Economics but includes multidisciplinary faculties devoted to teaching Economics, Finance, Management, Marketing, Law, International Affairs, Hotel Management, Tourism, Catering, Information Systems and Environmental Studies -- at the undergraduate and graduate level. In addition, the University hosts the International Business School (IBS), a dynamic business incubator centre, a satellite campus in Astana, the nation's capital, as well as internship programs with the National Bank of Kazakhstan, the Ritz Carlton Hotels, among others.

In recent years, Narxoz has undergone highly successful systemic reform and transformation of its management, academic curriculum, and facilities to align University practices with international education standards, accreditations and partnerships to position the University as a leader in innovation and research in Kazakhstan and the Central Asian region.
 For further information, see www.narxoz.kz.

The Management Board of Narxoz University and the University's patron, Verny Capital, seek outstanding candidates to serve as the next President of the University, beginning January 2018. The new President will report to the Supervisory Board of the University and will lead strategic development; assume direct control of the educational, academic, operational and financial activities of the University; ensure sustainability of operations and use of University resources; and oversee effective interaction with state authorities and relevant institutions in Kazakhstan. The qualities that Narxoz seeks in its next President include strong institutional leadership, distinguished academic credentials, managerial abilities and an ability to relate to and inspire students of diverse nationalities.

Required Qualifications: Doctorate degree in Economics or Business. Fluency in Russian and English. Established track record in academic administration with at least five years experience in senior academic administration. Ten years teaching experience and recognition among international higher education community. Experience in developing policy-reforms and relevant research initiatives. Ability to interact with students, colleagues and international business community members of diverse cultural backgrounds. Successful fundraising experience. Experience in international accreditations (e.g., EPAS, EQUIS and AACSB).

Narxoz University's Supervisory Board has retained Ward Howell International to assist in the international search effort.

For further information on the position and additional details on qualifications, requirements please email Alexander Davydov, Partner, Ward Howell International at Davydov@wardhowell.com and Lyndsay Howard at lyndsayhoward@gmail.com.

The closing date for applications is Friday, July 7.



Director, Migration Health Division
 (Geneva, Switzerland) - D1 Level

The International Organization for Migration is inviting applications for the post of **Director, Migration Health Division at Headquarters in Geneva, Switzerland**. The Director's responsibility is to oversee and coordinate global activities of the Migration Health Division (MHD).

MHD is a Division within the Department of Migration Management (DMM), with considerable thematic autonomy, responsible for the development of migration and health related policy guidance to the Field, the formulation of global strategies, standard setting and quality control as well as for knowledge management with relation to issues pertaining migration and health. Dealing with cross-cutting subject matter, MHD deals with migration and health issues in both emergency and non-emergency contexts.

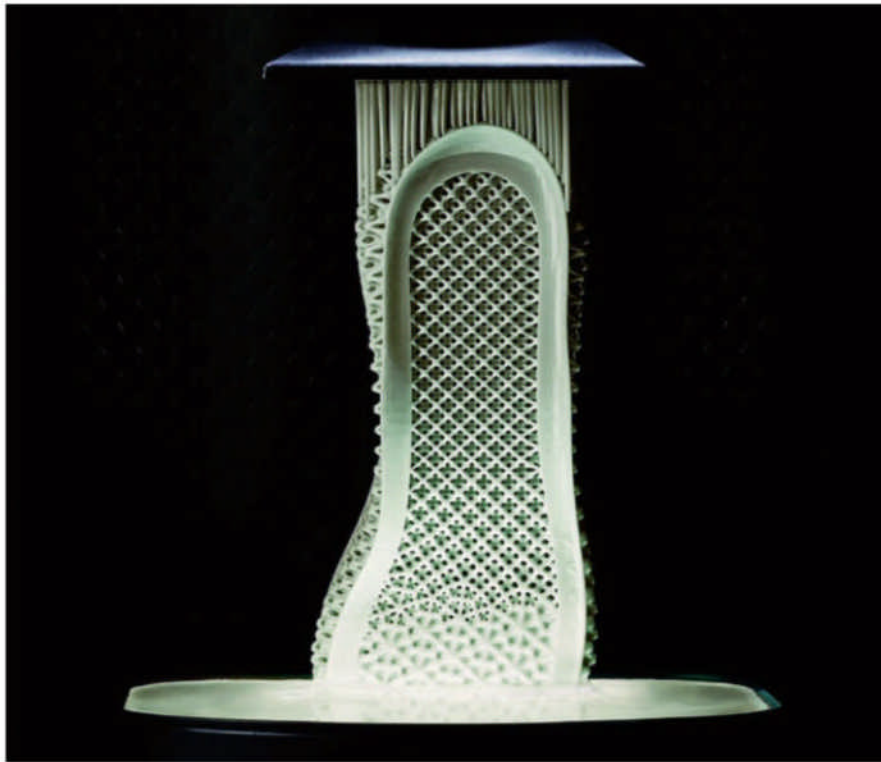
Qualifications and Core Competencies: Master's degree in a health related field (such as: Medicine, Health Sciences, Public Health Administration), preferably at the PhD level from an accredited academic institution with fifteen years of relevant professional experience. Postgraduate degree in Public Health or degree related to Migration Studies, obtained from an accredited academic institution is highly desirable. Relevant professional experience in both a health domain and with migration health at national and international levels. Experience in providing expert advice, support to governments as well as in liaising with governmental and diplomatic authorities and international institutions; Experience in communication of migration health issues in the framework of international fora. Sound knowledge of project cycle management, in particular in health programme management as well as of monitoring and evaluation.

Salary: IOM offers an attractive salary package based on the United Nations system at the D1 level.

A full term of reference is available at the IOM website: www.iom.int.
Candidates may apply before 17 July 2017 using the IOM online e-recruitment facility: <http://www.iom.int/how-apply>.

The factories of the future

Advances make 3D printers a more potent option for industrial production



SLOWLY but surely the sole of a shoe emerges from a bowl of liquid resin, as Excalibur rose from the enchanted lake. And, just as Excalibur was no ordinary sword, this is no ordinary sole. It is light and flexible, with an intricate internal structure, the better to help it support the wearer's foot. Paired with its solemate it will underpin a set of trainers from a new range planned by Adidas, a German sportswear firm.

Adidas intends to use the 3D-printed soles to make trainers at two new, highly automated factories in Germany and America, instead of producing them in the low-cost Asian countries to which most trainer production has been outsourced in recent years. The firm will thus be able to bring its shoes to market faster and keep up with fashion trends. At the moment, getting a design to the shops can take months. The new factories, each of which is intended to turn out up to 500,000 pairs of trainers a year, should cut that to a week or less.

As this example shows, 3D printing has come a long way, quickly. In February 2011, when *The Economist* ran a story called "Print me a Stradivarius", the idea of printing objects still seemed extraordinary.

Now, it is well established. Additive manufacturing, as it is known technically, is speeding up prototyping designs and is also being used to make customised and complex items for actual sale. These range from false teeth, via jewellery, to parts for cars and aircraft. 3D printing is not yet ubiquitous. Generally, it remains too slow for mass production, too expensive for some applications and for others produces results not up to the required standard. But, as Adidas's soles show, these shortcomings are being dealt with. It is not foolish to believe that 3D printing will power the factories of the future. Nor need the technology be restricted to making things out of those industrial stalwarts, metal and plastic. It is also capable of extending manufacturing's reach into matters biological.

Adding it up

There are many ways to print something in three dimensions, but all have one thing in common: instead of cutting, drilling and milling objects, as a conventional factory does, to remove material and arrive at the required shape, a 3D printer starts with nothing and add stuffs to it. The adding is done according to instructions from a com-

Also in this section

22 Economies of scalelessness

puter program that contains a virtual representation of the object to be made, stored as a series of thin slices. These slices are reproduced as successive layers of material until the final shape is complete.

Typically, the layers are built up by extruding filaments of molten polymer, by inkjet-printing material contained in cartridges or by melting sheets of powder with a laser. Adidas's soles, however, emerge in a strikingly different way—that is, according to Joseph DeSimone, the result of chemists rather than engineers thinking about how to make things additively. Dr DeSimone is the boss of Carbon, the firm that produces the printer which makes the soles. He is also a professor of chemistry at the University of North Carolina, Chapel Hill.

Carbon's printer uses a process called digital light synthesis, which Dr DeSimone describes as "a software-controlled chemical reaction to grow parts". It starts with a pool of liquid polymer held in a shallow container that has a transparent base. An ultraviolet image of the first layer of the object to be made is projected through the base. This cures (ie, solidifies) a corresponding volume of the polymer, reproducing the image in perfect detail. That now-solid layer attaches itself to the bottom of a tool lowered into the pool from above. The container's base itself is permeable to oxygen, a substance that inhibits curing. This stops the layer of cured polymer sticking to the base as well, and thus permits the tool to lift that layer slightly. The process is then repeated with a second layer being added to the first from below. And so on. As the desired shape is completed, the tool lifts it out of the container. It is then baked in an oven to strengthen it.

Dr DeSimone says that digital light synthesis overcomes two common problems of 3D printing. First, it is up to 100 times faster than existing polymer-based printers. Second, the baking process knits the layers together more effectively, making for a stronger product and also one that has smooth surfaces, which reduces the need for additional processing.

All this, he reckons, makes digital light synthesis competitive with injection moulding, a mass-production process which has been used in factories for nearly 150 years. Injection moulding works by forcing molten plastic into a mould. Once the plastic has solidified, this mould opens to eject the part. Injection moulding is fast ►►

▶ and extremely accurate, but making the moulds and setting up the production line is slow and expensive. Injection moulding is therefore efficient only when making thousands of identical things.

The usual economies of scale, however, barely apply to 3D printers. Their easy-to-change software means they can turn out one-off items with the same equipment and materials needed to make thousands. That alters the nature of manufacturing. For example, instead of having vast warehouses packed with spare parts, Caterpillar and John Deere, two American producers of construction and agricultural equipment, are working with Carbon on moving their warehouses, in effect, to the online cloud, whence digital designs can be downloaded to different locations for parts to be printed to order.

Printers made by established producers are improving, too. They are speeding up, enhancing quality and printing more colours and in a wider variety of polymers, including rubbery materials. Two of the biggest firms in the business, 3D Systems and Stratasys, were joined last year by a third American company when HP, well known for conventional printers in offices, entered the market with a range of 3D plastic printers costing from \$130,000. According to the latest report by Wohlers, a consultancy, the number of firms manufacturing serious kit for 3D printing (ie, not hobby printers, but systems priced from \$5,000 to \$1m and more) rose to 97 in 2016 from 62 a year earlier. Nor is purchase always necessary. Whereas many producers sell their machines outright, Carbon follows a “software” model and leases them to customers at a price starting from \$40,000 a year. And, like software firms, it updates its machines over the internet.

New metallica

Printing polymers, which have low melting-points and co-operative chemistry, is reasonably easy. Printing metals is another matter entirely. Metal printers use either lasers or electron beams to reach the temperatures needed to melt successive layers of powder into a solid object. This takes place in multiple stages: depositing the powder, spreading it and, finally, fusing it.

Such printers can produce extremely intricate shapes, but may need to run for several days to make a single item. For high-end components used in low-volume products, such as supercars, aircraft, satellites and medical equipment, this can, nevertheless, be worth the wait. 3D printing, which is able to create voids inside objects far more easily than subtractive manufacturing can manage, increases the range of possible designs. There are cost savings, too. Addition, which deposits metal only where it is needed, generates less scrap than subtraction. That saving matters. Many of the specialist alloys used in high-



A kilo saved is a trophy won

tech engineering are exotic and expensive.

These advantages have been enough to persuade GE, one of the world's biggest manufacturers, to invest \$1.5bn in 3D printing. In Auburn, Alabama, for example, the firm has spent \$50m on a factory to print fuel nozzles for the new LEAP jet engine, which it is building with Safran of France. By 2020, the plant in Auburn should be printing 35,000 fuel nozzles a year.

Each LEAP uses 19 nozzles, which have new features, such as complex cooling ducts, that GE says can be created in no other way. The nozzles are printed as single structures instead of being welded together from 20 or more components as previous versions were. The new nozzles are also 25% lighter than older designs, which saves fuel. And they are five times more durable, which reduces servicing costs.

More such developments are coming. GKN Aerospace, a British firm, recently signed a five-year agreement with Oak Ridge National Laboratory, in Tennessee, to find new ways to print large structural aircraft parts in titanium. The intention is to reduce waste material by as much as 90% and to cut assembly time in half.

Existing metal printers can be as big as a car, and some cost \$1m or more. What, though, might companies achieve if they had smaller, cheaper metal printers? Ric Fulop thinks he can make such machines. Mr Fulop is the boss of Desktop Metal, a firm he co-founded in 2015 with a group of professors from the Massachusetts Institute of Technology and nearly \$100m in cash from investors that include GE, Stratasys and BMW. The firm's first printers are now coming to market.

Instead of zapping layers of powder with a laser or an electron beam, Desktop Metal's machines use a process called bound-metal deposition. This also involves a bit of cooking. First, the machine extrudes a mixture of metal powder and polymers to build up a shape, much as some plastic printers do. When complete, the result goes into an oven. This burns off the polymers and compacts the metal particles by sintering them together at just below their melting point. The outcome is a dense metallic object, rather like one that

has been cast the old-fashioned way as a solid chunk of metal. The sintering causes the object to shrink. But this can be compensated for by printing it a little larger than required, because the shrinkage occurs in a predictable way.

Desktop Metal makes two sorts of machine. Its Studio system, priced at around \$120,000, is designed for prototypes and small production runs. A full-scale system costs just over \$400,000. By incorporating a conventional metal printer's multiple production stages into a single “sweep” of the print head, Desktop Metal's machines are fast. According to Mr Fulop, they can build and bake objects at the rate of 500 cubic inches (8,194cm³) an hour. That compares with about 1-2 cubic inches with a conventional laser-based metal printer, or 5 cubic inches with an electron-beam machine.

On top of all this, because the materials used by Desktop Metal's printers are already employed in other industrial processes they are, according to Mr Fulop, 80% cheaper than some specialist 3D-printing powders. And they require less finishing to remove rough surfaces. Improvements such as these can change the economics of manufacturing (see box on next page).

Printing a bit of you

One of the earliest adopters of additive manufacturing was the medical industry. For good reason; everybody is different, and so, therefore, should be any prosthetics they might need. As a result, millions of individually sculpted dental implants and hearing-aid shells are now printed, as are a growing number of other devices, such as orthopaedic implants. The big prize, however, is printing living tissue for transplants. Though this idea is still largely experimental, several groups of researchers are already using bioprinters to make cartilage, skin and other tissues.

Bioprinters can work in several ways. The simplest use syringes to extrude a mixture of cells and a printing medium, a method similar to that used by a desktop printer in plastic. Others employ a form of inkjet printing. Some medical researchers are trying a form of 3D printing called la- ▶▶

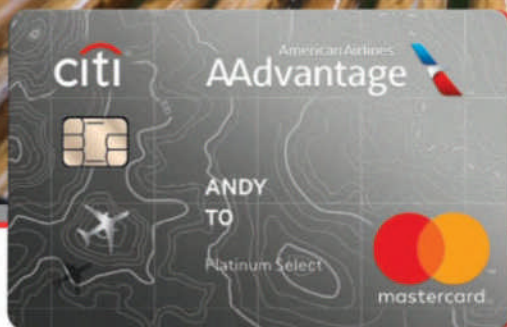
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► ser-induced forward transfer. In this, a thin film is coated on its underside with the material to be printed. Laser-pulses focused onto the film's upper surface cause spots of that material to detach themselves and land on a substrate below. Sometimes, though, the third dimension needs a helping hand. Certain printers therefore impose the desired shape by printing cells directly onto a pre-prepared scaffold, which dissolves away once the cells have proliferated sufficiently to hold their own shape.

Anthony Atala and his colleagues at the Wake Forest Institute for Regenerative Medicine, in North Carolina, have printed ears, bones and muscles in this way, and have implanted them successfully into animals. The crucial part of the process is ensuring the printed tissue survives and then integrates with the recipient when transplanted. Some types of tissue, such as cartilage, are easy to grow outside the body. Infusing nutrients into the medium they are kept in is sufficient to sustain them, and they tend to take well when transferred to a living organism. More complex structures, though, like hearts, livers and pancreases, require a blood supply to grow beyond being tiny slivers of cells. Dr Atala and his colleagues therefore print minute channels through their structures, to let nutrients and oxygen diffuse in. This encourages blood vessels to develop. The next step, probably within a few years, will be to test such bioprinted material on people.

All clever stuff. But what was missing in bioprinting, reckoned Erik Gatenholm and Hector Martinez, two biotechnology entrepreneurs, was some form of standardised "bio-ink". So, in January 2016, they founded a firm called Cellink to commercialise bioprinting materials developed at the Chalmers University of Technology, in Gothenburg, Sweden.

Cellink's ink is made from nanocellulose alginate, a biodegradable material containing wood fibres and a sugary polymer found in seaweed. Researchers first mix their cells into the bio-ink and then extrude the result as a filament from which the desired shape is constructed. The company has gone on to develop tissue-specific bio-inks that contain growth factors needed to stimulate particular types of cells, including stem cells. These are cells that can proliferate to produce any of the cell types that form a particular tissue. If the stem cells in question are obtained from the patient into whom the transplant will later be inserted, that will reduce the risk that the transplant will be rejected.

In addition to making bio-ink, Cellink has also launched its own range of printers. These are sold at a discount to universities in return for research feedback. That provides a good picture of what is going on. In particular, says Mr Gatenholm, advances are being made in printing tissues for drug testing. One is to employ a pa-

Production costs

Making things anew

Printing in 3D transforms the economics of manufacturing

TYPICALLY, a new manufacturing company begins by making small numbers of high-value items for niche markets before tooling up to produce stuff in large volumes for mass consumption. But Domin Fluid Power, a five-year-old firm based near Bristol, in England, has used 3D printing to go about things rather differently.

Domin began as a design service working in the aerospace industry, but after two years its bosses decided it should make its own products. Those they picked were high-performance hydraulic pumps and powered servovalves, both of which control fluids in mechanisms found in machines ranging from aircraft to processing plant in factories. The question was which market they should concentrate on.

Aerospace offers good profit margins. But it is a low-volume business and one in which new devices often take time to be accepted, delaying return on investment. The market for factory and general industrial equipment is broader, easier and quicker to enter, and can absorb large volumes. But it is price-sensitive. So, unless those volumes can actually be sold, and economies of scale achieved, bankruptcy looms. At least, it does with conventional manufacturing methods.

Domin, however, acquired a 3D metal printer from EOS, a German firm. And that, says Marcus Pont, the company's general manager, overturned the calcula-

tions. For a start, economies of scale hardly matter with a 3D printer. Changing designs requires merely a tweak of the software, rather than the retooling of a factory. This means, at the operating level, the unit cost of making one thing or many things is about the same.

Moreover, a 3D printer can create sophisticated designs that require less material to make, which lets products be lighter. Usually, removing material from a product to lighten it makes it more expensive. Cutting, drilling and machining require extra work and thus incur extra cost. That would normally push a supplier into a market that values weight-saving (see table). At one end of the scale, Formula 1 motor racing, a kilogram saved may be the difference between winning and losing a race. In this business such a kilogram is worth more than \$120,000. At the other end, saving a kilogram on equipment which sits on a factory floor is worth only a few dollars.

But with a 3D printer hardly any additional work is needed. Indeed, contrary to accepted wisdom, the lighter a part gets the cheaper it becomes to make, because of the materials saved. So Domin decided to enter the market for factory and general equipment first, with a competitively priced lightweight servovalve. This valve is, though, identical to the one they will offer for mobile hydraulics in tractors, diggers and trucks, and also to the one they hope will qualify for aerospace use. With a little modification, they think it will also crack the racing-car market, opening a way to reach the entire automotive industry.

Mr Pont believes Domin is at the head of a trend. As 3D printers get faster and the quality of their output improves, the market for manufactured goods will, he reckons, change dramatically. "Industry needs to rethink the value of additive manufacturing," he says. "It is not just a weight reducer but a cost reducer as far as we are concerned."

Weighty matters

	Value of weight saving, \$/kg
F1 motorsport	More than 120,000
Spacecraft	25,000
Aircraft	1,200-13,000
Automotive	20-600
Trucks, excavators, etc.	1.3-12.7
Factory equipment	0-6

Source: Marcus Pont, Domin Fluid Power, 2017

tient's own cancer cells to print multiple versions of his tumour. Each can then be challenged with a different drug, or mixture of drugs, to help determine what treatment will work best. For actual transplantation, Mr Gatenholm suggests that cartilage, followed by skin, are likely to be the first tissues printed for such use. Organs that need blood vessels will follow.

Bioprinting, then, looks set to become a new manufacturing industry—albeit one

located at medical centres and operating in sterile conditions that more resemble a laboratory than a production plant. But even the less esoteric forms of 3D printing, those involving plastics and metals, will transform what a factory is. The 3D print shops of the future will still have some workers. But those will mainly be hardware and software engineers. And they are more likely to be wearing white coats rather than overalls. ■



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Homicide in Baltimore

On murderous streets

BALTIMORE

Most parts of America have never been safer. Maryland's most populous city is not among them

BACK in the 1980s and early 1990s, when Dante Barksdale was playing the game in Baltimore—dealing drugs, toting guns, making some money—there was a process to killing people. “You couldn’t shoot someone without asking permission from a certain somebody,” muses the former gangster, on a tour of the abandoned row-houses and broken roads of West Baltimore, the most dangerous streets in America. “It’s become like, ‘I’m going to kill whoever’s got a fucking problem with it.’”

Mr Barksdale, who spent almost a decade in prison for selling drugs, speaks with authority. His uncle, Nathan “Bodie” Barksdale, was a big shot in the more hierarchical Baltimore gangland he recalls. Avon Barksdale, a fictional villain in “The Wire”, a TV crime drama set in Baltimore, was partly inspired by him. The younger Mr Barksdale was himself fleetingly portrayed in it. (“The Wire’ was a bunch of bullshit,” he sniffs. “I got shot in the fourth episode and I didn’t get paid.”) Now employed by the Baltimore health department, in a team of gangsters-turned-social workers known as Safe Streets, he uses his street smarts to try to pre-empt murders by mediating among the local hoodlums. This also gives him a rare vantage onto the city’s latest upwelling of violence, which is concentrated in poor, overwhelmingly black West Baltimore—and is horrific.

Hours after Mr Barksdale conducted his

tour of some of Baltimore’s most troubled streets on June 12th, they witnessed another six murders. That raised the number of killings in the city to 159, the highest recorded so early in the year at least since 1990, even though the city’s population was much bigger then than it is now. If weighted to reflect the fact that the murder rate always climbs in the hot, fractious summer months, this suggests Baltimore may see more than 400 murders this year. That would smash the existing record of 344 killings, which was set in 2015, fuelled by violent rioting over the death in police custody of a drug peddler called Freddie Gray.

This is catastrophic. A 50-minute drive from Washington, DC, black men aged 15 to 29 are as likely to die violently as American soldiers were in Iraq at the height of its Baathist insurgency. Yet there is no sign of Maryland or the federal government taking the sort of emergency action such a disaster would seem to justify. Instead of bolstering law enforcement in Baltimore and a few other violent cities, including chiefly Chicago, but also St Louis and Milwaukee, Jeff Sessions, the attorney-general, has tried unsuccessfully to row back a modest federal-government intervention devised by his Democratic predecessor. Meanwhile he has used the violence in those places to misrepresent the much more pacific state of America at large.

“The murder rate is up over 10%—the

largest increase since 1968,” Mr Sessions said last month in testimony to the Senate intelligence committee. He neglected to clarify that, notwithstanding that rise, the murder rate is at close to its lowest level in a quarter of a century. In most places, Americans have never been less likely to be murdered; the homicide rate in New York is below the national average. More than 55% of the increase last year was accounted for by Chicago, where 781 people were murdered—more than the total for New York and Los Angeles combined.

America is not experiencing a crime wave, in short, but rather historic progress marred by a few exceptionally bleak places. That does not justify Mr Sessions’s campaign for harsher custodial sentences across the board, which would not cut violent crime much or at all in Baltimore or anywhere. The attorney-general would do better to fathom what is causing the bleak spots, starting with a few stark truths.

As American as cherry pie

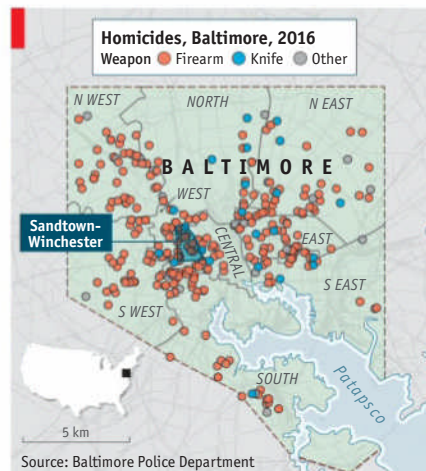
Most murder victims in America are black people shot dead by other black people. Blacks represent 13% of America’s population, yet in 2015 they represented 52% of the slain. The toll on black families and communities is appalling; between 1980 and 2013, 262,000 black men were murdered in America, more than four times America’s total number of casualties in Vietnam. If black Americans were murdered at no more than the national rate, America would still be an unusually violent developed country; its murder rate would fall from the current level of 4.9 per 100,000 people, which is similar to that of some African countries, to 2.4 per 100,000. That would make America merely three times as dangerous as Germany.

Criminologists have for decades ar- ▶▶

gued about what makes young black men so much likelier to commit murder than young men of other ethnicities. The answer lies in some combination of poverty, family instability, epidemics of drug use in the wretched inner-city districts into which many blacks were corralled by racist housing policies, and bad, or non-existent, policing. The last of these, which may be the most important, extends far beyond occasional instances of police brutality. In America's overtly racist past, the killers of black Americans were less likely to be caught than the killers of whites because black lives were valued less. These days, inadequate resources, recruitment and training of inner-city police officers are bigger problems. Yet the outcome is the same. In the 1930s, Mississippi solved 30% of black murders; in the early 1990s, Los Angeles County, then in the grip of a violent crack-cocaine epidemic, solved 36%; in 2015 the police in Baltimore solved 30.5% of murders, most of which involved blacks.

Where murderers operate with a sense of impunity, they are likely to commit more murders. "I probably know ten dudes right now who have shot people and never been arrested," says Mr Barksdale. Another grim indicator of impunity is that, while the number of fatal shootings has soared this year, the number of non-fatal ones has hardly increased. "Instead of taking a shot and running away, the gunmen are walking up and taking multiple shots to leave no witnesses alive," says Cassandra Crifasi, a researcher into gun violence at Baltimore's Johns Hopkins Bloomberg School of Health. In the absence of effective policing, friends and relatives of murder victims are also more likely to take the law into their own hands—and so the virus spreads.

The same pattern has been noted in other poorly policed societies, especially those experiencing upheaval or trauma. The homicide rate among black Americans, notes Jill Leovy, a writer on murder in America, is similar to that among Arabs in some parts of Israel's occupied territories and American frontiersmen in the 18th century. "Like the schoolyard bully," she writes in "Ghettoside", "our criminal-justice system harasses people on small pre-



texts but is exposed as a coward before murder. It hauls masses of black men through its machinery but fails to protect them from bodily injury and death."

Better policing contributed to the drop in violent crime seen in most American cities from the mid-1990s. The size of its contribution is unclear, however: the complexity of local circumstances and the patchiness of America's crime data makes accounting for changes in crime rates hard. Even with decades of data to mull over, and a list of likely factors including better policing, strong income growth, demographic changes and reduced alcohol consumption, researchers at the Brennan Centre for Justice, at New York University, could account for only half of the national reduction in violent crime. Accounting for the recent surge in killing in Baltimore and Chicago is even harder. Yet it is striking that both places have recently suffered a dramatic collapse in public trust in the police, sparked by acts of brutality.

Loathed but needed

Just as the killing of Freddie Gray, who suffered a fatal spine injury in the back of a police van, lit up Baltimore, so the killing of Laquan McDonald, another young black man, who was shot dead in possession of a pocket-knife, led to protests in Chicago. In both cases the police, undermanned and unsure how to comport themselves in a world of mobile-phone cameras in every pocket, retreated. Between November 2015 and January 2016, the number of suspects briefly detained in Chicago dropped by 80%. In Baltimore, arrest numbers have fallen in the past three years, even as the murder rate soared.

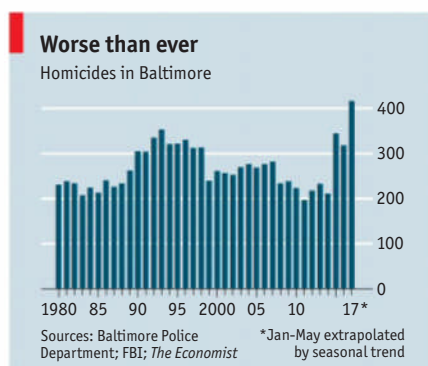
Baltimore's police department was thrown into additional disarray last year by a damning report from the Department of Justice, which concluded that many of its officers were poorly trained, racist and incompetent, especially in their bungled efforts to police poor black neighbourhoods. This finding led the feds to demand the overwatch role that Mr Sessions has

tried unsuccessfully to give up. Another scandal, in March, has made matters worse; seven members of an elite Baltimore police unit were charged with robbing drug dealers and law-abiding Baltimoreans, among other crimes. "I sell drugs," one allegedly boasted.

Baltimore's police bridle at the suggestion that they are to blame for the city's violence. They are at least trying harder. The case-closure rate for murders is currently around 50%. In response to the six murders on the day of your correspondent's visit to West Baltimore, the city's police commissioner, Kevin Davis, also announced what amounted to a weeklong state of emergency. He dispatched most of the city's 2,850 police officers—including many previously dedicated to office-work—on 12-hour patrols. If such efforts could be sustained, they would probably be popular, even though the police are not. "No one trusts the police, no one wants to tell them anything," said Yolanda Stewart, a resident of the troubled Sandtown-Winchester neighbourhood, whose 21-year-old nephew was recently shot and maimed outside her house. "But we need strong police around here to protect us."

A tour of Baltimore's trouble spots also evinces some sympathy for the cops. Better policing alone cannot curb a major crime wave; though New York's crime-fighting success is often attributed to an imaginative crackdown on petty crime in the 1990s, the city's long economic boom probably played a bigger part. By contrast, the state of Baltimore's poorest neighbourhoods, huddled on either side of the Patapsco river, is unrelentingly dire.

Whole streets have been boarded up against the junkies who hunker miserably on the weedy verges. Where an occasional inhabited house interrupts the monotony of abandonment, a glimpse of curtains or a pot-plant appears both valiant and acutely pathetic. ("The people in these communities are doing the best they can," says Ericka Alston, a former addict who runs a much-praised after-school club in West Baltimore.) The city has an estimated 16,000 abandoned houses, some of which have lain empty since its previous big riot, in 1968, following the death of Martin Luther King. Most of the damage is more recent, however. A former steel and manufacturing hub, the city has lost 75,000 factory jobs since 1990; as a result, around a quarter of Baltimoreans are stuck in poverty, with few obvious exits. A 25-year-long study of 790 children in Baltimore by the sociologist Karl Alexander and colleagues, from 1982 to 2007, found only 4% of poor children made it through college. In Sandtown-Winchester, shortly before the riots, 52% of adults were unemployed, 49% of teenagers were "chronically absent" from school and a third of houses were empty or abandoned. Whatever caused the drop ▶▶



▶ in crime that Baltimore experienced with the rest of America, such indicators suggest it was fragile progress.

That is especially true given the attendant horrors of Baltimore's other big scourge, drug addiction, which also has a long history in the city. "If you think dope is for kicks and for thrills, you're out of your mind," said Billie Holiday, a jazz singer and heroin addict, who grew up in Sandtown-Winchester in the 1920s. Mr Barksdale and many of his ex-gangster colleagues cut their teeth during the crack-cocaine binge of the late 1980s and 1990s. Many, including Mr Barksdale, are the sons of addicts. Underpinning the latest crime surge is a third epidemic, of opioid prescription drugs, which is in some ways the deadliest yet.

According to an estimate by the health department, around 50,000 Baltimoreans are addicted to opioids. Some consider that an exaggeration; a visit to the streets around Baltimore's Lexington Market suggests it might not be. "See him on the bike! He's so high he can't ride straight," says Mr Barksdale, from behind the wheel, picking out the stoners with an expert eye. There appear to be dozens of them; two dealers are plainly visible, dishing out the content of orange pillboxes. It is probably Percocet, an opioid pain-reliever, with a street value of \$30 for a 30mg hit. One of the dealers is operating within a few feet of a police van—perhaps, Mr Barksdale speculates, because he too is stoned. "Everyone's high!" he exclaims. "You used to be ostracised if you was on drugs. Now it's so common it's accepted."

In the view of Mr Barksdale and his co-workers, these and other changes in Baltimore's illegal drugs market help drive the killing. The more hierarchical gangs, and regulated murders, depicted in "The Wire"

were based on the relative scarcity of heroin and cocaine; a gangster with a good supply of the drugs occupied a commanding position. By contrast, the easier availability of prescription drugs—especially in the aftermath of the riots, during which many pharmacies were looted—has led to a profusion of petty dealers, many of whom are also addicts. The result is constant turf battles which, unchecked by sobriety, are especially liable to turn bloody.

In turn, the bloodshed has led to a general downgrading of the value of a life. "The normal has changed, violence and retaliation and pain are expected," says Ms Alston, who estimates that 98% of the 50-100 children who attend her after-school club have heard or seen someone being shot. "This is about six-year-olds walking in and saying, 'Did you hear so and so get shot?'" That suggests a third way in which violence, which public-health experts increasingly view as analogous to infectious disease, spreads. The community starts taking it for granted.

Safe Streets is one of the more imaginative efforts to stop the contagion. It was launched in Baltimore a decade ago after a model pioneered in Chicago by an epidemiologist, Gary Slutkin. His idea was to erect barriers around the violence in the form of interventions by community leaders and streetwise locals. Of 31 such "violence-interrupters" employed by Safe Streets, all but two have done prison time. "We all did shit, got shot, got hit the fuck up, that's why we're credible messengers," explains Mr Barksdale. "Ain't none of us were snitches." Patrolling their areas in orange t-shirts, the violence-interrupters soak up news of the latest disagreements with obvious relish. ("So there are these two marching bands got this beef going on," recounts one with delight, through an open window of Mr Barksdale's car, "and they got knives and pit-bulls...")

Uncertainty about where the violence-interrupters stand in relation to the law has made them controversial. Because they are devoted to forestalling violence, they tend to take no view on the drugs deals they observe. A few have also sought to augment their meagre salaries unwisely. Mr Barksdale concedes that one of the problems is keeping people engaged without dipping back into their old lifestyles. His gangster uncle, who briefly worked for Safe Streets, was one who succumbed to temptation. Nathan Barksdale died in prison in North Carolina in February, aged 54, having been jailed for four years for trafficking heroin. Such controversies have left Safe Streets short of friends in high places; it almost lost its annual funding, of \$1.6m, last year. Yet the ex-crims appear to be effective. A study by researchers at Johns Hopkins University published in 2012 found a statistically significant reduction in non-fatal violence in the four neighbourhoods they patrol,

and a significant reduction in killings in two of them. Given the high cost of violence, financially and otherwise, that suggests Safe Streets is good value. It is estimated that \$80m has been spent on treating gunshot wounds in Baltimore over the past five years.

It will take more than a few more ex-gangsters to pacify Baltimore, however. A straw-poll of Safe Streets workers suggests the city's troubled parts need four things above all. They need better schools, to mitigate the damaging effects on teenagers of their chaotic families, and to equip them for the jobs being created in Baltimore's plusher areas. They need fewer prescription drugs. And they need more and better policing. For the last of these, there is at least some hope in the form of the promised reforms and federal oversight. Of better schools and fewer drugs in Baltimore's violent districts there is no sign and, in the absence of serious attention to this calamity, little prospect. ■

The Supreme Court

Rightward, ho!

NEW YORK

The battle to watch pits one kind of conservative against another

WHEN the justices took their chairs last October, Hillary Clinton was a shoo-in for the presidency and Antonin Scalia's seat seemed destined for a jurist who would anchor a liberal Supreme Court majority for the first time in almost five decades. Nine months later, as the justices wrapped up a largely uncontentious term, Neil Gorsuch, Donald Trump's pick for Mr Scalia's seat, seems poised to cement the court's conservative tilt for the foreseeable future. "Conservatives have to be clinking their champagne glasses," says Elizabeth Wydra, president of the Constitutional Accountability Centre.

Justice Gorsuch joined the court in mid-April, taking part in only 13 of the 60-odd cases handed down by the end of June. That is enough to confirm that he mimics his predecessor's jurisprudence. Indeed, he seems to be even more conservative: his votes are in lockstep with those of the right-most justice, Clarence Thomas. In the eyes of Ian Samuel of Harvard Law School, who clerked for Scalia, the new justice "seems to combine Justice Thomas's views with Scalia's writing skill and assertiveness". Justice Gorsuch has already penned or joined a sheaf of conservative opinions and statements on religion, gun rights, gay couples and Mr Trump's travel ban that needle not only the court's liberal justices, but also Anthony Kennedy, his old boss, ▶▶



Barksdale, gangster-turned-helper

▶ and John Roberts, the chief.

On June 26th the court ruled that Mr Trump's executive order suspending travel from several Muslim countries applied only to foreigners who lacked a "bona fide" link to people or organisations in America. Justice Gorsuch, joined by Justices Alito and Thomas, dissented in part. They argued that the order should have been revived immediately pending the court's full consideration of the case in October. They seemed unwilling to affirm a string of lower-court rulings that judged the ban to be motivated by religious hostility rather than genuine national-security concerns.

The court's compromise on that issue bears the print of Chief Justice Roberts, who has tried to keep his court above the political fray. In April the chief said there was a "real danger" that the public would assume that the courts were embroiled in the same "partisan hostility" as Congress and the White House. By making its endorsement of the president's travel policy partial and temporary, and in light of the time-bound nature of the order (its entry and refugee bans expire in 90 and 120 days respectively) the anodyne, unsigned 13-page order may be all the Supreme Court ever has to say about it.

Jeffrey Rosen, president of the National Constitution Centre, a non-partisan museum in Philadelphia, cites this shrewd compromise as an exemplar for a "term when the court was holding its fire". It is "exciting", Mr Rosen says, to see Chief Justice Roberts's "vision of narrow, unanimous opinions realised so dramatically". It was indeed a year of comity: Adam Feldman, a Supreme Court statistician, notes that the 2016-17 term was one of only two in the past 50 years in which there were more unanimous rulings than divided ones.

In 2013 Chief Justice Roberts defanged the Voting Rights Act on the ground that the status of racial minorities had dramatically improved. Yet in February he wrote the opinion in *Buck v Davis*, a 6-2 ruling condemning the lawyer of a black man who was convicted of murder for putting up a witness who testified that black men are particularly prone to violence. Duane Buck "may have been sentenced to death in part because of his race", the opinion read. This is "a disturbing departure from a basic premise of our criminal-justice system". And for just the third time in his 12-year tenure, the chief joined his liberal colleagues to form a five-justice majority in *Bank of America v City of Miami*, a ruling allowing cities to sue banks whose predatory loans to black home-owners helped spur defaults and urban blight.

Several contentious issues await the justices when they convene again in October. In addition to the travel ban and two other immigration disputes to be re-argued, they will hear the case of a Colorado baker with religious objections to same-

sex marriage who refuses to create a wedding cake for two men. They will ask whether law-enforcement agents may look up people's mobile-phone records without a warrant. And in a case that could reshape American electoral politics, they will hear a constitutional challenge to partisan gerrymandering. With retirement rumours dispelled for now, swing-Justice Kennedy seems likely to be around for another year. The battle to watch lies to his right: Justice Gorsuch's bold conservatism challenging the chief's more cautious kind. ■



Agriculture in the Midwest

The last thing they need

CHICAGO

Midwestern farmers are anxious about the future of NAFTA

“I HAVE always told you that I will either renegotiate or terminate NAFTA,” said President Donald Trump at a recent rally in Cedar Rapids, Iowa. He had been about to pull out of the North American Free-Trade Agreement with Canada and Mexico, he explained. But then he got a nice call from Justin Trudeau, Canada's prime minister, and another from the president (“good guy”) of Mexico asking him to negotiate: “and I am always willing to negotiate.” Even so, Mr Trump insisted, NAFTA has been very unfair to the United States, so he will renegotiate successfully—or pull out. The audience applauded, but rather hesitantly.

Of America's top ten farm states by cash receipts from production, six are in the Midwest, and Iowa ranks second, after

only California. Farmers have benefited from NAFTA more than other industries, which is why they are now fighting hard against messing about with the treaty. In 1993 America exported corn, soyabeans and other farm products worth \$8.9bn to Canada and Mexico; by 2015 farm exports were worth \$39bn. Some 30% of all American farm trade is with Mexico and Canada. The top three commodities exported to Mexico are maize (corn), soyabeans and pork; Iowa is a major producer of all these.

On the first day of marathon public hearings on the renegotiation of NAFTA on June 27th, held at the offices of the United States Trade Representative (USTR) in Washington, Kevin Skunes, a leader of the National Corn Growers Association, said that exports account for fully one-third of corn farmers' income. American corn exports to Canada and Mexico have increased more than sevenfold since 1994. Last year they supported 25,000 jobs and provided income for 300,000 farmers.

NAFTA has also created surprisingly integrated supply chains. Consider pork, writes Cullen Hendrix of the University of Denver in a paper for the Peterson Institute for International Economics, a think-tank. In 2014 America imported 3.9m eight-to-12-week-old piglets which had been born and weaned on Canadian farms. These were fattened up on farms in Iowa, Minnesota or Illinois until they were ready for slaughter and processing. Many of the resulting pork cutlets were then exported back into Canada. The beef industry is similarly integrated: around 300,000 head of cattle a year pass from one country to another. Most are weaned calves from Chihuahua state in north-western Mexico. These graze on slightly lush pastures in Texas, New Mexico and Arizona until they too are slaughtered for domestic consumption or export. American beef exports to Mexico reached almost \$1bn last year.

Agriculture accounts for a relatively small part of the GDP of NAFTA members, but it will be one of the thorniest topics in the renegotiation talks due to start in August. Farmers are feeling vulnerable anyway, so uncertainty over trade is the last thing they need, explains Charles Baron of the Farmers Business Network, a digital platform for farmers. Global grain supplies are outstripping demand, the Chinese economy is slowing and demand for corn-based ethanol is stagnating. Net farm income fell from \$120bn in 2013 to an estimated \$62bn this year.

Farmers did not ask for a renegotiation, says David Salmonsens of the American Farm Bureau Federation, America's largest farm lobby. But he would like it to be updated and tweaked. Easier access to the Canadian dairy and poultry market, which is protected by high tariffs and quotas on production, would be welcome. (Extra access was negotiated as part of the Trans-Pacific ▶▶)

Partnership, a deal Mr Trump ditched.) Some also object to the clout of the independent NAFTA panel that rules on anti-dumping duties, which a government imposes when it thinks its trading partner is competing unfairly. The panel has ruled, for example, that American duties on softwood lumber from Canada are illegal.

After Robert Lighthizer, the USTR, notified Congress on May 18th about the renegotiation of NAFTA, his agency received

more than 12,000 comments from the public in a month, which crashed the server. Mr Lighthizer is now working on recommendations for the talks, which he will send to Congress on July 16th. Emotions ran high at the public hearings. Farmers noted that Mexican imports of American soyabean meal dropped by 15%, and imports of chicken by 11%, in the first four months of the year. Mexican stomachs count for more than Trumpian bluster. ■

budget is spent on children, the old, and especially the disabled. And since Medicaid pays the residential-nursing costs of old people who have run down their assets, it foots the bill for almost two-thirds of the occupants of nursing homes.

The second conservative complaint is that Medicaid is administered so badly that it may not be worth having at all. Only 70% of doctors accept new patients on Medicaid, compared with 91% acceptance for those with private insurance. This is because states keep on cutting what they pay doctors under the programme.

Medicaid seems not to improve some health measures. The best evidence comes from Oregon, which in 2008 expanded it through a lottery. Two years later, those who benefited did not have lower blood pressure, cholesterol or blood sugar. Yet a lack of care was not to blame: visits to the doctor went up. Those enrolled reported feeling healthier. And they were much less likely to suffer catastrophic financial losses because of medical bills. Perhaps as a result, rates of depression fell by a third.

Medicaid, then, is not useless. But it is not that effective, either. And the huge variation in spending per enrollee, from about \$4,000 in Nevada to almost \$11,000 in North Dakota, takes some explaining.

Prodding states to make Medicaid more efficient is therefore a worthy goal. It might mean states have to foot more of the bill for the programme. The trick is making sure they do not respond by abandoning the vulnerable. As Republicans redraft their bill, they should remember that. ■

Medicaid

Patching up the poor

WASHINGTON, DC

Whatever happens to the Republicans' health-care bill, Medicaid needs reform

MANY conservatives worry that once an entitlement programme exists, it is all but impossible to pare back. They will be disheartened by the postponement, on June 27th, of a Senate vote on the Republicans' health-care bill. The party's moderates cannot tolerate the proposed cuts to Medicaid, the federal and state health-insurance programme for the poor. Under the bill, which will now be amended or rewritten, Medicaid's budget would have been 26% lower in 2026 than currently forecast. "Medicaid cuts hurt [the] most vulnerable Americans," noted Senator Susan Collins of Maine, announcing her opposition. Conservative justifications for cuts—that Medicaid has grown too big, and is ineffective—must compete with the fact that one in five of Ms Collins's constituents use the programme. But are the right's complaints about Medicaid justified?

When Medicaid began in 1965, it served two groups: those who also received cash welfare from the government, and whom ever states deemed to be "medically needy". That mostly meant elderly residents of nursing homes. But it could be much broader. New York included almost half its population. Because the federal government picked up over half the tab, in 1976 Congress tried to control costs by limiting coverage to the poor and nearly-poor.

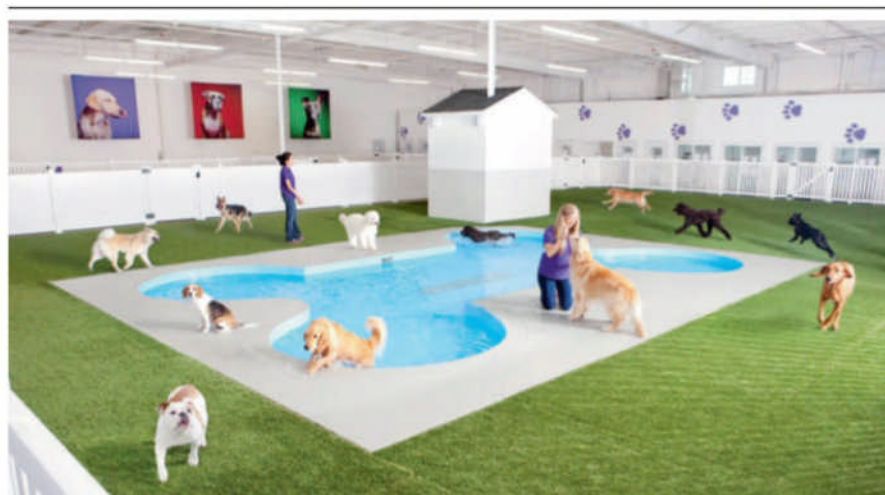
In the 1980s, however, Washington oversaw a gradual broadening of coverage. For example, Congress let states cover children without regard to their parents' means. Then it required states to include poor pregnant women and infants. In the 1990s states were encouraged to tinker with their programmes, and eligibility expanded further in some places.

By the time Barack Obama's Affordable Care Act passed in 2010, nearly 55m Americans were enrolled. Under Obamacare, compliant states extended Medicaid to everyone earning less than 138% of the pov-

erty line. Today enrolment is almost 80m, with nearly 100m people using it at some point during any given year.

It irks many conservatives that nearly one in three Americans benefit from a programme ostensibly for the poor. They particularly question whether able-bodied, working-age adults should be covered. (The Senate bill would have allowed states to require such enrollees to work.)

About a quarter of Medicaid spending goes to working-age adults. In 2012, the last year for which data are available, only 1.4% of them were unemployed (though that was before Obamacare). The rest of the



A dog's life

More than 2m live animals are transported by air every year in America. Those going through John F. Kennedy Airport in New York have the best of it, thanks to the Ark, which claims to be America's first 24-hour privately-owned airport terminal for animals. So far it has hosted dogs, horses, cats, baby goats, parrots and a giant rat. Penguins and other water fowl have a bed-sized water basin and a frozen floor. Italian opera, usually Luciano Pavarotti, is piped into the Ark's equine centre. The handlers say the music has a calming effect on the horses as they await departure for racing, dressage, show-jumping and polo events. Meanwhile humans trudge through security and then board planes with narrower seats and less legroom than they had in the 1970s—doggone it.

Lexington | Divided, even at birth

A new history of the American revolution revives memories of violence and terror



IN MARCH 2016, at a dismaying moment in the election campaign (there were a few), the Republican Speaker of the House of Representatives, Paul Ryan, urged a gathering of congressional interns to recall the “beautiful” experiment that created America. This, Mr Ryan told the youngsters, is the only nation founded not on an identity but on an idea, namely: “that the condition of your birth does not determine the outcome of your life.” Conceding that modern politics might seem consumed with “insults” and “ugliness”, the Speaker insisted that this was not the American way. The Founders determined that their noble idea could be upheld only with reasoned debate, not force. Mr Ryan cited the first of the *Federalist Papers*, and Alexander Hamilton’s counsel that in politics it is “absurd” to make converts “by fire and sword”.

He was drawing on a rich rhetorical tradition. Browse through school history books, with names like “Liberty or Death!”, and the struggle to throw off British rule is sanctified as a victory of American patriot-farmers and artisans against battle-hardened British redcoats and foreign mercenaries, defending ideals crafted by orators in periwigs. Yet go back to contemporary sources, and they called it what it also was: a brutal civil war.

That is the unsparing history told in a fine new book, “Scars of Independence: America’s Violent Birth” by Holger Hoock of the University of Pittsburgh. Intrigued by monuments to Loyalist exiles and martyrs in English churches, Mr Hoock dug into long-forgotten archives and eyewitness accounts. He concluded that selective amnesia took hold soon after the war, as victors told their version of history, and the British displayed their genius for forgetting defeats. In the republic’s earliest decades, stone monuments charging the British with “cold-blooded cruelty” rose on battle sites from Lexington, Massachusetts to Paoli, Pennsylvania. Meanwhile orators told Americans that their revolt had been unusually civilised: one public meeting in 1813 declared the revolution “untarnished with a single blood-speck of inhumanity”.

By 1918, with America fighting in a world war on the British side, it could be risky even to accuse George III’s forces of brutality. Robert Goldstein, a German-American film producer in Los Angeles, was tried and imprisoned for inciting “hatred of England” with “The Spirit of ’76”, a silent epic about the revolutionary war which depicted British troops bayoneting a baby and as-

saulting women. A court scorned the film-maker’s plea that the infant-stabbing soldiers were not British, but Hessian auxiliaries.

In time the war was reimagined as a moment of unity, when the North was bound in a common cause with the South. In 1930 tens of thousands heard President Herbert Hoover mark the 150th anniversary of the Battle of King’s Mountain, in South Carolina, where in his words a “small band of Patriots turned back a dangerous invasion” that tried to divide the united colonies.

It is true that the war was driven by stirring ideals. The Founders were at pains to show that their rebellion was in defence, not defiance, of natural law and the inalienable rights of man. As commander of the continental army, George Washington sought to out-civilise the British, harshly punishing troops who robbed civilians or abused captives, for instance. Still, this revolution was not untarnished by blood-specks.

Mr Hoock, a German-born historian, is dispassionate as he records cruelties not only by the British, but also by the Americans who fought on opposing sides as Loyalists and as pro-independence Patriots. For all Hoover’s talk of invaders being crushed at King’s Mountain, the battle was the war’s largest all-American fight, involving a single British participant, a Scottish militia commander. Civilians knew terrors, too. Patriots formed “committees of safety” to demand loyalty oaths from neighbours suspected of sympathy for the Crown. Mr Hoock digs up detailed accounts of Loyalists being variously ostracised, tarred and feathered, choked with pig manure, branded with GR (for George Rex) and lynched. Anglican churches had windows smashed and several priests were killed. Loyalists’ businesses were attacked, and their property confiscated. Books were burned. Brother fought brother, and fathers disowned sons—among them Benjamin Franklin, a Founder who was never reconciled with his Loyalist son, William, the last colonial governor of New Jersey. At the war’s end, about one in 40 Americans went into permanent exile, the equivalent of some 8m people today.

The British treated prisoners vilely. More than half of the Americans held on British prison ships anchored off Brooklyn died of starvation or disease. Racial tensions foreshadowed those that would tear America apart in the civil war, decades later. Colonial governors sought to recruit runaway slaves to their side. When southern Patriots caught a 15-year-old girl fleeing slavery to join the British, the book records, she was lashed 80 times; hot embers were then poured on her lacerated back, as an example to others. Native Americans suffered cruelly: Washington ordered the “devastation” of Iroquois nations allied with Britain.

No July 4th picnic

The cruelty did not stop with peace in 1783. Hamilton, a former aide to Washington and a proud Patriot, warned against political violence in the *Federalist Papers* for a reason. Three years before the paper cited by Mr Ryan, Hamilton wrote a letter to his fellow-citizens, expressing alarm that former Loyalists in New York faced persecution as a result of “the little vindictive selfish mean passions of a few”.

Mr Ryan’s pep talk had a noble aim: assuring youngsters that when demagogues practice identity politics or wink at campaign-trail violence, they are betraying the Founders’ cerebral ideals. Alas, real history is messier than that. Alongside high-minded debate, a great nation’s birth-pains included sectarian rage and political terror. Those who would restore civility to politics should reckon, honestly, with that legacy. ■



Canada's indigenous peoples

Unfinished business

RAPID LAKE, QUEBEC

The government's intentions are good. But righting a historic wrong will take sustained effort

IF LOCATION were all that mattered, the Rapid Lake First Nation reserve in Quebec would be a paradise. It sits in a wildlife area popular with hikers. The highway leading to it weaves through forests and lakes. But idyllic is not the word that comes to mind driving into the Algonquin community of about 350 people on a rainy day. The dirt roads are turning to mud. Some homes appear derelict. The only electricity comes from a diesel generator. At an office in a trailer Tony Wawatie, a community official, doesn't mince words: "Some of our people live in third-world conditions."

Rapid Lake is far from the worst First Nation reserve in Canada. Water does not have to be boiled before drinking, as in more than 130 other First Nation communities. It has not been devastated by youth suicide, like Wapekeka in northern Ontario where three 12-year-old girls have killed themselves this year. Health care beyond what the on-reserve clinic can provide is a drive, not a flight, away. Still, this community where almost all adults are on social assistance is jarring in a rich democracy.

As Canada prepares to celebrate its 150th birthday on July 1st, its main unfinished business is the situation of the 1.4m indigenous people: Inuit, First Nation and mixed-race Métis. "No relationship is more important to our government and to Canada than the one with indigenous peoples," the prime minister, Justin Trudeau, insisted on June 21st, National Aboriginal Day. (He is pictured with Perry Bellegarde, the head of the Assembly of First Nations.) But he will have his work cut out to convince

them that he means it, after a series of broken promises reaching back to before Canada was even a nation. Few will join the birthday bash. Why would they? asks Pam Palmater, a Mi'kmaw lawyer and university professor. "It's a celebration of the worst 150 years of indigenous peoples' lives."

Canada was not *terra nullius*, or nobody's land, as the fiction of the time had it, when Europeans came to live there in the 17th century. An estimated 500,000 inhabitants could trace their roots back to at least 10,000 years. The Iroquois Confederacy, which united warring tribes, predated the Dominion of Canada by more than 250 years. The French and British signed peace treaties with the locals, who outnumbered them, and enlisted them in battles with each other and with the United States. "Canada would be American today if not for the Indian allies who fought for the Crown," says Peter Russell, a historian.

Once the European population grew, the balance of power shifted. The British ignored land rights and treaties guaranteed by King George in 1763. Indigenous peoples were confined to reserves and their lands taken by the Crown or sold. The reserve at Rapid Lake measures less than a square kilometre, though its Algonquin residents claim a territory 10,000 times that. After the birth of Canada, efforts to assimilate or wipe out indigenous peoples were redoubled. Between the 1870s and 1996 over 150,000 indigenous children were put in residential schools to "kill the Indian in the child".

Only when indigenous Canadians be-

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gan using the courts to defend their legal rights did their situation finally start to improve. In 2008 Stephen Harper, then the prime minister, apologised for the residential schools and set up a Truth and Reconciliation Commission. In 2015 it said that the schools were part of an organised effort to wipe out aboriginal culture. It has paid more than C\$3bn (\$2.4bn) to settle abuse claims, and C\$1.6bn to former residents still living in 2005. Last year Mr Trudeau started an inquiry into the estimated 1,017 indigenous women and girls who were murdered and the 164 who have gone missing since 1980. He recently handed the former American embassy building, which faces parliament, to indigenous groups and removed from his own office the name of Hector-Louis Langevin, an architect of the residential school system.

Before the books begin

The Canadian Museum of History is updating its exhibits to include more about indigenous peoples. Although it was designed by Douglas Cardinal, an indigenous architect, and sits on land claimed by the Algonquins of Quebec, previous displays suggested that Canada's story only started with the arrival of Europeans. Now, the pre-contact section includes an ivory carving of a tattooed woman's face that is almost 4,000 years old. In the post-contact section are oil portraits of Mohawk and Mohican chiefs who visited Queen Anne in London on a diplomatic mission in 1710.

Revising history textbooks to include pre-contact times is harder, because education is not under federal jurisdiction. Ontario and Alberta have made great strides but progress is uneven, says Roberta Jamieson, a lawyer and former chief of the Six Nations of the Grand River Territory. And more broadly, there is an ad hoc air about much of the government's efforts. It has followed up on some of the commission's recommendations, including asking the pope to apologise for the Catholic church's ►►

▶ role in residential schools. But it has so far rebuffed a call for the prime minister to state publicly that Canada had more than two founding peoples—the English and the French. Unless the government creates a detailed plan for reconciliation, good intentions will not get it far, says Murray Sinclair, an Ojibway who was head of the commission before becoming a senator.

Attitudes among non-indigenous Canadians may also be slow to shift. Lynn Beyak, a Conservative senator, was sanctioned by her party in April for saying there had been “an abundance of good” in the residential schools. Last year 42% of respondents told Environics, a pollster, that the schools had not been intended to destroy indigenous culture. Fully 67% said that indigenous people had a sense of entitlement, and 26% that indigenous people themselves were the biggest obstacle to equality. Carolyn Bennett, the minister for indigenous affairs, says Ms Beyak’s comments demonstrate a pressing need to educate non-indigenous Canadians about the residential schools and indigenous history.

For the Algonquins on the Rapid Lake reserve, the priority is getting the federal and provincial governments to honour a trilateral deal struck in 1991. It gives them a say in what happens on their traditional territory and a share in any revenues. All parties blame each other for breaching it. His people do not oppose development on lands they claim, as long as it is sustainable, insists Mr Wawatie. “Let’s co-exist,” he says. If there is a way to make that happen, the next 150 years could be better for Canada’s indigenous people than the last. ■

Brazil’s political scandal

Temer tantrum

Bribery charges will not bring down the president just yet

EVER since an audio recording emerged in May of Brazil’s president, Michel Temer, seeming to discuss paying hush money and backhanders, the country’s zealous prosecutors have been expected to pounce. Even so, the decision by Rodrigo Janot, the chief prosecutor, on June 26th to charge Mr Temer with bribe-taking was momentous. It is the first such charge against a sitting president.

Mr Janot bases his accusations on the tape and testimony of Joesley Batista, the billionaire businessman who secretly recorded it. These resulted in a sting operation in which Rodrigo Loures, a former aide to Mr Temer, was filmed receiving 500,000 reais (\$159,000) from Mr Batista’s envoy, allegedly for interceding with the

antitrust agency on his firm’s behalf. Mr Janot suspects that the cash, plus another 38m reais promised by Mr Batista, was in fact meant for Mr Temer. The president protests his innocence and points out that his relationship with Mr Loures is all that links him to the payoff.

Even before the charges Mr Temer’s administration was the most unpopular on record, with an approval rating of just 7%. In June he narrowly held on to office when the electoral tribunal ruled to clear him and Dilma Rousseff, under whom he served as vice-president before her impeachment last year, of charges of illicit campaign financing in 2014. But he retains support where it matters most: in congress. For the case to proceed, the charges must be approved by two-thirds of deputies in the lower house. Enough support him to make that improbable.

Congressmen seem to have decided that two things are needed to give them a chance of re-election in 2018: an economic revival and a containment of the vast corruption investigation code-named *Lava Jato* (Car Wash). On neither point would Mr Temer’s removal serve them well. On the first, he can point to falling inflation and a return to growth in the first quarter of the year as signs that his pro-market reforms are bearing fruit. Labour reforms to allow more flexible working hours and ease firing and hiring seem on track.

As for *Lava Jato*, politicians on all sides are under scrutiny, so most agree on the desirability of reining it in. On June 28th Mr Temer announced that Raquel Dodge, a deputy chief prosecutor, would be replacing Mr Janot when his term ends in September; they will be hoping that she takes a less crusading approach. The disgruntled include Ms Rousseff’s left-wing Workers’ Party, which slams Mr Temer’s reforms and regards his replacement of his former boss as a “coup”. Any day a federal court could rule against Luiz Inácio Lula da Silva, still Brazil’s most popular politician, who has half a dozen cases pending against him for corruption and money-laundering.

All this means Mr Temer has a good shot at completing the last 18 months of his term. But he remains vulnerable. Congress may seek to soften an unpopular overhaul of budget-busting public pensions. It may want more pork in return for support. Neither demand will help with a budget deficit of 9% of GDP, though the nascent return of growth should increase tax receipts.

And Mr Janot is expected to file a string of other charges against the president—for accepting other bribes, as well as obstruction of justice. Several of his chums are either already in jail, like Mr Loures, or may be soon. Brazilians, who marched in their millions to demand Ms Rousseff’s impeachment, are weary of protest. But further sensational revelations could see them back out on the streets. ■

Offshore oil

The gusher in Guyana

GEORGETOWN

Can a weak government spend the coming windfall well?

SOUTH AMERICA’S only English-speaking country is one of its poorest. But perhaps not for much longer: Guyana has struck black gold. By 2020 ExxonMobil, the world’s biggest private oil firm, expects to be pumping oil in Guyanese waters, with Hess and Nexen, its American and Chinese partner firms. In the past two years they have found reserves of around 2bn barrels. Five more promising prospects will be drilled by 2018, and then perhaps a dozen more. Guyana could be producing 120,000 barrels per day by 2020, and more than 400,000 by the mid-2020s.

Even with oil at under \$50 a barrel, this is vast wealth for a nation of just 750,000. But the Guyanese seem strangely underwhelmed. “It will not trickle down,” a street trader shrugs. Little of the work will be done onshore. Guyana has few engineers and no heavy industry. A global glut of refining capacity means there is no point in Guyana building its own. Oil will be pumped into giant vessels, then shipped directly to foreign markets.

So the main question is how the government will spend its share of the windfall. There is talk of a sovereign wealth fund and projects to boost long-term growth: an all-weather road linking the capital, Georgetown, to the interior and Brazil; a deep-water port; hydro-electric schemes; better health care and schools.

But Guyana already had diamonds and gold, and little of that wealth was shared. Horse-drawn carts still weave through the Georgetown traffic. Large new gold mines under Australian and Canadian ownership have boosted export earnings and the tax take. But small locally owned ones ▶▶



Waiting for the wealth to trickle down

▶ smuggle much of their output abroad, by passing the taxman. State-owned sugar producers gobble subsidies. Cash will be tight until the oil starts flowing.

Retail sales are down. Nightspots are closing. “Businesses are scared to invest,” says an accountant. He blames a crack-down on money-laundering and graft. Others blame a newish local office of America’s Drug Enforcement Administration for reducing the flow of drugs cash.

The minister for natural resources, Raphael Trotman, wants Guyana to sign up to the Extractive Industries Transparency Initiative, which monitors mineral revenues

to stop them being stolen. The Guyana Oil and Gas Association, a recently formed coalition of private firms and individuals, aims to promote transparency in the industry. But oil tends to corrupt weak governments. And Guyana’s is far from strong; the country has a history of corruption and its politics are bitter and racially polarised.

An alliance led by the mainly Afro-Guyanese People’s National Congress, the party that governed from 1964 to 1992 through rigged elections, squeaked back into power in 2015. It is locked in a standoff with the opposition over who should become the new head of the elections com-

mission, which has kept elections broadly free and fair since 1992. If no deal is reached, the constitution seems to allow the president to impose his choice—in which case the leader of the opposition People’s Progressive Party, which is mostly supported by Indo-Guyanese people, threatens to sue.

The risk is that Guyana’s petrodollars will be squandered on more sugar subsidies and pay rises for the unproductive public sector. The next election is due in 2020 just when the oil starts to flow. The victor could enjoy a well-lubricated quarter-century in office. ■

Bello | Adiós to Venezuelan democracy

Nicolás Maduro prepares a “caricature of a caricature” of Cuba

WHEN Hugo Chávez took office as Venezuela’s president in 1999, his first act was to call a referendum to draw up a new constitution. In a country suffering from low oil prices and rising poverty and fed up with corruption, the assembly generated enthusiasm. Both its convoking and the new constitution, which extended citizens’ rights as well as the president’s powers, were backed by big majorities in referendums.

Constitutions, like diamonds, are supposed to last. But that is not the view of Nicolás Maduro, a former bus driver chosen by a dying Chávez to replace him as president in 2013. He has ordered a new constituent assembly, to be chosen on July 30th. Everything about the process is different from 1999. In violation of Chávez’s constitution, it has been called by presidential decree rather than by referendum.

Mr Maduro says its purpose is to defeat the opposition’s “fascism”. Yet it will be chosen under a system that might have been devised by Mussolini. Each of the 340 municipalities will elect one assembly member, regardless of size (only state capitals will get two), meaning the opposition-supporting cities are under-represented. A further 181 members will be chosen from communal and occupational groups controlled by the regime.

Mr Maduro wants the assembly because he can no longer stay in power democratically. Low oil prices and mismanagement have exacted a heavy toll. Food and medicines are scarce; diseases long curbed, such as diphtheria and malaria, are killing once more. The opposition won a big majority in a legislative election in 2015. Since then Mr Maduro has ruled by decree and through the puppet supreme court. In almost daily opposition protests since April, 75 people have been killed, many shot by the National



Guard or pro-regime armed gangs.

Mr Maduro’s lurch to dictatorship has opened cracks in his political base. Luisa Ortega, the attorney-general and long a *chavista*, has become an outspoken critic. The constituent assembly will “complete the definitive dismantling of democracy”, she told a Peruvian newspaper this week. Its apparent purpose is to turn Venezuela into a dictatorship along Cuban lines. Already Mr Maduro has instituted a Cuban-style rationing system with food parcels delivered by the armed forces. The assembly, officials say, will assume sovereign power—and sack Ms Ortega.

A last opportunity to apply diplomatic pressure failed last month at a meeting of foreign ministers of the Organisation of American States, held in Cancún. The Mexican hosts thought they had more than the 23 votes needed (out of 34) to condemn Venezuela. They got only 20, as Mr Maduro’s diplomats won over wavering Caribbean mini-states with threats to cut off cheap oil. The outcome, says a Latin American diplomat, depended on how much pressure the United States was prepared to put on the Caribbean. Not enough: Rex Til-

erson, the secretary of state, stayed away to deal with Qatar. Though Venezuela is more isolated than ever in its region, Mr Maduro could claim a kind of victory.

Even had the motion passed, it might have changed little. The only potential obstacles to Mr Maduro’s gambit are on his own side. Many *chavistas* oppose the constituent assembly. “Democratic *chavismo* is significant in terms of popular sentiment,” says David Smilde, a Venezuela specialist at Tulane University. “But it’s completely disorganised.” Although there have been intermittent protests in *chavista* areas of Caracas, usually over food shortages, the opposition has failed to link up with dissidents from the regime in a truly national protest movement.

The armed forces, which sustain Mr Maduro in power, have wavered but not bent—so far, at least. Several retired generals who were close to Chávez have criticised the idea of a new assembly. At least 14 junior officers have been arrested since the protests began. On June 20th the president stripped the defence minister, General Vladimiro Padrino, of the powerful post of the operational commander of the armed forces. To some analysts, this looked like an expression of mistrust.

Tension is rising. On June 27th a police officer in a helicopter buzzed the supreme court and interior ministry. A pro-government mob attacked the parliament, and large-scale looting took place in Maracay, west of Caracas.

Mr Maduro and his circle lack the aura of heroism that originally surrounded Fidel Castro. “If *chavista* Venezuela was a caricature of the Cuban revolution, Maduro is a caricature of the caricature,” says the Latin American diplomat. There is no revolution in Venezuela, just squalid abuse of power. More blood may be spilled before this tragedy ends.



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Kazakhstan

Steppe change

ASTANA

The world's biggest landlocked country is open, if not quite ready, for business

WHEN an authoritarian ruler builds a gigantic dark globe, he should not be surprised that people call it the "Death Star". But whereas the Death Star from "Star Wars" was a tool for wiping places off the map, the Kazakh pavilion at Expo 2017, which opened in June in Astana, Kazakhstan's capital, is supposed to put the Central Asian country of 18m on the map, especially for investors. The Death Star celebrates traditional forms of Kazakh hospitality, such as giving guests a warm coat, or a sheep's head for supper. A shopping mall named after the old Silk Road offers fancy souvenirs.

Kazakhstan is at a crossroads, both literally and figuratively. Geographically, it is sandwiched between Russia, China and the Middle East, astride once and future trade routes. The president, Nursultan Nazarbayev, is eager to turn this location to Kazakhstan's advantage, by joining China's "Belt and Road" programme of new transport links between Asia, Europe and Africa. Over the past two years Chinese cash has created a massive freight-rail hub at Khorgos, spanning the border between the two countries. Xi Jinping, China's presi-

dent, visited the Expo on June 8th, and purred that the two countries should be "partners forever".

The other crossroads is historical. Kazakhstan has a choice: open up or stagnate. This is not easy, given how much the country has suffered from foreign domination in the past. The Soviets forced nomadic Kazakhs into collective farms at gunpoint, wiping out a quarter of the population. They used Kazakh territory both as a gulag and a nuclear testing ground, deliberately exposing children to radiation to measure its effects.

No nomad is an island

Few expected an independent Kazakhstan to thrive, but it has done better than any of its Central Asian neighbours. That is thanks mainly to gushers of hydrocarbons. Oil and gas accounted for 58% of exports last year; the mammoth Kashagan oilfield is one of the biggest discoveries in the world in recent decades. But reasonably competent government has also played a part. Real output per person rose from \$1,600 in 1990 to \$14,000 in 2013 (see chart on next page). Mr Nazarbayev, who has

been in charge since Soviet days, spent much of the windfall conjuring Astana out of a patch of nearly deserted steppe. The move to the new capital allowed the civil service to marginalise many crusty old hands, who stayed behind in the previous capital, and to promote young modernisers, who moved.

In the past three years the oil price has crashed and Kazakh belts have tightened; economic growth has fallen from 6% in 2013 to 1.1% last year, though the IMF expects it to recover somewhat this year and next. The government dipped into the national pension fund to cover some of the costs of Expo, infuriating many. "Have you seen our pension money exploding?" grumbled one Kazakh after the opening fireworks display.

Samruk-Kazyna, the Kazakh sovereign-wealth fund, is planning to sell shares in the firms it controls. Kazatomprom, the world's largest uranium producer, will probably float up to 25% of its shares next year, says Baljeet Grewal, a director of Samruk-Kazyna. The next big offerings will be of Air Astana, the national carrier (of which BAE, a British firm, owns 49%), and KazMunaiGas, the state oil and gas giant, perhaps in 2019 or 2020, she says. The prime minister, Bakytzhan Sagintayev, sounds admirably pro-market: he calls state-owned firms "dinosaurs" and talks of the need to allow more competition.

Between 2016 and 2017 Kazakhstan jumped from 51st to 35th place on the World Bank's ease of doing business rankings, with big improvements in how ▶▶

straightforward it is to get construction permits or electricity. A digital portal for basic interactions with the state has curbed low-level corruption. Officials used to demand bribes from applicants for business permits. "But now it's better," says an entrepreneur who runs a dance studio. The president vows that, by 2025, the country will switch to the Latin alphabet, since English is the language of global commerce (and perhaps because dumping Cyrillic script is one in the eye for the Russians).

When the Expo is over, the site will become home to the Astana International Financial Centre, a would-be regional stock-market and financial hub. Firms operating there will be subject to rules based on English common law, enforced by independent courts, the government promises. The aim is to reassure investors, who might otherwise be nervous of sinking money into a country that scores as badly as Russia on Transparency International's corruption league table.

All this sounds good. But Kazakhstan has been promising big privatisations for seven years, yet has delivered only small ones. The banking system is rickety. Oligarchs will labour mightily to block reforms that harm their interests. Foreign investors may not believe assurances about the rule of law, since this "depends on the word of one man", as a local analyst puts it.

Another problem is that, for most Kazakhs, free enterprise is a novel concept. No one can remember a time when the state did not dominate the economy. Many find it reassuring. Consider Yezmek Kazhe-nov, a typical entrepreneur. On discovering that apples originated in Kazakhstan, he decided to grow the fruit to make jam, juice and sweets. He bid for a plot of state-owned land, not with money, but by showing a bureaucrat his business plan. He was given the land free of charge. The state will pay 35% of his workers' wages for the seven years it takes his trees to reach maturity, and will build a road to help him get his crop to market. He is delighted; this allows him to carry on running two cafés in Astana, more than 1,000km from his orchard. He is also looking for a white-collar job

with a salary. One can see why a sparsely populated petrostate would pay its citizens to occupy land that its neighbours might covet. But such coddling is unlikely to foster efficiency.

Hoping to raise productivity, the government last year passed a law allowing foreigners to rent farmland for up to 25 years. This sparked mass protests—Kazakhs fear that Chinese multitudes will occupy their empty land and never leave. The government was forced to put the plan on hold. For the same reason, it has been reluctant to let in Chinese labourers to build Belt-and-Road infrastructure. Kazakhs are also nervous of Russia. Vladimir Putin has claimed the right to intervene wherever ethnic Russians are in trouble, and a fifth of Kazakhstan's population is

Russian.

Kazakhstan's government is nowhere near as abusive as some of its neighbours. But dissident media are crushed, criticism of the president is taboo and Mr Nazarbayev was re-elected with 98% of the vote in 2015. He turns 77 on July 6th and has no clear successor. Last year he appointed his daughter to the Senate, prompting speculation that he is grooming her for the top job. "The transition has started," says an observer in Astana, citing new draft amendments to the constitution. These would reduce the powers of the presidency for any successor, while maintaining Mr Nazarbayev's unique status as the "First President". As such, he is forever immune from arrest or even from having his bank accounts snooped on. ■

Sex toys in Pakistan

From the land of the pure

Manufacturers of leather and metal goods have found a new niche

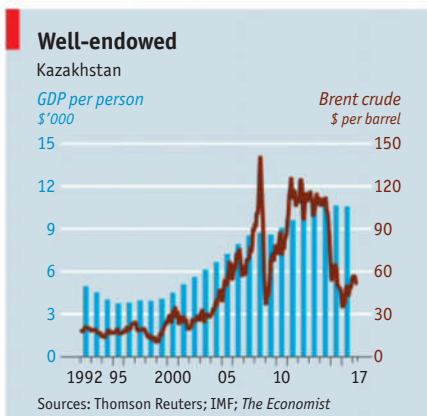
INSIDE a small, gloomy factory in a provincial city in Pakistan, two young men huddle over a grinding wheel. They believe they are making surgical instruments. But like many of the small, local firms manufacturing steel and leather goods for export, their employer has a new sideline. The nine-inch steel tubes whose tips the men are diligently smoothing are, in fact, dildos. "It's just another piece of metal for them," says the firm's owner, who picks one up to show how his worldlier customers—all of them abroad—can easily grip the gleaming device.

This surreptitious set-up is inevitable. That a country as conservative as Pakistan exports anal beads, gimp masks and padlockable penis cages, among other kinky wares, would shock locals as much as the Westerners whose hands (and other parts) the finished products end up in. Fearing the response of religious hardliners, many of the companies involved do not advertise their wares on their own websites. Instead, they list the saucy stuff through Alibaba, a Chinese e-commerce giant that acts as a middleman for many businesses in the developing world. Some officials demand bribes to allow the exports to flow. Others are simply unaware of the potential for mischief in, for example, a Wartenberg Pinwheel—a spiked disc that can be run across the skin.

The risk has so far proven worthwhile. A local maker of leather goods, one of 64 sex-toy suppliers based in the city that list on Alibaba, says that only a small proportion of its sales comes from fetish gear. But

the company can earn as much as 200% profit on a kinky corset or policeman's uniform, compared with just 25% on mundane jackets and gloves, its original business. To minimise the potential for outrage, production lines are arranged carefully, with only trusted staff putting on the final spikes and studs. To those who complain that the products the firm makes might encourage unmarried or gay people to fornicate—an illegal activity for both groups in Pakistan—the owner's son has a ready riposte. "What if a gay person wears a [normal] jacket that was also produced by us?" he asks. The company does not know, and has no business knowing, how customers use its products, he says.

Less flexible businessmen may be missing an opportunity. Buoyed by the international success of "Fifty Shades of Grey", an erotic film that was not released in Pakistan (although locals have posted plenty of spoofs on YouTube), global sales of sex toys have reached about \$15bn a year. And recent developments favour Pakistan. Local firms cannot compete in rubber toys, as the latex they would have to import from China is subject to a hefty tariff. But Western customers increasingly opt for alternative materials, including metal, in the wake of reports that many Chinese toys contain a carcinogenic chemical. Back in his office, the owner of the metal-working factory invites your correspondent to feel how smoothly his labourers have polished a dildo. "You can use Pakistani steel for a long time," he says, approvingly. "It rusts much later than Indian or Chinese." ■





Elections in Papua New Guinea

Wantok and no action

GOROKA AND PORT MORESBY

Voters in a poor, mountainous, maladministered country head to the polls

ACCORDING to legend, tribesmen from the Asaro river valley in the remote eastern highlands of Papua New Guinea (PNG) first began covering their bodies in white clay and donning grotesque, swollen-headed masks to make their enemies think they were spirits. On a brisk June afternoon in Goroka, the capital of Eastern Highlands province, a dozen Asaro Mud Men, as they are colloquially known, moved slowly and deliberately through a crowd of hundreds gathered on a dusty field, bows drawn and spears in hand. Elsewhere members of another local tribe danced in a circle in leaf skirts and ornate feathered headdresses. A band played up-tempo reggae while buses and lorries festooned with fern fronds and draped with campaign posters for Gabriel Igaso, the would-be parliamentarian whose rally this was, drove slowly through the crowd, packed with cheering supporters. Much of the town turned out for the afternoon's entertainment.

Rallies like this have taken place across PNG since April 20th, when campaign season began. Voting in the country's five-yearly general election started on June 24th and continues until July 8th, assuming all goes according to plan. But voting has already been delayed in Port Moresby, the capital, and complaints about unpaid election workers and the poorly maintained electoral roll have caused kerfuffles

elsewhere. The inhospitable terrain and atrocious roads make getting ballots and observers to rural areas time-consuming and difficult—hence the drawn-out schedule. Results are due to be announced on July 24th. Then begins the potentially even longer and more tortuous process of forming a government.

Peter O'Neill, the incumbent prime minister, has managed to hold his rickety coalition together for the past five years, though not without controversy. He took office in 2011 on an anti-corruption platform, but allegations of graft have dogged his tenure. He disbanded Taskforce Sweep, an anti-corruption body he had created on entering government, when it began investigating him. The police got as far as issuing an arrest warrant for him and the finance minister over allegations of fraudulent payments to a local law firm (both men deny wrongdoing), before the case got bogged down in a legal mire. Last year police shot at dozens of students protesting against the government.

Whether all this has diminished Mr O'Neill's standing with voters is unclear. His party appears well financed, and elections in PNG are always unpredictable. Political parties, of which there are 45, are weak; most candidates run as independents. A local in Goroka explains, "Our elections are not like yours, where you look at a candidate's degrees and policies.

Here you have to vote your *wantok*"—a word in Tok Pisin, the national lingua franca, that literally means "one talk", ie, people who speak the same language. PNG has some 7.6m people and around 850 languages, so the *wantok* is something akin to a clan. "If my candidate wins," explains the man from Goroka hopefully, "I will get some benefits."

PNG's system of limited preferential voting allows voters to select up to three candidates, in order of preference. Candidates with the fewest first-preference votes are eliminated, with their votes going to the next candidate named on the ballot, until one candidate attains a majority. The hope was that people would vote for a clansman with their first preference, but would base their other two choices on less parochial qualities. In practice, *wantoks* simply trade preferential votes. Candidates are expected to host huge parties with food and entertainment. "Everybody expects you to cook for them," complains Rawali Bokuik, who is running for a seat in Port Moresby.

With voting driven by ethnicity and pork-barrel politics, national policy—indeed, policy of any kind—plays virtually no role. Every candidate promises to deliver better infrastructure, health care and education, but once in office will be expected to dole out favours and jobs to his *wantok*. Mr O'Neill has made this process more brazen with something called the District Services Improvement Programme, whereby every MP is able to allocate 10m kina (\$3m) a year to projects in his district, with little oversight. Thus rather than one unified election on national themes, PNG in effect holds distinct, local elections for all 111 parliamentary seats. To add to the confusion, 3,332 candidates are running, an average of 30 a seat.

Trying to stitch together a coalition out of such diverse interests and obligations is like knitting with eels. Earlier this year Mr O'Neill's People's National Congress (PNC) party lost its main coalition partner, the National Alliance, after Mr O'Neill sacked its leader, who had accused the government of economic mismanagement. Mr ▶▶



▶ O'Neill's opponents smell blood. Mekere Morauta, a former prime minister, emerged from retirement to contest a seat in Port Moresby, calling Mr O'Neill's government "an octopus with many tentacles, invading every crevice... where there is the smell of money". Other heavyweights who command enough name recognition and following to form a government include Don Polye, a treasurer whom Mr O'Neill dismissed; Sam Basil, an opposition leader; and Gary Juffa, the firebrand governor of Oro Province.

Whoever emerges victorious will face the same headwinds. According to the Asian Development Bank, growth plummeted from 13.3% in 2014 to just 2% last year, largely because of disappointing revenue from ExxonMobil's massive liquefied-natural gas (LNG) project—the biggest private-sector investment in PNG's history, which came online just as the international price of LNG began falling. Some economists argue that these statistics may understate the problem, and that the economy may in fact have contracted.

Either way, the government has struggled to meet its obligations. Earlier this

year PNG lost its voting rights at the United Nations for failing to pay \$180,000 in dues (the government blamed an administrative error). The country's main electricity provider has cut power to several government agencies over unpaid bills. On the revenue side, the government may get some relief from rising commodity prices and additional LNG projects. One local economist says the government seems determined to "white-knuckle" it until then, perhaps bringing in some extra cash by hiking the sales tax, or taxing capital gains.

Despite its fiscal woes the government remains committed to hosting next year's Asia-Pacific Economic Co-operation summit for the first time. A new "APEC Haus" is being built on reclaimed land in the centre of Port Moresby, irritating some locals who think the money could be better spent. In 2019 Bougainville, a large but poor island that long waged a separatist battle against PNG's central government, will hold a referendum on independence; few would be surprised if it voted to secede. The tenure of the government to be formed in August is unlikely to be easy, whoever ends up leading it. ■

Money politics

Deposits required for lower-house election candidates, June 2017, \$



Sources: Electoral commissions; Inter-Parliamentary Union

*For first-past-the-post seats
†If candidate files financial reports

year set daunting deposits to try to keep the riff-raff out of politics. But whereas the deposit for a parliamentary candidate in Britain remained fixed at £150 from 1918 until 1985 (it is now £500), the Japanese rates kept pace with inflation. Moreover, Britain has lowered the threshold below which a deposit is forfeited from 12.5% of votes to 5%. Other countries have done away with deposits altogether. America, for one, does not require them.

Some would like Japan to follow suit. A group of lawyers led by Kenji Utsunomiya, who has twice run unsuccessfully for governor of Tokyo (a deposit of ¥3m, which he retained), is making its third attempt in the city's courts to have deposits scrapped. The Diet, Japan's parliament, toyed with lowering them in 2008, but did not. Ironically, says Mr Miyabe, the initiative came from the ruling Liberal Democratic Party, which dominates Japanese politics and is easily the country's best-funded party. Its intention in proposing the change, cynics say, was not to open politics to the rabble, but to hobble the Democratic Party of Japan, a left-leaning rival, by attracting more candidates and thus splitting the opposition. At any rate, with the Democrats now enfeebled, the LDP seems to have lost interest in changing things. ■

Democracy in Japan

Bills before parliament

TOKYO

The price of admission to Japanese politics is high

SETSU KOBAYASHI is still smarting from his brief foray into Japanese politics last year. A constitutional scholar, he set up a centrist political party called Kokumin Ikari no Koe ("The Angry Voice of the People"). But the people were not as angry as he thought: none of the party's list of ten candidates won any of the seats allocated by proportional representation in elections for the upper house of parliament. They had each deposited ¥6m (\$53,000) to run, which they all forfeited. The whole exercise left Mr Kobayashi ¥60m out of pocket—the price of a nice apartment in Tokyo. "Never again," he says.

Candidates for first-past-the-post seats in parliament pay half as much (¥3m)—but that is still swingeing by international standards (see chart). This creates a big obstacle for new parties or independents trying to break into politics. Tokyo is about to hold elections for its local assembly; candidates must stump up ¥600,000 to stand. Tomin First no Kai (Tokyoites First), an upstart party founded this year by Yuriko Koike, the city's governor (pictured), has had to raise millions of yen to register its novice candidates. Setting the cost of entry so high favours the big political parties, backed by

unions and industry lobbies, complains Akira Miyabe of Greens Japan, and helps ensure that parties like his don't get a sniff at office. "The system is clearly unfair and unconstitutional," he says.

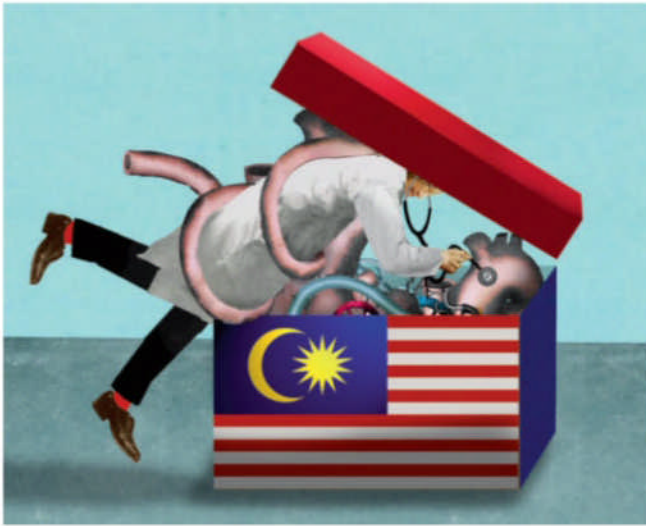
Britain inspired Japan's Election Law of 1925. At the time many European govern-



At least help us get our money back

Banyan | Doctor on call

The return of a former prime minister shows the sorry state of Malaysian politics



WHEN Mahathir Mohamad spent a week in hospital last year, at the age of 91, talk naturally turned to his legacy as Malaysia's longest-serving former prime minister. How naive. Dr Mahathir may have stepped down in 2003 after 22 years in office, but he has hardly been retiring in retirement. His constant sniping helped topple his immediate successor, Abdullah Badawi, who lasted until 2009.

Now the old warhorse is picking a fight with Najib Razak, the prime minister since then and now leader of Dr Mahathir's former party, the United Malays National Organisation (UMNO), which has run Malaysia for the past 60 years. Dr Mahathir has registered a new political party and persuaded Pakatan Harapan, the fractious coalition that forms Malaysia's main opposition, to admit it as a member. Now Pakatan is debating whether to make Dr Mahathir the chairman of their coalition—and, perhaps, their candidate for prime minister at elections which must be held within 13 months. Having long said that he would not be returning to parliament, Dr Mahathir has lately been hinting that he would consider another stint in the top job.

It is difficult to imagine a more unlikely turn of events. The original incarnation of the coalition Dr Mahathir might soon be running was formed in the late 1990s to oppose his own interminable rule. Its founder, Anwar Ibrahim, was Dr Mahathir's deputy until the latter sacked him during a power struggle; he was later jailed on sham charges of corruption and sodomy. The current government's methods are copied directly from Dr Mahathir's playbook. Since 2015 Mr Anwar has been back in prison following a second sodomy conviction, this one just as dubious as the first. The reversal of the authoritarian turn Malaysia took under Dr Mahathir is one of Pakatan's main objectives.

What makes all this even tougher to stomach is that Dr Mahathir's conversion to the opposition's cause looks disturbingly incomplete. Though he is hobnobbing with former enemies, the old codger still finds it difficult to apologise for the excesses of his tenure. Many of his views remain wacky: in May he told the *Financial Times* that he still thinks the American or Israeli governments might have arranged the attacks of September 11th 2001. Can Malaysia's opposition really find no more palatable leader?

These are desperate times, retort Dr Mahathir's supporters.

Since 2015 news about the looting of 1MDB, a government-owned investment firm from which at least \$4.5bn has disappeared, has dragged Malaysia's reputation through the muck. American government investigators say that 1MDB's money was spent on jewellery, mansions, precious artworks and a yacht, and that nearly \$700m of it went to the prime minister. Mr Najib says he has not received any money from 1MDB, and that \$681m deposited into his personal accounts was a gift from a Saudi royal (now returned). He has kept his job, but only after replacing the deputy prime minister and the attorney-general.

One might expect this scandal to propel Pakatan into power at the coming election, but instead the opposition looks likely to lose ground, perhaps even handing back to UMNO and its allies the two-thirds majority required to amend the constitution. This bizarre reversal has much to do with Malaysia's regrettable racial politics: the Malay-Muslim majority largely favours the government and the big ethnic-Chinese and -Indian minorities tend to vote against it. Mr Najib has baited an Islamist party into renewing calls for more flogging for moral lapses, forcing them to leave Pakatan. The split in the opposition will lead to lots of three-candidate races, in which UMNO will romp home.

Put in this context, Dr Mahathir's reappearance is a godsend. It stands to transform Pakatan's chances by granting access to a broad swathe of rural constituencies that they had previously thought unwinnable. Many Malays have fond memories of the booming economy of Dr Mahathir's era (they overlook its crony capitalism and his intolerance for dissent); in their eyes, he put Malaysia on the map. As coalition chairman, Dr Mahathir might also bring some order to Pakatan's noisy council meetings. His backing could be invaluable after a narrow victory or in a hung parliament, when UMNO's creatures in the bureaucracy might be expected to put up a fight.

All these benefits could probably be obtained without offering to make Dr Mahathir the prime minister. But he may be the only front man upon whom most of the coalition can agree. That role had previously fallen to Mr Anwar, but it has become clear to all but a few holdouts that he cannot continue to manage the quarrelsome coalition from his cell. Voters are not sure whether to believe Pakatan when it says that, should it win, it will find some way to catapult Mr Anwar out of his chains and into the country's top job. Nor are they much inspired by the notion of accepting a seat-warmer to run the country while this tricky manoeuvre takes place.

It could be worse

This is a depressing mess, even by Malaysia's dismal standards. The opposition bears no blame for the dirty tricks which, over several shameful decades, the government has used to hobble Mr Anwar and many others. But by failing to nurture—or even to agree upon—the next generation of leaders, they have played straight into UMNO's hands.

It is possible that the thought of hoisting Dr Mahathir into the top job will at last force the coalition to thrust a younger leader to the fore (some suspect that this is the outcome that Dr Mahathir, a shrewd strategist, has always had in mind). But it is also possible that, facing only uncomfortable options, they will end up making no decision at all. Some in Pakatan seem happy to barrel into the next election without telling voters who will lead Malaysia should they win. That might seem like pragmatism, but it is really just defeatism. ■



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Financial risk

The rationality police

PARIS AND SHANGHAI

China's "regulatory storm" hits four of its most global companies

CHEN FENG was in fine spirits as his Parisian guests, midway through a banquet of lobster and candied duck, toasted his success. The chairman of HNA, a Chinese conglomerate that began as a small airline just over two decades ago, was in France for the firm's "international week", featuring glitzy events ranging from a golf tournament to a fashion show. The gala on June 26th coincided with Mr Chen's turning 64. Wearing a Chinese suit, he stood on stage at the Petit Palais (pictured), as enormous sparklers blazed on a display beside him. The revellers, aided by opera singers, offered a chorus of "Happy Birthday".

In normal times the evening would have been notable for what it revealed about a new kind of ambitious Chinese company, eager to make a global name for itself. But the circumstances were abnormal. A few days earlier word had leaked that China's regulators wanted banks to check their loans to HNA and three other fast-growing companies. This had caused panic among holders of the firms' shares and bonds. Analysts wondered whether the companies' global shopping spree would screech to a halt. The good cheer displayed by Mr Chen and his colleagues seemed designed to reassure people that in HNA's case, it would not.

The three other big companies named by the banking regulator were Dalian Wanda, a property developer that is building an entertainment business; Fosun, a



health-to-tourism conglomerate; and Anbang, an insurer that has made a series of high-profile overseas deals. The regulator also mentioned a lesser-known entity, Zhejiang Rossoneri, an investment company that bought AC Milan, a football club.

The regulator's instructions were simply that the banks take a closer look at loans to these companies to guard against risks. But analysts looked for possible hidden meaning. The regulator often asks banks about their exposures to various industries, but it was unusual for it to specify firms by name. Rumours spread that banks were responding by halting loans to the companies and even selling their bonds. The firms denied this was happening, which may have helped the prices of their

shares and bonds to recover somewhat.

Several of the companies have connections to the ruling elite. This has led some observers to speculate that the regulator's order might be related to factional struggles, or that it might signal an attempt by China's president, Xi Jinping, to tighten his grip on the economy by toppling tycoons. But trying to take down so many business leaders at the same time would be an assault of unprecedented magnitude, even by Mr Xi's standards.

There is a better explanation, namely that the action is part of a broader campaign over the past six months to clean up the financial system: a "regulatory storm", as many have described it. Officials have worked to close loopholes, to stamp out insider trading and to cut reckless borrowing. They have targeted predatory investors, describing them as "financial crocodiles".

How do HNA, Wanda, Fosun and Anbang fit in? They have been China's most aggressive investors abroad. Of the \$230bn of overseas deals pursued by Chinese companies since the start of 2016, these four groups account for more than \$60bn, according to S&P Capital IQ, a data provider. This poses two risks. First, the cash exodus has piled pressure on the yuan and forced the central bank to eat into its foreign-exchange reserves to support the Chinese currency. Second, much of the investment has been funded by domestic borrowing. If the overseas assets perform poorly, the companies could be left with crippling debts at home.

Aware of these risks, the government has ratcheted up capital controls since last year, making it much harder to move cash abroad. The result has been a sharp drop in deals. Chinese firms announced about \$45bn of overseas investments in the first half of 2017, down from nearly \$140bn during the same period in 2016 (see chart). By ►►

▶ demanding that banks examine their loans, regulators appear to be making capital controls more targeted and homing in on the biggest spenders.

Within ICBC, China's biggest bank, an internal e-mail about the order does not mention the companies' domestic operations. Rather, it focuses on what the government has termed "irrational outbound investments", referring to highly leveraged deals, especially in industries such as property, hotels, entertainment and sport. Roughly 70% of overseas spending by HNA, Wanda, Fosun and Anbang has been in these industries.

There is, however, a clear political message in the regulator's directive. It is that the Communist Party decides what companies can and cannot do with their cash overseas. It is sensible for regulators to be prudent about debt-fuelled deals, but their caution should apply to all sectors, not just those that are out of favour with the party. Have Chinese companies been overpaying for football clubs and hotel chains, or have they been making shrewd judgments about consumer trends? It is hard for investors to be certain. But the Chinese government has made its choice. ■

Video streaming

Stemming the flow

SHANGHAI

The government cracks down on fun

ON THE evening of June 17th nearly 10,000 young people packed a flying-saucer-shaped theatre by the Huangpu river that flows through Shanghai. They had come to watch a performance by Luo Tianyi, a singing hologram of a young woman—China's most popular virtual star. More than 1m people also watched the show live on AcFun, a video-streaming platform much loved by enthusiasts of Japanese *anime*, the cartoon genre to which Ms Luo belongs. AcFun may now be wondering whether that was its live-streaming swansong. The government is not a fan of such broadcasting.

Only five days after the concert, China's television and film watchdog asked local authorities to shut down video- and audio-streaming services on AcFun as well as

Sina Weibo, a social-media platform, and iFeng, a news website. It accused the firms of not obtaining licences that are required for broadcasting through the internet. It also accused them of streaming news and current-affairs shows (not allowed either without a permit) and, what's worse, airing "negative views" in them.

AcFun responded immediately. It vowed to tighten its controls over content streamed through its site. Sina Weibo announced that only users with the required licence would be allowed to upload audio and video programmes. iFeng quietly removed all of its current-affairs videos, including those of Phoenix TV, its Hong Kong-based parent. The only ones that remain on the site—once renowned for its political coverage (albeit rarely critical of the Communist Party)—relate to topics such as sport, beauty and fashion.

The crackdown is part of the government's long-running battle against the spread of uncensored information through the internet. It is becoming increasingly willing to risk collateral damage: better to stop teenagers from watching singing holograms than let them see an unauthorised performance by a human being who proves careless with her words about the party.

It is not yet clear how the move against the three companies will affect the many millions of people who enjoy live-streaming themselves, often to make money from digitally proffered tips. Many of them are young women who sing or dance for their internet audiences. Last year the government banned lewd behaviour in such performances ("seductive" eating of bananas, for example). Sina Weibo, however, has said that only "programmes" were covered by the licence requirement—implying that wriggle-room still existed for individuals to stream themselves flirting.

Think positive

Will it last? It had long been widely thought that the authorities were keen on people whiling away their time on mindless entertainment—anything that might distract them from the party's failings. But in early June the Beijing Cyberspace Administration ordered internet firms, such as Sina Weibo and Tencent, to shut down or suspend social-media accounts specialising in gossipy news, mostly about celebrities. It accused them of peddling "vulgarity". (The last article on one of them, called Mimeng—with an estimated 1.4m followers—was entitled "A Brief History of Prostitution".) The party's mouthpiece, the *People's Daily*, called the closures "a victory of positive energy against negative energy".

But as always in China when the government tries to tighten control over the internet, users resist. Some of the gossipy accounts have reopened under different names—with less racy content. ■



A dissident's hardest struggle

Liu Xiaobo's "crime" was to call for democracy and urge others to support him. In 2009 that earned him an 11-year jail sentence for "inciting subversion of state power"—among the toughest penalties meted out for such an offence since it was established more than a decade previously. On June 26th it was revealed that Mr Liu will never complete his term: he is on "medical parole" undergoing treatment in hospital for terminal liver cancer. Police have rarely allowed his wife to leave her home since he was awarded the Nobel peace prize, in absentia, in 2010. But they have reportedly let her visit his sick bed. The government apparently wants to avoid the international outcry that a Nobel laureate dying behind bars, cut off from his family, would provoke. Mr Liu, however, is still not free. The authorities say he is subject to supervision by prison officials. Protesters in relatively free Hong Kong have rallied this week to demand Mr Liu's release (above, a demonstrator there holds his picture). But on the mainland his name is largely blocked online, as are references to "Charter 08", his call for reform. For a time, internet censors even tried to stop use of the phrase "empty chair": the object that represented his absence at the Nobel ceremony in Oslo.

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The rule of law in Africa
Bleak house

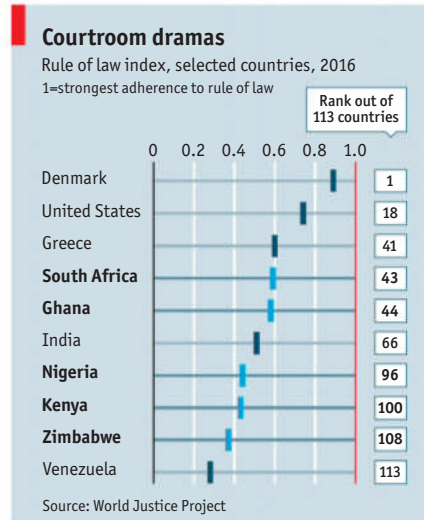
HARARE
The struggle to make justice swifter and fairer

IT IS a little past 11 o'clock in the morning and Courtroom c is silent. The accused, the defence attorney, the state prosecutor and even the judge who is supposed to be trying the case of *The State v Innocent Gweke* are absent. In fact, almost all of the courts turn out to be empty. A clue to the mystery may lie in the smell of fried chicken wafting along the airy corridors of Harare's High Court building, which manages to get through less than half of the matters put before it each year, leading to an ever longer backlog of cases.

The wheels of justice may turn slowly in Zimbabwe, but in some other parts of the continent they have almost fallen off. In the Central African Republic (CAR), for instance, UN peacekeepers lament their inability to arrest criminals in the town of Kaga Bandoro because there are no holding cells to hold them, never mind courtrooms or judges to give them a fair trial.

Zimbabwe and the CAR are extreme examples, but across much of Africa you find courtrooms that are dilapidated and judges who take an age to resolve disputes or sort the innocent from the guilty. Among the myriad problems Africa faces it may seem odd to prioritise the provision of justice. But until legal systems become faster and fairer, the continent will struggle to attract foreign investment.

Andrew Skipper of Hogan Lovells, a



law firm in London, says his clients who work in Africa fret about how to manage the risks of corruption and weak legal frameworks. Many of them would like to be doing more deals in African countries and see plenty of opportunities there. But all too often they are held back from investing because governments have not passed the necessary laws or set up the regulatory agencies that would set the rules and give investors certainty.

Locals share these concerns. A busi-

nessman in Nigeria sighs that he feels like a character in "Bleak House". He has two lawsuits against another Nigerian businessman that have been before the courts for more than a decade. "Every time one comes up for a hearing, they get another postponement," he says. "It will go on like this for the rest of my life."

Even worse than slow judges are the dodgy ones. The former boss of an anti-corruption agency (in a country that will have to remain nameless, for obvious legal reasons) tells how it managed to get corruption charges brought against a politician. After the person was acquitted the two bumped into one another at a party. An awkward moment was eased when the politician clasped his accuser in a warm hug. "My friend, you won't believe how much you cost me to bribe the judge," he said with a grin.

In Ghana the judiciary was scandalised in 2015 when an undercover journalist aired footage and audio recordings of judges taking bribes or demanding sex to sway their rulings. As many as 34 were implicated, many of whom have since been fired or have retired. Nigeria, too, has recently suspended judges as part of its crackdown on corruption. But the problem spreads far beyond west Africa.

When Afrobarometer, a pollster, asked people in 35 African countries whether they thought judges were corrupt, 65% said that "some" or "most" of them were. Another 11% did not hedge their bets, answering that "all of them" were crooks. Such perceptions help shape reality by keeping good people out. One Ghanaian lawyer who considered joining the bench was overruled by his wife who said it would bring shame on the family.

To be fair, being a judge can be risky. In ►►

► Nigeria several judges, or their wives and children, have been kidnapped in recent years, although it is not clear whether these were simply for ransom or to change their minds on a point of law. And lawyers have been killed in Mozambique and Kenya. One London-based lawyer says he knows of an instance in which a British arbitrator flew out to west Africa to deal with a commercial dispute. He flew home the next day after a threatening note was pushed under the door of his hotel room.

Yet some of Africa's judges and courts do their citizens proud. For many years Zimbabwe's judges stood up to Robert Mugabe, who has ruled the country since 1980 with little regard for the law. Some judges ruled against him even when their courtrooms were invaded by thugs chanting that they should be killed. Having failed to silence them, Mr Mugabe resorted to driving them from office and into exile before packing the bench with party hacks.

South Africa's Constitutional Court has also been a beacon of independence in standing up to the government. But other elements of the justice system have been systematically undermined by Jacob Zuma, a president facing 783 charges of corruption. He has fired or forced senior policemen and prosecutors to resign and replaced them with deeply compromised people. Several of these appointments have since been overturned by the courts.

Courts that work and honest, independent judges are but two elements of the complex of rules, institutions and traditions that make up the rule of law. Among the other essential elements are governments that try to act within the law and, when they fail to do so, obey the courts. The World Justice Project, an NGO based in Washington, DC, considers these among 44 factors to construct an annual Rule of Law Index. This shows that although sub-Saharan Africa is not the only region where the rule of law is weak, it could do a lot better. South Africa, the best in the region, is 43rd in the global index (see chart on previous page). Zimbabwe ranks 108th out of 113 countries.

Yet things may be improving. Many African countries are buffing up their laws and courts to woo foreign investors. And the prosecution of some crimes is being internationalised. This happens not just through organisations such as the International Criminal Court, which deals with serious violations of human rights, but also through the judiciaries of some rich countries. Anti-bribery laws in America and Britain, for example, not only focus the minds of British and American businessmen, who risk arrest if they pay bribes in Africa, but also of Africans who worry that they may be arrested for bribery at home when they travel abroad. This means that even in places where the courts are weak, people can be forced to play by the rules. ■

Agriculture in Africa

Lost in the maize

LUSAKA

Fertiliser subsidies in Africa do not always work as intended

ASK Anesi Chishiko about fertiliser, and she points to her goats and her trees. Manure and leaves are all that she folds into the earth on her family farm in Zambia. Inorganic fertiliser is too costly: the government offers subsidies, but only "clever people" know how to get them, she explains. Her maize sucks up nutrients more quickly than she can replace them. Each year, she says, the soil gets worse.

Farmers in sub-Saharan Africa use little fertiliser: the region accounts for just 1.5% of the world's consumption of nitrogen, a crucial nutrient. Governments, who want them to use more, spend nearly \$1bn annually on subsidies. That is good business for traders, and good politics for leaders chasing rural votes. But it is not the best way to help small farmers like Ms Chishiko. Fertiliser often reaches them late, or not at all. And the cost saps budgets as surely as over-cropping saps the soil.

An earlier generation of subsidies was phased out in the 1990s, at the behest of international lenders. Then, in 2005, Malawi revived its fertiliser scheme. Crop yields soared. Experts gushed about a "Malawi miracle". Governments from Tanzania to Nigeria started forking out for fertiliser again. By 2015, they declared, African farm- ►►

Ice cream in Yemen

Pralines behind the battle lines

ADEN

A scoop from our Middle East correspondent

CHOLERA spreads, with over 200,000 new cases reported. Malnutrition is rife. Government salaries were last paid a year ago. But the customers keep coming at the local franchise of Baskin-Robbins, an American ice cream brand, in Sana'a, Yemen's rebel-held capital. Since the war erupted, the company has added a new branch to the five it already has in the capital. "Our best-seller is pralines," says one of the managers, who last month served more than 16,000 customers.

When Saudi Arabia and the United Arab Emirates first began bombing in March 2015, getting supplies quickly became a problem. The tubs are shipped from America, but bombing knocked out the refrigeration units in Aden, the southern port, and the road north was treacherous. So Baskin-Robbins rerouted their orders through Salala, a port in neighbouring Oman. Each month a freezer truck brings its fresh stock of 20 flavours 1,500km (900 miles) through the desert. The journey is expensive and tiresome but mostly safe, so long as the gunmen manning some 60 checkpoints en route are kept happy. For the right fee, they will also refrain from inspections, which in the heat might make the ice cream melt.

Import duties have put up costs. The company has to pay them twice: to the internationally-recognised government at the Omani crossing; and to the rebels at a new office on the mountainous approach roads to Sana'a. But such is the demand in a country where temperatures can exceed 50°C that the franchise still turns a profit. Air strikes can interrupt business, sending Yemenis rushing



home, but they have grown less common. Of eight outlets in the rebel-held north, only one has had to close, because it lies close to a military base.

The south of Yemen has been more problematic. Artillery fire from the rebels besieging the government-held city of Taiz, 300km south of Sana'a, has destroyed that city's sole Baskin-Robbins outlet. And Aden's three ice-cream parlours were looted or bombed when rebels stormed the coastal city when the war began. Eventually, though, one was rebuilt, and a deal was reached to allow the precious tubs to cross enemy lines. "Business is business and fighting is fighting," explains a Yemeni magnate. But when war only boosts the warlords' opportunities for extortion, why should they ever stop?

ers would be using 50kg per hectare. The target was missed: south of the Sahara, farmers use only a third of that amount. But subsidies persist.

Cheaper fertiliser has pepped up farm production and, in places like Malawi, raised incomes. But it does not always help the neediest. In Zambia, studies have found that a third of subsidised fertiliser never reaches the intended beneficiaries, and is probably resold commercially, with crooked middlemen pocketing the subsidy. Much of the rest goes to bigger farmers, who could afford to buy their own. The system is a “failed project”, the country’s agriculture minister said last year. Past governments in Zambia have directed fertiliser to electoral strongholds. (In Ghana, by contrast, vouchers have been used to woo opposition voters.) The biggest schemes resemble welfare programmes. Zambia spends five times as much on farm subsidies as it does on cash transfers to the poor.

Zambia is now trying to reform. Instead of doling out bags of fertiliser, the govern-

ment plans to give farmers “e-vouchers” (like a bank card) to buy their own inputs. The idea is to boost private suppliers and to cut fraud. A pilot scheme has already uncovered 20,000 “ghost farmers”—such as dead people and children—on existing registers. Other countries have also innovated: since 2012, Nigeria has zapped subsidies onto farmers’ mobile phones.

Yet fertiliser is often the wrong priority. It works wonders in test plots, but is less effective in real fields, especially in acid soils. And it is risky for farmers to spend money on fertiliser when, without irrigation, they are at the mercy of the rains. Tight budgets may now force a rethink. Nigeria wants to cut prices, and the need for subsidies, by making more fertiliser domestically: it recently struck a deal with Morocco for phosphate, a raw material. Meanwhile, African entrepreneurs are concocting organic alternatives out of everything from rice husks to urban waste. Muck and leaves alone may not replenish Ms Chishiko’s soil. But they could be part of the answer. ■

motion of violence.”

By the time of 2011’s Arab spring, Al Jazeera was already well established. But its coverage of the uprisings marked a turning-point. Its reporters beamed out live images from raucous protests. The channel became the primary source of information for participants and observers. Al Jazeera’s web traffic increased by 2,500% during the revolution in Egypt, despite the government ransacking its Cairo bureau. “Long live Al Jazeera!” chanted protesters in Tahrir Square.

Qatar’s neighbours were not nearly as thrilled with the station. They feared that the uprisings might spread to the Gulf. Al Jazeera’s favourable coverage of victorious Islamists, such as the Muslim Brotherhood in Egypt, further alienated the Gulf rulers, who see the group as a threat. It has also led to criticism that Al Jazeera is following Qatar’s lead, at the expense of its editorial integrity. The station takes positions “not based on journalistic priorities, but rather on the interests of the foreign ministry of Qatar,” said Aktham Suliman, a former correspondent, after quitting in 2012.

Al Jazeera continues to offend. When 12 Saudi soldiers were killed in Yemen in April, the station failed to refer to them as “martyrs”, enraging Riyadh. It angers the Egyptians by referring to the removal of the Brotherhood by the army in 2013, as a “coup”, which it was. The station has also given favourable coverage to Jabhat al-Nusra, the al-Qaeda affiliate in Syria. Since Qatar’s expulsion from the Saudi-led coalition fighting in Yemen, Al Jazeera’s reporting on the war has grown more critical. It now highlights the bombing of civilians and a cholera epidemic exacerbated by the fighting. The coalition “has proven to have no plan”, said a reporter on June 16th. Al Jazeera will probably survive this crisis: but the Qatari government may force it to tone things down. ■

Al Jazeera

Changing the channel

CAIRO

Is the broadcaster an independent voice or a propaganda tool?

WERE it not for Saudi intolerance, there might never have been Al Jazeera, the Arab world’s most popular news channel. In its formative days the Qatari-funded station struggled to find good staff. Then Saudi Arabia kicked the BBC’s irritatingly truthful Arabic-language channel off a Saudi satellite, causing it to shut down. Suddenly dozens of journalists were looking for work. Al Jazeera hired them. When it went on the air in 1996 it was run by people steeped in the BBC’s standards.

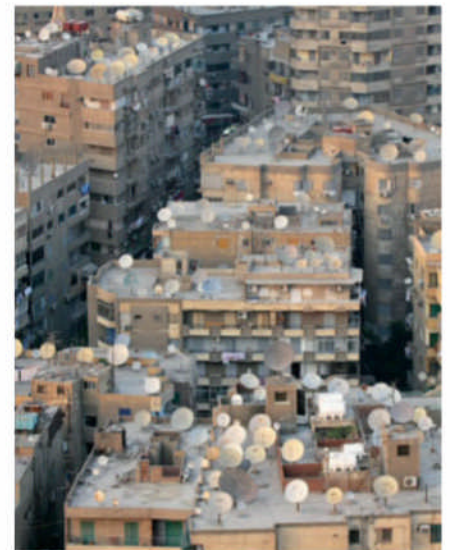
Al Jazeera is now at the centre of a feud pitting Saudi Arabia against Qatar, its super-rich neighbour. Several Arab countries, including Egypt and the United Arab Emirates (UAE), have joined the Saudis in isolating the tiny monarchy over its alleged support for terrorism and its ties to Iran. But what really irks them is how Qatar has used Al Jazeera to wield outsize influence in the region. They see it as a propaganda tool, promoting an agenda often at odds with their own.

The coalition is demanding that Qatar close Al Jazeera, and agree to 12 other conditions, before dropping their blockade. Several countries have already banned the station and blocked its website. This has led to a backlash from those who see something unique in Al Jazeera. Most other channels pump out sterile state-ap-

proved reports, but Al Jazeera is an independent broker of information. Or at least it was.

In its early days the station distinguished itself with intrepid reporting, heated debates and unsparing coverage of autocrats, save its Qatari hosts. It was audacious, relatively, calling Saddam Hussein a “dictator” and allowing Israelis on the air. Dissidents, Islamists and pan-Arab nationalists were given a platform. The channel was indeed “a voice for the voiceless”, as it claimed. While vexing the region’s censors, it won awards. More tellingly, it has at one time or another been kicked out of nearly every country in the region.

But the station has also welcomed, and championed, extremist viewpoints. It broadcast messages from Osama bin Laden and allowed Yusuf al-Qaradawi, an Islamic theologian, to advocate violence on his own talk show. The bureau chief in Beirut once hosted an on-air birthday party for a militant convicted of killing four Israelis. Its war coverage seems deliberately incendiary. Some in the West, familiar only with Al Jazeera’s tempered English offering, have compared it to biased stations in America. But Al Jazeera Arabic is like “Fox News on steroids”, says Hussein Ibish of the Arab Gulf States Institute, a think-tank. “It goes much further, flirting with the pro-



Of dishes and dissent

Algeria

Reviving the land of the living dead

ALGIERS

Algeria has vast potential but a mummified ruling class

EVERY 15 seconds out pops a washing machine, a television and an air-conditioner from the modern production lines in Setif, 270km (170 miles) east of Algiers. Some 90% of them are destined for export. Algeria offers cheap labour, proximity to Europe and has been calm for a decade. Production costs are a seventh as high as in France, says a manager at the Algerian company, Cevital, which recently acquired Bradt, a French manufacturer of domestic appliances. A new 100-hectare site is set to open across town early next year.

Historically Setif has been a turbulent city. A massacre of demonstrators there triggered the guerrilla war that forced out the French colonists in 1962. In the 1990s jihadists waged a decade-long revolt, taking refuge in the mountains near the town. Only last month the security forces fired rubber bullets at retired army officers demanding higher pensions.

So the government should welcome fresh investment and jobs. But local entrepreneurs complain that officials obstruct them. Authorisations which once took a month now drag on for three. On the coast at Bejaia, the government has barred delivery of equipment for Cevital's new line in animal fodder, next to its huge cooking-oil plant. Ministers still mouth calls for diversification (away from oil) and private investment, but many bigwigs seem nervous of undermining the government's business empire. "We should beware of licensing monopolies," says Djamel Ould Abbas, the 83-year-old secretary-general of the National Liberation Front (FLN), which has ruled Algeria since independence.

Monopolies, for Mr Abbas, remain a prerogative of the state. His worldview has resisted evolution since the anti-colonial struggle he helped wage in the 1960s. "We're the only Muslim and Arab country that has remained faithful to its sociopolitical ideals of solidarity with the poor and marginalised," he says. By his reckoning, there is much to chirp about. Algeria does better than any other African country on the UN's "human development" index. The poor live in free, if grim, housing estates. Desalination plants have ended water shortages. A modern subway speeds through the capital. Toll-free highways criss-cross the country. The first Arab state to succumb to a jihadist uprising was also the first to emerge. Some 200,000 people were killed in its "dark decade" in the 1990s, but today it is one of the Arab



Bouteflika, ready for a fifth term

world's most tranquil states. The last big attack in the capital was almost ten years ago. The Arab spring of 2011 passed it by. Young would-be *haraga*, migrants considering an illegal dinghy-ride across the Mediterranean, say terrorism in London and Paris is a deterrent.

But the elderly founding fathers seem ever more out of touch. In elections in May, only 28% (according to the government's massaged figures) turned out to vote. A quarter of the ballot papers were spoiled. The president, Abdelaziz Bouteflika, is 80 years old and confined to a wheelchair. In May he needed help casting his ballot. He has not given a speech in public for years. Critics call him "the living dead".

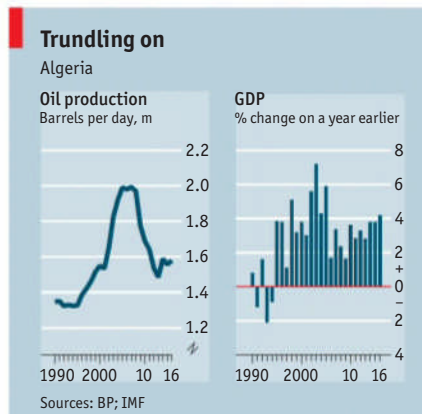
Petrodollars and the fear of a knock on the door still buy quiescence. But welfare, red-tape and drugs have sapped the nation's vitality. Goods that Algeria once pro-

duced in abundance, such as wheat, are now imported. Bread, petrol and milk are subsidised. Food and transport for students, as well as education, are free. But the government can no longer balance the books. Since oil prices collapsed in 2014, it has burned through 90% of its oil stabilisation fund. It has spent almost half of its foreign reserves, and the rest could run out in two years. The budget deficit hit 17% of GDP last year. Having relied on oil and gas rents for decades, the government's kneejerk response is to increase production.

The government seems unable to restructure the state. Bread riots erupted in the 1980s when it tried to cut subsidies, and Islamists surged at the ballot box. Unveiling another economic plan on June 20th, Mr Bouteflika's latest prime minister, Abdelmajid Tebboune, spoke of the need to rationalise subsidies—and then committed \$3bn for a social-housing scheme and work on the president's pet project, building the world's third-largest mosque. Privatisations have floundered. The valuations of eight state conglomerates earmarked for flotation in 2014 remain pending. The stock exchange is open two hours a day, twice a week. Seeking splendid isolation, octogenarians in power since independence discourage foreigners and speculators they fear might come to control Algeria's fate. They have paid off the country's foreign debt, sealed its land borders and upheld a law limiting foreign investment to 49% of any concern. Their efforts could be self-defeating. Once reserves run out, "we're bound for the IMF and they will dictate terms," predicts Abderrahmane Benkhalfa, a pro-private-sector finance minister replaced earlier this year.

Politically, the regime seems no less averse to change. A cabal surrounding Mr Bouteflika's influential brother, Said, are already mooting a fifth presidential term, once the fourth expires in 2019. Contenders are kept at bay with perennial reshuffles. Governments last on average little more than a year. Long after the internet has eroded the state's monopoly on information, there is no FM frequency, let alone private radio stations.

Tourism might help Algeria open up. Its 1,600km of coastline and deserted beaches could attract far more holidaymakers than they do. But even at showpiece state hotels, surly staff sneer, as if wondering why Algeria bothered with liberation only to end up serving foreigners once again. Visa restrictions anyway make Algeria a hard place to visit. Next to the coastal Roman town of Tipasa, an abandoned Club Med resort looks almost like part of the ruins. Discarded plastic pedalos whiten in the sun. The tourism ministry recently assigned redevelopment of the site to a young press officer. But the ministry gave her no budget. If only Algeria's liberators knew how to lighten their grip. ■



The
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SPECIAL REPORT
TRUMP'S AMERICA

July 1st 2017

The power of groupthink



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The power of groupthink

Observers of Donald Trump's presidency who hope that American politics will eventually return to normal may face a long wait, says John Prideaux

"IT'S A WONDERFUL day under President Trump! Please leave a message," chirps the answerphone at the Palm Beach Republican Club, which sits on a palm-tree-lined avenue with a crossroads at one end and the turquoise Atlantic at the other. If Mar-a-Lago is Versailles, then this is its local village, whose inhabitants get occasional glimpses of the royal carriages. There is nothing downtrodden about the area. West Palm Beach, the nearest town, has a McLaren dealership and is patrolled by bicycle-mounted "Security Ambassadors".

Palm Beach is about as different from rural Kansas as it is possible to be, yet the way the president's supporters talk about him in both places is much the same: he's a businessman, he's trying to do the right thing, Congress is getting in his way, the media are painting him as a bad man which he's not, and anyway the country was a disaster under Obama. In the time your correspondent spent in West Virginia, Kansas, Georgia, Alabama and Florida talking to mayors of small towns, local Republican Party bosses and ordinary folk who voted for the president, nobody spontaneously raised the lingering scandal over Russian meddling in the presidential election, and hardly anybody showed buyer's remorse.

Go back 50 years, and if you knew someone's income, you could predict, with reasonable accuracy, how they would vote. That is no longer true (see chart on the next page). From Florida's golf courses to rural Appalachia, from Midwestern blue-collar suburbs to California's bougainvillea-lined driveways, where some of the most prominent pro-Trump intellectuals grew up, the tribes that make up the president's support are bound together by something powerful that has little to do with

ACKNOWLEDGMENTS

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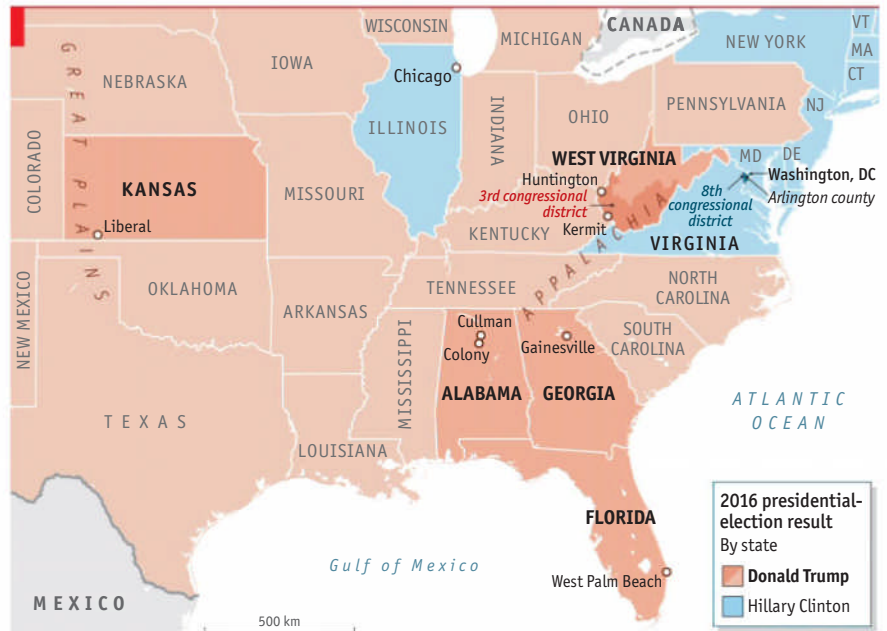
To be fair, not everybody in America thinks it's a wonderful day under President Trump. Plenty of people have watched the 45th president's progress since his inauguration—from the “American carnage” speech to the firing of the FBI director, James Comey, from the courting of authoritarian leaders abroad to the continuing mingling of business interests and power—and concluded that this president is a threat to the republic. This special report is not about them. Rather, it is about the roughly 40% or so of voters—some 50m Americans—who have lived through the same events and like what they see. According to Gallup, a polling organisation, that is the share who approved of the president a week after his inauguration. Five months into his administration, which has felt like a period of extraordinary turbulence to those following events closely, Trump voters are less enthusiastic than they were, but that headline approval number has declined by only a couple of percentage points.

Of this group, about half say they strongly support Mr Trump and are with the president no matter what. That is the share of voters, about 20%, who told YouGov, *The Economist's* pollster, that it is a good idea for the president to appoint family members to positions in the White House, for example. Those who take him from a 20% approval rating to one closer to 40% are the ones he needs to stick by him. If you understand how they think about politics and what can change their minds, you can sketch the boundaries of the president's support or, as his detractors might put it, what he can get away with.

The first thing to note is that most voters pay little attention. Those who follow politics tend to assume that everyone else does, too, but they are mistaken. According to the American National Election Study (ANES), a large survey run by Stanford and the University of Michigan and published in March, 94% of Trump voters did not attend a single political rally, speech or meeting last year. The figure for Clinton voters is 90%. The survey is considered the most rigorous study of what goes on in voters' heads when they cast their ballot. (All the numbers on public opinion in what follows come from the ANES, unless otherwise stated.) Only about a fifth of Americans pay close attention to politics, and they tend to be the most committed conservatives or liberals. For the rest, political issues are little more than “a sideshow in the great circus of life”, wrote Robert Dahl, a political scientist, in 1961. That remains true. Americans do not trust government much and expect politicians to lie; 31% of Trump voters and 36% of Clinton voters think that the American government “probably” or “definitely” knew about 9/11 in advance.

Wishful thinking

So how do the vast majority of voters change their minds? Not by taking each issue, deciding what is important to them, determining which candidate is closer to their preferences and then voting accordingly. In “Democracy for Realists”, the most influential recent book on voting, Christopher Achen and Larry Bartels show that the opposite often happens: people may well decide which candidate they like and then ascribe policies they approve of to him or her, often incorrectly. Each presidential-election year the ANES asks voters to place themselves on a spectrum



with “many more services” on the left to “reduce spending a lot” on the right, and then to place the two main political parties somewhere on that spectrum. About 15% decline, or say they have not thought about it. The same number, more or less, will place themselves but cannot place the parties, meaning that 30% of the electorate does not have a good sense of where Republicans and Democrats stand on the most fundamental question about the role of the state.

Of those who do answer, quite a few have a weak grasp of the parties' governing philosophies. After the election, defeated Democrats spent some time fretting over the 80,000 votes they lost in Pennsylvania, Michigan and Wisconsin, handing Mr Trump a win in the electoral college. They wondered whether the FBI's late intervention on Mrs Clinton's e-mails swung the election. But a far larger number of voters did not really know what either party stood for. The ANES also asks voters whether the Republicans or Democrats are more conservative, and found that some 15% of Trump voters thought the Democrats were the more conservative party (as did 6% of Clinton voters). Add in the don't knows, and 16% of Clinton voters and 24% of Trump voters were not sure which party was more conservative.

How is this possible in a country that is, as is often pointed out, highly polarised between conservatives and liberals? Only if a large number of people, rather than picking the party that best fits their own political views, are deciding on some other criteria—which is what they seem to be doing. Sometimes voters imagine that one of the parties fits their world view when it does not. Sometimes they adapt their preferences in order to fit the candidate or party they like. This can happen even on issues that voters think of as

It's not about money

United States, Democrats' lead over Republicans in presidential elections, by income, \$'000
Percentage points



▶ non-negotiable. Abortion is one of those, particularly for women and Catholics, for some of whom this has the highest priority. Yet according to an analysis by Mssrs Achen and Bartels of a study in which the same voters were re-interviewed year after year, about half of men who were anti-abortion and voted Democrat in 1982 had become pro-choice Democrats 15 years later, changing their position to align it with their party's thinking. A more recent flip comes from white evangelical voters, who supported candidate Trump by the same margin by which they supported George W. Bush, himself a white evangelical (see box).

This is not to pick on Trump voters or evangelicals: the same is true of Democrats, as the abortion example shows. Most voters make political choices based largely on what people like them are doing, and rarely change their minds. For example, it is hard to think of two more different candidates, in temperament, style and policy, than Mitt Romney and Donald Trump, yet more than 90% of those who voted for Mr Romney in the presidential election in 2012 also voted for Mr Trump this time, according to the ANES. The same share of Obama voters also backed Hillary Clinton. Those who expect Republican voters to desert Mr Trump each time a scandal breaks should bear this in mind.

Partisan reflexes often get blamed for whatever is currently going wrong in Washington. But partisanship works in part because it is such a helpful mental shortcut. Take the repeal of the Affordable Care Act, or Obamacare, by the House of Representatives, says Mr Bartels. Repealing the law is bound to have substantial effects on people's lives, but measuring those effects against a background of changing social conditions, health-insurance markets and medical technology would be tricky even for a health economist, let alone for a moderately well-informed voter. "So why not accept the judgment of people you trust?"

This kind of groupthink is so powerful that it shapes the way people see the world around them. Right after the election, and more than two months before Mr Trump took office, Republicans told pollsters that their personal finances were in much better shape than they had been the week before the ballot. Democrats said the opposite. The question had nothing to do with politics, and yet the answers given were somehow conditioned by the election. To understand how this can happen, compare and contrast two congressional districts: the one that is heading Republican fastest, and its Democratic counterpart. Conveniently, they are less than 200 miles apart. ■

Revelations

The importance of personal morality in politics is negotiable

TEN MINUTES BEFORE the Sunday morning service begins at the Free Chapel in Gainesville, Georgia, shuttle buses are ferrying worshippers from the north and south car parks to the church's 3,000-seat auditorium. Newcomers are being welcomed with coffee and doughnuts in the Connections Lounge. Inside, the church is equipped with a lighting rig and sound system as for a gig by a soft-rock band. Most of the service is taken up with Christian pop, the congregation listening rather than singing along. This Pentecostal church has grown rapidly over the past decade, thanks to its charismatic pastor, Jentezen Franklin (pictured). It now has several campuses around the country, funded by the tithes paid by regular churchgoers. Mr Franklin is a member of Donald Trump's evangelical advisory board.

Back in 2011, white evangelicals were the most likely group to say that personal morality was important in a president, according to the Public Religion Research Institute. Since Mr Trump became the Republican standard-bearer, they have become the least likely group to say that, changing what seems like a fundamental issue of morality to accommodate their support for the president.

One possible explanation for this swift change of heart is that many of those who identify themselves in surveys as evangelicals are not as religious as they seem. But Greg Smith of the Pew Research Centre says that idea is not supported by Pew's polling of different religious groups, which shows that



most self-described evangelicals are fairly observant. According to Pew, the president's approval rating among white evangelicals is close to 80%, even though some of the younger ones are appalled by him.

How do evangelicals explain their support for a thrice-married adulterer whose biographers have not found a man preoccupied with his salvation? "He doesn't pretend to be anything he's not," says Ed Henry, a state senator for Alabama. Mr Henry is one of a number of Alabama lawmakers who spent months pursuing his state's governor (himself a prominent Baptist) for covering up an extramarital affair. He sees no conflict between this and support for Mr Trump. Other evangelicals mention the appointment of Neil

Gorsuch to the Supreme Court as evidence that what they perceive as a long assault on them from the judicial branch is now over.

In the Free Chapel, Mr Franklin is recounting a recent visit to the White House for dinner. Cheers and applause greet the first mention of the president's name. "I'm so glad that the Lord's Prayer is being prayed in the White House," he tells the congregation. Most of his sermon does not touch on politics; instead, he uses the visit to the White House to show what can happen when the faithful throw off self-doubt. He returns to the president at the end. "I prophesy that God will open big doors for his people in 2017," he declares, before sending the faithful out, squinting in the bright Georgia sunshine.

Urban-rural divides

Taking out the white trash

Mutual incomprehension between urban and rural America can border on malice

ACCORDING TO THE Cook Political Report, which ranks every district in Congress by voters' strength of support for one party or the other, Virginia's eighth district is heading Democratic faster than any other in the country. This does not mean that it is changing from Republican to Democrat. Virginia 08 is Democratic already, just becoming even more so. The man charged with stopping this momentum for the benefit of the Republicans is Jim Presswood, head of the Arlington county Republican committee. Mr Presswood is an environmental activist who once worked for the Natural Resources Defence Council, an NGO. He has a pronounced interest in the sort of changes to farming championed by the farm-to-table movement. These are not typical preoccupations among Republican activists, but Mr Presswood voted for Mr Trump, mainly because he could not support a pro-choice candidate. In this district over 100,000 people work for the government, and Mr Trump lost it by miles. "Drain the swamp was a tough message for us," muses Mr Presswood. "This is the swamp."

Virginia 08 takes in Arlington, which includes the pretty 18th-century town that was already there when Washington, DC, was built just across the Potomac. The district's Democratic congressman, Don Beyer, used to run a family car dealership (Volvo, naturally) and was appointed ambassador to Switzerland and Liechtenstein after collecting money for Barack Obama's campaign in 2008. This is the sort of CV that resonates with voters in northern Virginia, an area dotted with independent coffee shops serving customers who use words like "artisanal". An impressive 30% of over-25s have postgraduate degrees, compared with 12% nationally. Across America, education levels have become much stronger predictors than income of how people will vote. Hillary Clinton did much better in America's 50 most educated districts than Mr Obama did, and performed far worse than he did in the 50 least educated. People with postgraduate qualifications tend to buy houses next to others like them, just as those with less schooling tend to cluster together.

The district that is heading fastest in the opposite direction, according to Cook Political, is West Virginia's third congressional district, in the south-east of the neighbouring state. Downtown Huntington, the district's biggest town with a population of about 50,000, is almost as agreeable as Arlington on a bright spring day, the Ohio river lazing by and some ancient rolling stock converted into a yoga studio. Visitors with funny accents are quickly told that Huntington has been voted America's best community. Sadly this is not the town's only distinction. West Virginia also leads the nation in deaths from drug poisoning. An estimated one in ten babies born in the local hospital emerge addicted to opioids.

West Virginia 03 is also a difficult place to be a Democrat. The party has "become toxic to the level where you don't even want to talk about it", says Bill Bissett, who heads Huntington's chamber of commerce, slipping out of one of the town's liberal enclaves (an espresso bar) to talk freely about West Virginia's enthusiasm for Mr Trump. The district's political leanings are related to its economic history (this is coal country), which is related to the drug abuse, though the connections are not as clear-cut as

they seem at first sight.

West Virginia has gone from reliably Democratic to safe territory for Republicans in presidential elections within a generation. The long prior attachment to the Democrats dates from the state's role as a birthplace of organised labour in America. At the battle of Blair Mountain in 1921, 3,000 policemen faced off against 10,000 armed union members in what remains the biggest confrontation between workers and the state in America's history. Union strength kept West Virginia mostly Democratic; between 1932 and 1996 the state voted Republican in only three presidential elections. West Virginia's coal production peaked in 1997 and its political complexion changed soon afterwards. In 2000 the state backed George W. Bush, and has voted Republican in presidential elections ever since. Drug abuse spread around the same time: painkillers at first, then powdered white heroin and now fentanyl. As part of a Pulitzer-prizewinning series, the *Charleston Gazette-Mail* discovered that between 2007 and 2012 a single pharmacy in Kermit, a town of 400 people in West Virginia 03, ordered close to 9m hydrocodone pills.

On the face of it, then, this is a straightforward story of economic misery leading voters to ditch one political party and embrace another. But the reality is more complicated. Since the "war on poverty" was launched by Lyndon Johnson just over 50 years ago with an eye on Appalachia, the income gap between that region and the rest of America has narrowed. In 1970, now remembered as some sort of golden age, 14% of households in Appalachia lacked indoor plumbing; now just 3% do. Coal production in West Virginia, though well short of its peak, is higher now than it was in the 1970s. The drugs story is also more convoluted than it seems at first sight: painkiller abuse took root when mining was still booming, and West Virginians took a lot of Valium before the opioids arrived.

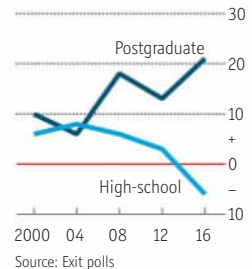
Deaths of despair

Yet as the region has grown richer, it has also grown sicker, and more people are dying from suicide, heart disease and drug overdoses—the "deaths of despair" identified in recent studies by two economists, Anne Case and Sir Angus Deaton, that have brought down life expectancy in West Virginia 03. In McDowell county, in the south-eastern corner of West Virginia 03, male life expectancy is 12 years lower than the national average and 16.5 years lower than in Arlington. As in other poor white parts of America, the sickening has been accompanied by the decay in institutions that regulated private lives and perhaps made hardship more bearable. Both marriage and churchgoing have become much less common.

The decline of coalmining in West Virginia is mainly due to the fall in the coal price, the exhaustion of the most accessible coal seams and the development of more efficient, mechanised mines in Wyoming. But that is not how the change is understood in the district. Even those who have nothing to do with the mining business tend to perceive it as a deliberate choice made by an uncaring elite in places like Arlington that values the lives of children yet to be born more highly than those of present-day West Virginians (which, in fairness, it probably does). Evan Jenkins, the congressman for the third district, switched from Democratic

Brain gain

United States, Democrats' lead over Republicans in presidential elections, by education level
Percentage points



► to Republican, explaining that West Virginia was under attack from a Democratic Party “that our grandparents would no longer recognise”. He was rewarded by the biggest winning margin in the country in 2014, unseating Nick Rahall, a Democrat who had been in Congress for 38 years.

That sense of being part of a victimised group is powerful stuff in politics, more potent than well-meaning schemes to improve rural internet access or to expand health insurance. John Shelton Reed, a (white Southern) sociologist, describes the condition of a white Southerner as a perpetual sense of being unfairly treated and looked down on. West Virginia, which sided with the Union in the civil war, is not in the South, but a lot of its voters now think like Shelton Reid’s Southerners.

Most people who live in northern Virginia will not in fact make sneering jokes about West Virginia, because educated liberals tend to see poverty as a product of circumstance and hence not funny. Urban prejudice against rural dwellers, such as it is, operates less consciously. People who include listening to country music among their pastimes are much less likely to get called for interview at elite white-collar firms than those who say they like sailing, according to an experiment conducted by Lauren Rivera at Kellogg business school. “It’s not just that poor whites are dying, it’s that they are dying and being told to check their privilege,” says Frank Buckley, a law professor at George Mason University who helped to write campaign speeches for Mr Trump.

However prevalent such attitudes may be in Arlington, rural Americans have amplified them, turning them into something defining. “Well if they had their way/They’d have thrown us away”, sings Chris Jansen in “White Trash”. In the song Mr Jansen—who led the Republican National Convention in a chorus of “Trump Yeah!”—gets the girl in the end, proving that white trash are no worse than anybody else, and maybe even a little better. The song is more euphoric than mournful; the indignant grievance it describes is enjoyable. A growing number of Americans are singing along to it. According to the University of Chicago’s General Social Survey, the share who describe themselves as lower-class has risen over the past decade.

If kicking back at people who think they are superior is so defining, then why do West Virginia’s voters favour a billionaire New Yorker promising tax cuts for the wealthy? This seems strange only to those who think voting is a branch of accountancy. Joan C. Williams, author of “White Working Class”, points

out that its members tend to resent professionals with their collections of diplomas but admire the rich. “The dream is not to become upper-middle-class, with its different food, family and friendship patterns,” she writes; “the dream is to live in your own class milieu, where you feel comfortable—just with more money.” The ideal is to own your own business so you no longer have to take orders from anyone, just like the president.

Heigh-ho, heigh-ho, it’s off to work we go

Arlington’s voters wonder how West Virginia’s could fall for a candidate who tells them that he will bring the coal jobs back, as if the spot price of coal can be set by executive order. Yet even those who suspect that coal is not about to make a comeback give the president points for taking their side against those uncaring city-dwellers. “We haven’t had a president say he wants to put coalminers back to work since Carter,” says Mr Bissett in Huntington. “People notice.” And there are even some signs that coalmining is picking up here: men in reflecting jackets are a common sight at McDonald’s again, and companies that sell supplies to the mines report increased sales. For that, the locals have China rather than Mr Trump to thank: since the government in Beijing instructed miners to limit their working days to 276 per year instead of 330, the price of metallurgical coal (the kind used for making steel rather than in power stations) has picked up. Even if this turns out to be a blip, those expecting voters to turn away from the president because he has not kept his promise could be waiting for a long time. They are more likely to blame the people in Arlington for thwarting him.

To be a Republican in West Virginia 03 is to be on the right side of a social divide that does not have a lot to do with policies. Some non-Republicans also manage it. The state’s Democrat governor, Jim Justice, is West Virginia’s wealthiest man, his family fortune made in coal and farming, and a newcomer to politics. When the Republican statehouse presented him with its budget in April, he called a press conference at which he lifted a silver lid to reveal a large pile of bull manure sitting on top of the budget. In May the governor invited Donald Trump junior to the state to fish and hunt. They did not get any wild turkeys but caught a few rainbow trout and posed together in hunting camouflage. Like the president, the governor owns a golf course and resort, the Greenbrier, which he rescued from flooding and financial difficulty. He sold his family’s mines and then bought them back

a few years later for a tenth of what he had been paid for them. Being both of the people and extremely rich has allowed him to resist the tide that swept away so many other Democrats.

Virginia’s eighth and West Virginia’s third districts are the most extreme examples of what is happening, but more and more places in America are becoming like them. In 1992 just 39% of Americans lived in districts where a presidential candidate won more than 60% of the vote. By 2006 the figure had gone up to 61%. Bill Bishop’s book “The Big Sort”, published in 2008, which drew attention to the way Americans are clustering in like-minded communities, conjures up images of Republican or Democratic voters moving house to be with people who vote like them, but that is not usually how it works. Instead, people tend to adopt the attitudes of the groups they cluster in. Palm Beach and Arlington are both wealthy neighbour- ►►

To be a Republican in West Virginia 03 is to be on the right side of a social divide that does not have a lot to do with policies



► hoods, but the world view of Trump supporters in Palm Beach is closer to West Virginia than to upscale Arlington.

If this divide were just over things like what kind of health care government should provide, it would be easier to cross. But the rift goes deeper than that. "It has become socially unacceptable not to be a partisan," says Lee Drutman, a political scientist at New America, a think-tank. The Pew Research Centre has found that a quarter of consistent conservatives and liberals would be unhappy if their children were to marry someone from the other side of the divide. Kathy Cramer of the University of Wisconsin-Madison followed the same groups of voters in Wisconsin from 2007 to 2012 and wrote about her findings in "The Politics of Resentment". This is how she describes the atmosphere during a heated recall referendum that was won by Governor Scott Walker: "People stole yard signs from each other. They stopped talking to one another. They spat on each other. They even tried to run each other over, even if they were married to one another. I am not kidding." Liberals and conservatives can sometimes recognise each other just by their names. A study by researchers at the University of Chicago of half a million Californian baby names found that conservatives favoured harder-edged names. Kurt's parents were probably conservative, Ashton's liberal.

Such non-political things shape what people think about big political questions, like when to go to war or how much to tax. Political attitudes are not fixed. They can adapt to fit whatever the head of the tribe is saying. Mr Trump mixes many ideas that have not been offered before in the same package. And his shortcomings tend to be discounted as irrelevant, or put down to inexperience or a hostile press. ■

Big-government conservatism

A town called Liberal

The birthplace of populism supports President Trump's policy of lower taxes with more protection

THE PLAINS OF south-west Kansas are so flat that, looking towards the horizon, it sometimes seems possible to detect the curvature of the Earth. This is a place of mile-long freight trains, cathedral-like grain silos, occasional tornadoes and homages to "The Wizard of Oz". The town of Liberal is said to have been named for an early settler famous among travellers for being free with drinking water. Liberal is conservative in a moderate Midwestern kind of way. It is also changing fast. Its big National Beef Packing plant relies on Hispanic migrants. Four-fifths of the children in Liberal's public-school system are Hispanic. This should make the town receptive to Democrats, but Mr Trump easily won the county of which it forms part.

Liberal's mayor, Joe Denoyer, is a disc jockey at the local radio station, playing country music and taking calls from listeners in the morning, then hanging up his headphones to sell advertising in the afternoon. He was raised in a Democratic family near Chicago and moved to Liberal in search of work. Asked about his political conversion, he recalls being impressed when Ronald Reagan joked about an assassination attempt on him, and later told Mikhail Gorbachev to "tear down that wall". Mr Denoyer voted for Mr Trump, though he thinks it unlikely that the president will keep his promises. Being mayor means getting into the weeds of local politics: halfway through the interview at the sta-



On a clear day you can see the Wizard of Oz

tion his boss wanders in and complains that the city has incorrectly served a notice to clear some overgrown grass in an alleyway near his house; Mr Denoyer says he will look into it.

Kansas's plains have played a big part in America's political history. In 1891 members of the Kansas Farmers' Alliance supposedly coined the term "populist" to describe their movement. In the presidential election in 1892 the candidate of the People's Party carried five states from a standing start, on a platform of support for farmers and abandoning the gold standard. There was a nativist streak to its ideas: Mary Elizabeth Lease, a Kansas populist and suffragette, warned about a "tide of Mongols" invading America. Though the party contained strains of anti-Semitism and racism, writes John Judis in "The Populist Explosion", these were secondary. The core of its appeal was an anti-elitism that has been part of Midwestern politics ever since. The People's Party was later incorporated into the Democratic Party.

A little over a century on, Kansas populism had changed again. In 2004 Thomas Frank lamented in "What's the Matter with Kansas?" that the leftist populism of Lease and her ilk had been replaced by a rightish sort. Republicans, he argued, had managed to bamboozle his home state, selling voters economic policies that were not to their advantage by wrapping them up in emotive messages about abortion and guns. Kathy Cramer puts the question more succinctly in "The Politics of Resentment": why would someone without teeth not support government-funded dental care? Her interviewees farther north, in Wisconsin, provided the answer: "The government must be mishandling my hard-earned dollars, because my taxes keep going up and clearly they are not coming back to benefit people like me. So why would I want an expansion of government?"

A wetter version of Texas

Kansas's current governor, Sam Brownback, has run with this kind of thinking. When he took office in 2011, promising to turn the state into a wetter version of Texas, with no state income tax and lots of incentives for businesses to move there, the Kansas Speaks survey run by Fort Hays State University showed that voters were keen on the idea. Since then the tax cuts have failed to produce the hoped-for economic miracle; instead, the government has repeatedly missed its revenue targets and services have been cut (the Republican-controlled state legislature voted to roll back the tax cuts in early June). The Kansas Speaks poll suggests that but for Chris Christie in New Jersey, Governor Brownback ►►



► would be the nation's least popular governor. It also shows that a majority now favour tax rises, and that most Kansans think their own taxes went up after the state cut income tax. When voters get what they thought they wanted, they do not always like it.

Mr Trump's approval rating is more than twice that of Governor Brownback's in Kansas. One reason is that he talks of more protection for his voters but without proposing tax increases. A consistent finding in the General Social Survey is that people favour tax cuts but like increased government spending even more. On the campaign trail, the president denied there was a trade-off, insisting that people can have lower taxes without cuts to social security (pensions) or Medicare (health care for the elderly); and a pro-business administration that will also prevent companies from moving jobs overseas. When researching a book on Tea Party activists in 2010, Theda Skocpol of Harvard University found that many wanted just this combination but ended up voting for shrink-the-government conservatives. Many of these activists already had a favourable impression of Mr Trump, who was then telling anyone who would listen that Barack Obama was not born in America. "The promise of social insurance for white people plus restrictions on trade and immigration is very appealing," says Ms Skocpol. "It is not a mixture that has been on offer before."

For all Mr Trump's railing against NAFTA, trade provokes less visceral feelings than immigration; a lot of voters say they do not know whether they favour more restrictions on imports. But there is a heartfelt nativist streak in support for Mr Trump, just as there was when 19th-century populists were denouncing the Mongol invasion. The share of people living in America who were born abroad reached 15% in 1890, then declined after restrictions were imposed on immigration in the 1920s, to a low of 5% in 1970. Since then it has risen again, reaching 13% in 2010. Many of the president's supporters feel that such people are not proper Americans; 63% of Trump voters said that to be truly American it was either very or fairly important to have been born in the country (42% of Clinton voters thought the same). One reason may be that voters failed to distinguish between Hispanics and illegal immigrants, a distinction the president has blurred.

Since assuming office, the president has continued to condemn illegal immigration, but also sometimes seemed to extend a welcome to the legal sort. His White House is split on this: some advisers would halt legal immigration too. Mr Buckley, the law professor and speechwriter (and himself an immigrant from

Canada), thinks that the president should copy the immigration law of 1924, which handed out citizenship to newcomers in proportion to the country's existing racial make-up (which in practice meant giving preference to northern Europeans). Mr Buckley reasons that having a boardroom or a cabinet that reflects the country's ethnic make-up is generally held to be a good thing, so why not apply the same logic to immigration quotas? Democrats resist such thinking as racially motivated, but they are in a bind. The long progressive consensus that started with the New Deal in the 1930s and lasted until the mid-1960s coincided precisely with the most restrictive immigration laws in the country's history. There is a tension between immigration and redistribution that the party has yet to resolve.

Republicans in Liberal argue that the melting pot is working well there. The bakery sells creamy *quinceanera* cakes; the newcomers seem to like the annual Ozfest (past participants include Judy Garland's stand-in and a smattering of munchkins). Citizenship classes at the community college are oversubscribed.

This strain in the Republican Party is being squashed by a White House partly staffed by Californians desperate to prevent the kind of ethnic change that swept through their home state from spreading to the rest of the country. Stephen Bannon, Mr Trump's chief strategist, who worked in Hollywood for a while, once said that the defeat of a bill in Congress that would have given illegal immigrants without a criminal record a path to citizenship was an achievement comparable to the passage of the Civil Rights Act. The stop-America-from-becoming-California movement is a window onto a more general truth. In addition to the divides on education, and between cities and countryside, American politics has become polarised along ethnic lines. ■

Race and status anxiety

Colonies of the mind

It is wrong to dismiss the president's supporters as a band of racists, but race helps explain his appeal

IN CULLMAN, ALABAMA, the strawberry festival is in full swing. A community band is playing a medley of Beatles numbers interspersed with patriotic songs while people browse the stalls or wait for a turn on the bucking bronco. On stage Senator Luther Strange, who was appointed by Alabama's governor when Jeff Sessions became attorney-general, is reminding the crowd that he is on the Senate's agriculture committee, so they might want to vote for him in the Republican primary in August. Alabama's voters remain very enthusiastic about Mr Trump, he says afterwards. They "recognise he's trying to turn the ship around" and tend to blame Congress for any reversals.

Cullman was founded as a German colony after the civil war and remains 96% white, according to the Census Bureau, though there are some migrant workers in nearby poultry plants. Woody Jacobs, Cullman's (Republican) mayor, says there are a ►►

▶ lot of illegal immigrants in the region, but that most people regard them as friends and co-workers. “People don’t want them to go. But they will also say, ‘we need to secure the border and get rid of the illegals.’” Asked how much of politics in northern Alabama is about race, he replies, with the patience of a man who has been asked this a few times before, that it really is not. “There’s an African-American town near here called Colony,” he says, “and I believe they voted for Trump.”

Over in Colony the voters do not seem so sure. Sitting in the Methodist church, Earlene Johnson says quietly that there was “a nice turnout at the town hall” on election night and that most people in Colony in fact voted for Mrs Clinton (the voting returns from the town hall confirm this: she took 64% of the 300 ballots cast). Outside the church is a graveyard with headstones that date back to the late 19th century. Colony was settled in the brief window during Reconstruction when former slaves might be granted 40 acres and a mule, and has remained African-American ever since. Aside from that it would be hard to distinguish from many other small towns in the South: people driving vast pickups, saying “y’all” and greeting visitors from the porches of bungalows that were towed in by truck and deposited in place. Mrs Johnson, who remembers the nearby schools being integrated, says that the troubles between the races are largely over now.

That is true, yet people still vote along racial lines, and not just in the South. To try to get at voters’ attitudes to people of other races, the ANES has asked a series of questions designed to measure racial resentment (such as “do you agree that blacks would get ahead if only they tried harder?”). Academics who study these responses debate whether they really reflect racism or whether they just pick up attitudes to subjects like welfare and affirmative action. Still, it is hard to argue that these questions have nothing to do with race, says Michael Tesler of the University of California, Irvine. When Hillary Clinton ran against Barack Obama in the 2008 Democratic primary, those who scored highly on racial-resentment questions were more likely to back Mrs Clinton. When she ran against Bernie Sanders in the 2016 primary, that pattern disappeared. Republican primary voters who scored highly on racial-resentment questions were more likely to back Mr Trump than other candidates. To dismiss the anger that the president taps into as racism is



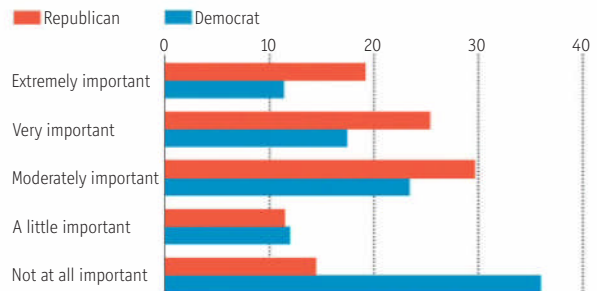
What remains when hard racism evaporates is a residue of unconscious bias and a tendency for people to sympathise more with those of their own racial group

“intellectual comfort food”, writes Joan Williams, the author of “White Working Class”. Some old-fashioned racism is indeed in evidence: when people show up with burning torches to protest against the removal of Confederate memorials, it is hard to call it anything else. But this kind of thing attracts attention because it is rare. There has been a marked decline in the racist attitudes prevalent in places like Cullman even 20 years ago. One simple measure of progress on race, the share of people who approve of marriage between whites and non-whites, rose from 48% in 1995 to 87% in 2013, according to Gallup.

What remains when old-fashioned hard racism evaporates is a residue of unconscious bias and a tendency for people to sympathise more with those of their own racial group. Republi-

The colour of their vote

United States, How important is it that whites work together to change laws unfair to whites?, non-Hispanic white respondents, by party affiliation, % replying*



Sources: American National Election Studies; *The Economist*

*Polled Sep 2016-Jan 2017

cans have long denounced Democrats for pursuing identity politics, but there is no other sort. Just as cities with large African-American populations tend to prefer African-American mayors, Trump voters, who are overwhelmingly white, have a marked preference for helping other white people. In 2016 the ANES asked voters how important it was for whites to work together to change laws that are unfair to whites. A large share of Trump voters thought this either “extremely” or “very” important (see chart). The number for Clinton voters was lower but still considerable, given what a big part anti-racism plays in the make-up of the modern Democratic Party.

The belief of many whites that life has become unfair and needs rebalancing in their favour is connected to feelings of fear

and of mourning for something lost, says Arlie Hochschild, a sociologist at Berkeley and the author of “Strangers In Their Own Land”, a book about conservative Louisiana published before the election. Ms Hochschild has since been back to check on some of the people she wrote about to see what they make of the president’s progress. They are exhilarated to have a president who “recognises” them, she says. Most of her interviewees were the elite of Mr Trump’s left-behind America, people who had struggled hard to get to community or Bible college. They were pleased that Mr Trump took their side against more recent arrivals in America, who seemed to be queue-jumping. They also liked the way he freed them from what Ms Hochschild calls “liberal feeling rules”, a set of attitudes to minorities, gay people, women and the poor that Trump

supporters found oppressive.

Race was seldom mentioned; in fact some of Mrs Hochschild’s subjects said they looked forward to the day when skin colour counted for nothing. The mourning is bound up with perceptions of status that are partly about skin tone and partly about the passing of a labour market when a man could support a family with one stable, albeit occasionally dangerous, job. This attitude is shared by a lot of women, Ms Hochschild found, who liked the president’s promises to protect their husband’s jobs, or to return America to a time when they themselves did not have to work. Half of Trump voters believe it is “better if a man works and a woman stays at home”, against only a quarter of Clinton voters. That change has been understood in terms of race. “A lot ▶▶

▶ of people said they saw what had happened to blacks three decades ago when they took the first hit from deindustrialisation. Their families are a mess. And now it's our turn," says Ms Hochschild. Being alarmed about a relative loss of status is not racist, but views about status are conditioned by race. During the Obama presidency, black Americans were consistently more optimistic about the future than whites. Since the election, economic confidence among whites has soared.

The price of prosperity

This might seem like a straightforward case of economic hardship fuelling support for the president. Yet once again there is more to it than that. In an essay published in 1955, "The Sources of the Radical Right", Seymour Martin Lipset tried to explain why the post-war boom, now remembered as a golden era for the economy, also gave rise to paranoid political movements such as the John Birch Society and to McCarthyism. He thought that when the economy was growing or stable, some groups of Americans developed "status anxiety" about being eclipsed by others. "In the United States, political movements or parties which stress the need for economic reform have usually gained strength during times of unemployment and depression," he wrote. "On the other hand, status politics becomes ascendant in periods of prosperity."

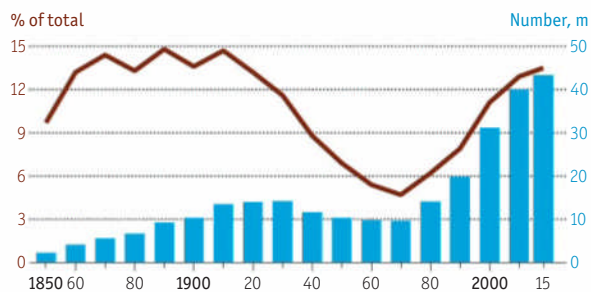
According to Lipset, "the political consequences of status frustrations are very different from those resulting from economic deprivation, for while in economic conflict the goals are clear—a redistribution of income—in status conflict there are no clear-cut solutions. Where there are status anxieties, there is little or nothing a government can do." Political movements that have successfully appealed to status resentments, in Lipset's view, tend to seek convenient scapegoats. "Historically, the most common scapegoats in the United States have been the minority ethnic or religious groups." The results from the ANES, which showed that half of Trump voters thought Barack Obama was a Muslim, seem to confirm Lipset's findings.

One of the puzzles of current American politics is why Mr Trump's brand of right-wing populism flourished at a point when the financial crisis was over, the country was nearing full employment and the S&P 500 was setting new records. If Lipset was right, the widespread view that the Trump presidency is the result of economic distress, and that the underlying attitudes can be assuaged with the right policies, may be misleading.

Like most voters, the president's supporters do not really know what they want from him. They do, however, have a strong sense that he takes their side against those groups of Americans who are against them. That gives Mr Trump a lot of leeway on what he can do without losing their support. ■

Still a nation of immigrants

United States, foreign-born population



Source: Migration Policy Institute



Trump in government

White House windows

The president's actions are hard to understand, leaving voters even more reliant on partisan thinking

ON ONE WALL of Stephen Bannon's office in the West Wing of the White House is a large whiteboard with a list of promises the president made on the campaign trail. Most of them fit the nationalist, nativist, populist programme that Mr Bannon has done more than anyone apart from the president himself to shape, but perhaps not all: one commitment is to build a safe zone for Syrian refugees. The president's chief strategist is a revolutionary in a Ferragamo tie, an alumnus of Georgetown, Harvard and Goldman Sachs who rails against the establishment. He talks about building an alliance of working people that will hold power for 50 years.

As a political strategist, Mr Bannon follows a template he perfected at Breitbart, the provocative website he used to run. The Breitbart strategy is to take an extreme position and hope that readers or voters will follow three-quarters of the way there. At Breitbart, for example, illegal migrants are not just people who broke immigration laws, but potential rapists and drug-dealers. Political scientists refer to the range of ideas the public might be willing to accept at any one time as the Overton window, after Joseph Overton, who codified the concept. Mr Bannon specialises in moving that window. Given that most voters do not follow politics closely, rarely switch parties and are often willing to align their preferences to those of the party or candidate they favour, Mr Bannon and the rest of the Trump White House have considerable freedom to place the window where it suits them.

The president's approval ratings may gradually slip to the mid-30s, as happened to George W. Bush in his second term. Perhaps some of the Midwestern voters who backed Mr Trump in the hope that he would bring back manufacturing jobs will be disappointed. His opponents will be energised at future elections, and in a country where opinions are split roughly down the middle, these marginal voters assume great importance. But it remains unlikely that his supporters will desert Mr Trump en masse. Incumbent presidents tend to do well in elections when the economy is growing robustly. Those questioning whether Mr Trump will be forced from office should remember this.

The president's admirers describe him as "situational", by which they mean he has no ideology to speak of and judges each decision that comes before him in isolation. That explains, they say, how he can denounce President Obama for bombing Libya to prevent its government from killing its citizens, then launch a cruise-missile strike against the Syrian government to do the

▶ same thing. The president often seems to be pursuing the Breitbart strategy, only then to head in the opposite direction. On April 12th he cancelled a federal hiring freeze he had ordered in his first week in office; decided against labelling China as a currency manipulator; endorsed the Export-Import Bank, which provides finance to big companies like Boeing; and declared NATO relevant after all, breaking three campaign promises and abandoning one favourite theme in a single day. A little over a month later he changed direction again, declining to endorse explicitly NATO's article 5, which says that an attack on one member is an attack on all, and pulling out of the Paris agreement on climate change. There is no consistent thread running through what he does; he can change his mind at any moment.

One of the president's informal advisers says he cares more about getting something that looks like a win than about pursuing any particular policy. That would explain why he sometimes seems unaware of the details of policies he has advocated. When his administration on its 100th day in office got close to pulling out of NAFTA, it came as news to the president that some of his voters benefited from membership of the trade block.

A permanent fit of absent-mindedness

Much of the scandal that has roiled the Trump administration could be explained this way. The decision to hire Michael Flynn as national security adviser, which has been the cause of so many of the president's troubles, was taken without seriously considering advice from the outgoing administration that picking someone for that role who was under federal investigation for working for other countries might be a bad idea. Likewise, the sacking of James Comey as head of the FBI, which some have seen as part of a well-thought-out plot, could equally suggest an absence of planning. The president may have been unaware that firing the FBI director after he declined to halt the investigation of Mr Flynn was an unusual move and would raise suspicions of a cover-up. This is no defence: the presidency is not a round of golf, where lousy players get a generous handicap to even things up. But Mr Trump probably does not realise that he is trampling on America's political norms, changing the way the country is governed through profound absent-mindedness.

To his backers, the continuing involvement of his children in Trump companies, far from being evidence of corruption, is a reminder of all that he has sacrificed to be president. They see the travel ban the president tried to impose on visitors from six Muslim-majority countries, which is still stuck in the courts, not as an attempt to enact the Muslim ban that he had promised on the trail, but as a reasonable effort to reconcile America's traditions of non-discrimination with the president's responsibility to pro-

tect its citizens. The never-ending stories about Russia, which tend to be misunderstood as an accusation that Vladimir Putin decisively influenced the result of the presidential election, are dismissed as inventions by liberals to explain Hillary Clinton's failure. Given how few Clinton voters the average Trump voter knows, that explanation can seem plausible to them.

How are voters likely to respond to this way of governing? Not by filtering out the noise from the latest outrage, then calmly taking each policy change and feeding it into a mental equation that recalibrates their level of approval for the president. Instead, to the extent that most people are thinking about politics at all, they are making judgments about whether the president is trying to do the right thing or is fundamentally malign. Such judgments are shaped by geography, education and skin colour, and are subject to groupthink: in mid-May 80% of Trump voters told YouGov that they see criticism of Mr Trump as an attack on "people like me".

Those who watch or listen to the news have their view of the president's good intentions confirmed when they find their place in their partisan trench reinforced by attacks on their opponents. Some of the most prominent conservative broadcasters—Rush Limbaugh on talk radio, Tucker Carlson on Fox News—do not support everything the president does so much as show allegiance to the tribe by denouncing those who denounce him. One of Mr Limbaugh's favourite themes is the similarity between American liberalism and *sharia* law. Even for someone who is unsure which party is the more conservative, a choice between a perhaps flawed but well-meaning president on one side and fundamentalists on the other does not take much reflection.

This gives the president a remarkable amount of latitude with his supporters. During the campaign Mr Trump offered to pay the legal costs if someone beat up a protester at one of his rallies. The ANES asked voters whether protesters who got roughed up for disrupting political events generally deserved what happened to them. Some 30% of Trump voters said protesters deserved it "a lot" or "a great deal"; only 18% replied "not at all". As long as it is the other side that suffers, a degree of violence is acceptable, even welcome.

It is extraordinary that such a prosperous, peaceful, fortunate country, with such deep democratic traditions, could have arrived at this point, but it has. "So strong is this propensity of mankind to fall into mutual animosities, that where no substantial occasion presents itself, the most frivolous and fanciful distractions have been sufficient to kindle their unfriendly passions and excite their most violent conflicts," wrote James Madison in Federalist Paper No 10. The Trump presidency could yet go in several directions. The one that seems definitely blocked is the route back to a land where it is rare to think that political opponents deserve to be beaten up. Perhaps that country no longer exists. ■



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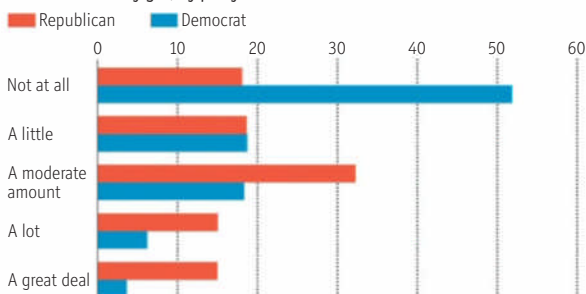
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Violence disagreements

United States, % agreeing that voters who get "roughed up" at political rallies deserve what they get, by party affiliation*



Sources: American National Election Studies; *The Economist*

*Polled Sep 2016-Jan 2017



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Turkey's refugees

The new neighbours

KAHRAMANMARAS

Turkey is taking care of Syrians, but failing to integrate them

THE refugee camp on the outskirts of Kahramanmaras, in Turkey's south, glows as brightly as the local officials singing its praises. The air-conditioned container-unit houses, home to 24,000 displaced Syrians and Iraqis, are spotless. Each unit comes with a kitchen, a bedroom, a television and a laundry machine. The camp also boasts a school, a hospital and a supermarket. "We have all that we need," says Muhammad Darwish, cradling his baby niece, Hiyam, one of over 240,000 refugee children born on Turkish soil since 2011. Turkey's president, Recep Tayyip Erdogan, surveys the scene from a huge banner near the camp's entrance, his image next to that of a distraught child. "It is a matter of conscience," reads the caption.

To the people of the surrounding villages, it is also a matter of controversy. The camp's residents are all Sunnis. The village locals are Alevis, members of Turkey's biggest religious minority and distant cousins of the Alawites, the sect that forms the backbone of the Syrian regime. Fearing sectarian tensions and the loss of grazing land for their livestock, the villagers protested against the camp's construction last year. Police doused them with tear gas. To make amends, the municipality gave each household a cow.

But the mistrust endures. In Lower Terolar, a village down the road from the camp, farmers say they avoid going out after dark

and give the refugees a wide berth. "They're a very different people," says an elderly man. "We should not have to be neighbours." The camp residents are equally anxious. "I would not go there on my own," says Ammar, a 25-year-old from Aleppo. "They're Alevis. They're not the same ones as in Syria, but they're Alevis."

Compared with other countries, Turkey has done an excellent job of looking after the 3m refugees who have poured in since the start of Syria's civil war in 2011. Mr Erdogan's Islamist government says it has spent \$25bn managing the two dozen camps near the Syrian border, home to 250,000 people, and providing aid to refugees outside of camps, in other parts of the country. That cost, and the strain on public services (Syrians in Turkey receive free health care), will probably keep rising. The refugee population is growing much faster than Turkey's. At the Kahramanmaras camp, it is set to double in under 10 years.

Most Turks' solidarity with the newcomers remains strong. Across Europe, anti-immigrant parties have jumped at the chance to turn fear of refugees into votes. In Turkey, neither the nationalist nor the secular opposition has attempted to do so.

Yet there are signs of trouble ahead. Opinion polls show attitudes towards refugees hardening. Reports of crime involving refugees, some of them bogus, have provoked clashes. In Istanbul, fighting

lasted for days after a Turkish man who tried to stop a group of Syrian and Afghan men from harassing local girls was stabbed and killed. "Whenever a Syrian and a Turk get into a fight, entire neighbourhoods tend to jump in," says Selcuk Delibas, a human-rights activist. In Kahramanmaras, the risk is compounded by old traumas. Villagers often recall a riot in 1978 in the provincial capital in which more than 100 Alevis were killed by mobs of nationalists and Islamists. Some are convinced that the refugee camp houses radical Syrian insurgents. "The villagers think the refugees are jihadists, and the refugees think the villagers are Assad supporters," says Mr Delibas.

Don't make yourselves at home

Some see these problems as the result of a flawed policy. While Turkey has met the newcomers' basic needs, it has made few efforts to integrate them. Instead of offering Syrians full refugee status, it has granted them "temporary protection", which implies fewer rights. The labour market remains largely off-limits. At the start of last year Turkey allowed Syrians to apply for work permits. To date, it has issued fewer than 20,000, corresponding to perhaps 1% of the working-age refugee population. About 500,000 others have entered Turkey's shadow economy, where they are routinely exploited. Education is an equally big problem. Of the 900,000 school-age Syrian children, less than 60% are enrolled. Just 18% attend normal schools, as opposed to temporary learning centres like the ones in the camps.

One reason why Mr Erdogan's government has yet to acknowledge that, after six years of war, the Syrians are in Turkey to stay, is the risk of a domestic backlash. Another is the fear that calls to integrate them are a ploy. "The government sees this as a ►►



► trick by the Western countries, to force these refugees to remain in Turkey instead of going to Europe,” says Murat Erdogan (no relation), a migration expert at Hacettepe University.

Even if that were true, a better integration policy would be in Turkey’s own interest. The longer it kicks the can down the road, says Mr Erdogan, the bigger the risk that the refugees will become a permanent, stateless underclass, susceptible to radicalisation. Opening the job market could help prevent the backlash the government fears. “If we can turn them from being dependent on aid to earning a living, they would be less exposed to resentment

by locals,” says Omar Kadkoy, a researcher at TEPAV, a think-tank in Ankara.

In Lower Terolara it is the economy that has started slowly bringing together the Alevi locals and the Sunni camp residents. Mustafa, a local farmer, has hired four Iraqi Turkmen refugees to help with the harvest. Shortly after midday, the men head down to the village for a meal prepared by Mustafa’s wife, followed by cigarettes, anecdotes and political banter. Mustafa takes a dim view of Turkey’s president. One of his new hires, Ziyad Ali, a former policeman who escaped Islamic State’s assault on Mosul in 2014, thinks him a hero. But they enjoy working together. That is a start. ■

Georgia’s new regime

Shallow roots

TBILISI

A model of democratic reform struggles to resist an oligarch’s influence

GEORGIA has been known for excess and eccentricity since ancient times, when it was called Colchis, the home of Medea and the Golden Fleece in Greek mythology. But even by Georgian standards, the latest hobby of Bidzina Ivanishvili, the country’s richest and most powerful man, is extravagant. The reclusive oligarch, whose hilltop glass-and-steel castle towers over Tbilisi, the capital, buys the oldest and tallest trees in the country, digs them out and transports them by road and ship to his residence on the Black Sea.

Most Georgians are amused, and hope he will buy one of theirs. But the image of a 100-year-old, 650-tonne tulip tree sailing over the water is an apt symbol for Mr Ivanishvili’s role in Georgia. The billionaire, who holds no official post but pulls strings from behind the scenes, is changing not only its physical but its political landscape. He has also uprooted the largest figure in Georgian public life, former president Mikheil Saakashvili.

After taking power in a popular uprising in 2003, Mr Saakashvili forcefully modernised Georgia, broke with its Soviet legacy and built an effective state. In 2010 his United National Movement (UNM) lost an election to the Georgian Dream party, an alliance put together by Mr Ivanishvili, whose accumulated wealth (mostly made in Russia) was half as large as Georgia’s annual GDP. Mr Saakashvili was forced out of the country; some of his associates were put in jail. Yet the main reason the UNM lost power was not its reforms or anti-corruption efforts, but fear of its repressive use of the judiciary for political ends.

In some ways Georgia today is freer than under Mr Saakashvili. The number of court acquittals has risen, and the fear of persecution is gone. But Georgia has also lost its sense of mission, says Gia Khukhashvili, a political consultant once close to Mr Ivanishvili. Economic growth hovers around 3%, far short of the double-digit levels it saw under Mr Saakashvili. Georgia as

a brand has lost its shine. Once a model of modernisation and one of the rare post-Soviet countries to have been successful at graft-busting, it now exemplifies the difficulty of transition. Critics say Mr Ivanishvili treats it as his playground. Oligarchs in other post-Soviet countries are envious.

To be sure, the changes brought in by the Rose Revolution in 2003 have not been fully reversed. Corruption has not returned; Georgia rates better than Italy and close to Spain on Transparency International’s corruption perceptions index. It has a strong civil society. Indeed, many of Mr Saakashvili’s former allies, including Giga Bokeria, the brain behind the country’s reforms, think the country has outgrown its former leader. They say it was the fear of Mr Saakashvili regaining power that cost the UNM last year’s parliamentary elections. (They are also angry at him for endorsing riots in Batumi in March.)

After that election, much of the UNM’s leadership quit. In May they unveiled a new party, the Movement for Liberty-European Georgia, at a rally in Tbilisi’s largest stadium. Waving flags of Georgia and the European Union, they pledged to eschew violence and hatred. “We will replace Ivanishvili without destroying our country,” said Gigi Ugulava, the leader of the party. Elena Khoshtaria, the female face of the party and a candidate for mayor of Tbilisi, talked about poverty and greenery. The split in the UNM may be tactically beneficial to Mr Ivanishvili, but it deprives him of a politically convenient arch-enemy: destroying Mr Saakashvili’s party was Georgian Dream’s *raison d’être*.

It also sharpens the country’s ideological conflict between modernisation and nostalgia. On June 18th the patriarch of the Orthodox church, a powerful figure, called for restoring Georgia’s monarchy. A few years ago this notion would have been scorned by the young, westernised elite. Now it is backed by one of that elite’s representatives, Irakly Kobakhidze, the speaker of parliament and the secretary of Georgian Dream. “We must take into account all factors, including our local peculiarities,” he said.

Some believe this is an attempt to undermine the president, Giorgi Margvelashvili, who has clashed with Mr Ivanishvili. Although the president has had no execu- ►►





Whatever floats your tree

▶ tive power since 2010, he is elected by direct popular vote (something that Georgian Dream wants to change) and is viewed as an independent arbiter.

With its support declining, Georgian Dream has been trying to change the constitution. It has proposed banning parties from forming electoral alliances (despite coming to power in an alliance seven years ago), imposing a 5% threshold to enter parliament, and giving all unallocated votes to whichever party comes first. Given the fragmented political landscape, this could give Georgian Dream another 20-30% of the seats.

On June 19th the Council of Europe's Venice Commission ruled that this combination of changes would "lead to a serious infringement of the principle of equality". A few days later, an emergency session of parliament approved a slightly amended version of the constitution that ignores the protests of the president, other political parties and civic activists. Georgian Dream also postponed until 2024 a planned shift from the current electoral system, whose combination of majoritarian and proportional voting benefits the government, to a fully proportional one, and barred the sale of agricultural land to foreigners.

Meanwhile, public life is starting to feel less free. An independent Azerbaijani journalist living in Georgia was kidnapped in Tbilisi in May and passed on to Azerbaijani authorities. An attempt by Mr Ivanishvili's allies to take control over Rustavi-2, an opposition television channel, was stopped only by a decision of the European Court of Human Rights.

One closely-watched case is that of Lasha Tordia, the head of the state audit office, who says he was assaulted at a nightclub by Otar Partskhaladze, a former chief

Balkan autocrats

Wrong and stable

BELGRADE

The West is again backing authoritarians to keep the peace

ON JUNE 23RD, in the presence of as many foreign dignitaries as he could muster, Aleksandar Vucic had himself anointed president of Serbia. The former prime minister, elected on April 2nd, had taken the oath of office in May, but decided to stage a big inaugural ceremony to demonstrate his stature. To succeed himself as prime minister Mr Vucic nominated Ana Brnabic, an openly gay woman, earning plaudits from foreign liberals.

In fact it is Mr Vucic who will run the country, and he is no liberal. Yet Western leaders are relieved. Serbia is the most powerful country in the western Balkans, and Mr Vucic, whatever his flaws, can keep it stable. Variations on this deal can be seen across the region. Some are calling such governments "stabilitocracies".

Mr Vucic's main opponent in the presidential race was Vuk Jeremic, a former foreign minister. The campaign was filthy. Media sympathetic to Mr Vucic made outlandish allegations: Mr Jeremic was purportedly a secret Muslim supported by Islamic State who had been complicit in a high-profile murder; his wife supposedly headed a drugs cartel. The police abruptly questioned him over alleged financial improprieties. No charges were filed, and Mr Jeremic says the stories were all fiction.

What happened to Mr Jeremic shocked no one. According to Srdja Pavlovic, the Montenegrin academic who coined the term "stabilitocracy", Western countries ignore local autocrats' anti-democratic practices so long as they keep the peace. Bosnia, for example, remains dysfunctional more than two decades after its war ended, divided by ethnic-based parties. America and Europe tolerate this, provided the country's leaders ensure their crises never turn violent.

Stabilitocracy works differently depending on the country. In Montenegro, it is clear who runs the show: since 1989 it has been Milo Djukanovic, who has thrice taken time off from serving as president or prime minister only to re-

prosecutor. Mr Partskhaladze and his bodyguards allegedly beat Mr Tordia after an argument about his agency's investigation into a land deal. Mr Khukhashvili says that if the alleged assault goes unpunished, "it shows that Georgia is slipping back to a system where informal power trumps state institutions."

Another test of Georgia's future will be the mayoral election in Tbilisi in October.

turn after running things from behind the scenes. Montenegro's government was praised in the West for guiding the country into NATO on June 5th. But power has never changed hands at the ballot box in Montenegro. As everywhere in the region, votes are bought by handing out government jobs.

Usually in Balkan countries, elections lead to coalition negotiations that focus on how to divide the spoils. (An election like Albania's on June 25th, in which the Socialists won outright, is extremely rare.) Working out who gets which ministry is comparatively easy. The bigger question is who gets which public company, along with its opportunities for patronage and kickbacks. In Macedonia, the VMRO-DPMNE party, after ruling the country for more than a decade, finally succumbed to a stream of leaks exposing corruption and interference with the judiciary. On May 31st the Social Democrats, along with ethnic Albanian parties, took power. But the new government will reproduce the same cronyism unless it "breaks the pattern of party control of the state", says Florian Bieber, a political scientist at Graz University. That is a tall order in a region where the state, whether under communism or now, has never been independent of parties.

"Citizens are alienated from politics and vote for personal, tangible benefits or out of fear," says a report on stabilitocracy by the Balkans in Europe Policy Advisory Group, an academic roundtable. Mr Pavlovic argues that by legitimising the situation, the West is creating animosity against itself. In Kosovo, the party that did best in the election on June 11th campaigned by denouncing Western support for the corrupt government. That party also supports the creation of a Greater Albania. If anyone tried to pursue that project, the region would go back to war as quickly as its menfolk could dig up the guns buried in their back gardens. In the long run, stabilitocracy may be a recipe for instability.

The field includes a former footballer for Milan (running with Georgian Dream), a popular TV presenter (running with the UNM) and an outsider who models himself on Emmanuel Macron, the French president. The contest will be a bellwether for the parliamentary vote in 2020. In today's Georgian politics, winning Tbilisi is the metaphorical equivalent of finding the Golden Fleece. ■

Germany's cagey chancellor

Better late than never

BERLIN

What Angela Merkel's shift on gay marriage reveals about her style

IT WAS a relaxed event at a Berlin theatre on June 26th. Angela Merkel was taking questions from the readers of *Brigitte*, a lifestyle magazine. A young man asked her: "When can I get to call my boyfriend my husband?" The chancellor, who had previously described marriage as the union of a man and a woman, gave a typically cryptic answer. She noted the "difficulties" that "some" have with same-sex marriage and described being affected by a meeting with a lesbian couple in her constituency. Then came the crucial phrase. Her Christian Democrat (CDU) party, ventured Mrs Merkel tentatively, should shift "somewhat in the direction of a question of conscience".

Then things moved fast. The next day her Social Democrat (SPD) coalition partners picked up on the comment, broke with the CDU and called a parliamentary vote on gay marriage with the socialist Left party and the Greens. The day after, the chancellor gave it her blessing. As *The Economist* went to press the vote was due on June 30th, and was expected to pass with the backing of the three left-of-centre parties and a handful of CDU MPs. If such a result clears the upper house (probable) and survives any challenges in the constitutional court (also probable), Germany will later this year join most of western Europe in letting same-sex couples tie the knot like mixed-sex ones.

What moved Mrs Merkel's position? The chancellor is coasting towards winning a fourth term at Germany's election in September; on June 28th, the pollsters at Forsa put support for her CDU (and its Bavarian partner, the CSU) at 40% for the first time in almost two years. She hardly needs to take gambles. But to understand her shift, one must grasp the three main rules of her leadership style.

The first is not to outrun public opinion. Even Mrs Merkel's riskiest policies—her decisions to switch off Germany's nuclear power stations in 2011 and to let in refugees in 2015—responded to changes in public attitudes. Likewise, the chancellor firmly ruled out gay marriage when most Germans were opposed, but the latest YouGov poll puts support for it at 66% (and for gay adoption at 57%). Her change of mind realigns her with the public mood.

Second: be strategically inoffensive. Mrs Merkel wins elections not just by making people like her, but also by reducing the number of people who dislike her. She makes herself so tolerable to supporters of

other parties that they stay at home on election day. At the SPD's pre-election conference in Dortmund on June 25th, a frustrated Martin Schulz, her rival for the chancellorship, lambasted this technique of "asymmetric demobilisation" as an attack on democracy. Mrs Merkel's new position on marriage, not stark enough to force either supporters or detractors to the polls, exemplifies his complaint.

This points to the third rule: triangulate deftly, and rapidly when events demand it. In recent weeks the Greens and the liberal Free Democrats confirmed that they would join no post-election coalition opposed to same-sex marriage. Then in Dortmund Mr Schulz made it an SPD red line. The issue threatened to overshadow Mrs

Merkel's manifesto launch on July 3rd and split the CDU's liberal wing from its conservatives (including those tempted by the right-wing Alternative for Germany party). So she tested out the "question of conscience" line within party circles and was ready to use it when the question was put at the *Brigitte* event.

Contained within these rules are the cases for and against Mrs Merkel. To her fans she is an exemplary democrat, constantly calibrating and recalibrating according to the will of the people. To her critics she merely follows public opinion and is too hyper-cautious to shape it. Mrs Merkel's shift on gay marriage is a welcome illustration of her strengths. That it comes so late reminds voters of her limitations. ■

Farewell to "TGV"

Going so fast

PARIS

France launches its last high-speed lines

IT TAKES courage to mess with one of France's most-loved brands. The public adores its TGV—*Train à Grande Vitesse*—as a symbol of modernity, and because many families dreamily associate the double-decker trains with long summer holidays. Yet from July 2nd, in time for *les vacances*, the state-owned railways, SNCF, will do away with the three-letter marque: the TGV service will be renamed "InOui".

The change comes at a fateful time. On July 1st Emmanuel Macron, the president, will flag off France's ninth and tenth high-speed routes, serving the country's west. Rennes will be just an hour and a half from Paris. Yet no more entirely new lines are being built after these. The Rennes track alone consumed many billions of euros in a decade of construction. A report in 2014 by the public auditor found the lines rarely bring cities wider economic benefits.

Now SNCF is recasting itself, says a senior manager, as a "mobility specialist" offering an array of services branded as "Oui". Ouigo, a no-frills version of high-speed trains, runs from stations near to France's larger cities. OUIBUS runs intercity coaches, a market liberalised by Mr Macron when he was economy minister. OuiCar is the state firm's effort to muscle in on car-sharing. "The only thing they're not into yet is walking," grumbles a rival at a coach firm.

This frantic activity reflects two concerns. First, passengers like the TGV, but more rely on conventional lines, whose infrastructure is increasingly rotten. SNCF earns €13bn (\$15bn) from mass transit, to just €6bn from high-speed. It gobbles up €5bn annually from taxpayers, and Mr Macron has to decide whether the state will shoulder its more than €40bn of debt. And with 250,000 staff, the firm desperately needs to be trimmed.

Second, SNCF is about to lose its monopoly. European rules compel France to let foreigners bid to run its high-speed services by 2020, and regional ones by 2023. France is a juicy target, says David Briginshaw of *International Railway Journal*, a magazine. Italy's high-speed train firms are eyeing lucrative routes such as the Paris-Brussels link.

The French have been preparing by getting into competitive markets abroad, including America, India and Italy. In June SNCF was shortlisted as a joint operator for Britain's planned second high-speed line. Yet SNCF might have heeded a warning from Marcel Proust, who was fond of trains but wrote of their compelling melancholia. "InOui" sounds perilously close to *ennui*.



Charlemagne | The chocolate curtain

Why it matters that eastern Europeans think they are being sold inferior Nutella



FOR some it is the cheese and yogurt; for others the fruit juice. But for Tibor Ferko, a young butcher from Usti nad Labem, a city in the northern Czech Republic, it is the chocolate that leaves him salivating at the chops. Mr Ferko gestures with near-Italian flamboyance as he recalls the “creamy” texture of the Milka bars available just across the German border but denied to him by the inferior product at home. A few miles away, in a supermarket off the Srbsice highway, Zdenek Kuklik vows never again to visit Czech shops for the Hipp baby food he feeds to the son clinging to his chest. Why? Because on the one occasion they bought locally he instantly spat the stuff out, explains his wife. From now on it will be strictly the superior product from across the border.

Suspicious that multinationals dump second-rate versions of the branded products they sell to westerners have a long pedigree across the ex-communist countries of eastern Europe. A mini-industry of angry consumer shows and cross-border shopping enterprises caters to consumers’ frustrations. Thousands of those who live near the frontier vote with their feet. Czechs visiting German towns like Altenberg and Heidenau, where supermarket signs come in two languages, say they can find higher quality, more choice and often lower prices.

No wonder politicians have spotted an opportunity. In February a Czech minister said his people were tired of being “Europe’s garbage can”, a metaphor that several Czech shoppers repeated unprompted to Charlemagne. Bulgaria’s prime minister compares food manufacturers’ treatment of east European consumers to apartheid—really. In March Robert Fico, Slovakia’s prime minister, brought the issue up at a European Union summit. If Angela Merkel and Theresa May were dismayed to find themselves discussing the relative consistency of Nutella in Austria and Slovakia, they were polite enough to go along with it. The EU’s 28 leaders duly acknowledged the issue of “dual quality of foodstuffs” in their common statement. Now eastern governments are ordering studies galore to heap pressure on Brussels to act.

In fact, EU law already outlaws advertising or packaging that misleads consumers. But some eastern governments want rules that would in effect harmonise products across the single market, and threaten to go rogue if they do not get their way. A bill in Hungary would force manufacturers to slap labels on foodstuffs that

differ in content from similarly branded stuff elsewhere. Food producers hope instead to soothe easterners’ anxieties with the balm of transparency, promising dialogue, support for more studies and opening up factories for visits. Boffins in Brussels are preparing a methodology for standardised tests that should help agencies across the EU ascertain the scale of the problem.

The European Commission says it does not yet see evidence of serious market anomalies. Food firms say that variations in their products result from factories’ sourcing decisions or differences in regional tastes. They deny offloading inferior products onto the poorer half of the continent. Coca-Cola substitutes fructose-glucose syrup for cane or beet sugar in the Czech Republic, for instance, but also in Spain and America. Such claims are often just “excuses”, says Jiri Sir, the Czech deputy agriculture minister. What can justify the replacement of pork by reconstituted poultry in luncheon meat? Whoever said “there’s no arguing about taste” had clearly never been to Brussels.

By framing all this as a European problem, eastern governments may hope to distract from failings at home. “Czechs are passive consumers,” sighs Stefan Linek, a factory worker in Usti. Some differences exist only in consumers’ heads. Studies have detected no substantial variation between Milka chocolate in the Czech Republic and Germany, a finding corroborated by your columnist’s personal taste tests and by the respective lists of ingredients. Charlemagne’s commitment to journalistic rigour did not extend to sampling Hipp’s baby food, but the company confirms that its products are identical on either side of the border.

West is best?

But if the culinary concerns of the east are overdone, they may betray a deeper set of worries. Today western Europe is enjoying a rare spell of exuberance, but parts of the east are finding it hard to shake off old neuroses. Real wages have not converged with the west as quickly as some had hoped, and mass emigration has deepened demographic problems and skills shortages. Expressing his support for a recent strike at a Slovak Volkswagen plant, Mr Fico reprised a common theme: “Our western friends do not understand when we ask them why a worker in Bratislava...has a salary half or maybe two-thirds lower than a worker in the same firm 200km westward.” Pay or food, the concern is the same. Multinationals are taking eastern Europeans for a ride.

Do not be surprised to see the same apprehension surface inside the EU itself. Viewed from much of the east, the agenda taking shape in Brussels, from a fresh wave of integration for the euro zone to proposals for social legislation, looks decidedly unappetising. Emmanuel Macron, who marched to victory in France wrapped in the EU flag, may be the man of the hour in Brussels and Berlin. But his inflated attacks on eastern “posted workers”, who work temporarily in the west for lower benefits, have hardly endeared him to the other half of the continent.

Eastern Europe is not blessed with many heavyweights. Mr Fico shifts shape with the political wind, Czech voters are preparing to elect an agriculture tycoon, and the Polish and Hungarian governments cynically manipulate the EU’s refugee crisis when they are not undermining their own countries’ institutions. They cannot expect much sympathy for a problem they are gleefully exaggerating. Yet the leaders of western Europe should not allow all this to blind them to fears among easterners that the club they joined with such enthusiasm over a decade ago is running out of space for their concerns. ■



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Labour's leader

Life and soul of the party

GLASTONBURY

The adoration of Jeremy Corbyn may not survive Labour's position on Brexit

“OH, JER-E-MY COR-BYN,” sung to the opening riff of the White Stripes’ “Seven Nation Army”, was the unofficial anthem of this year’s Glastonbury Festival. For the first time a politician was the star attraction of the music mudfest in Somerset. “Jezza’s” appearance in the prime Saturday slot on June 24th attracted more people, probably, than any of the acts that preceded him. And if his devotees couldn’t quite glimpse him at the back, there were Corbyn necklaces, t-shirts, posters and sand-sculptures to console them.

Ironically, it is this grizzled 68-year-old who has inspired many millennials to “stay woke”, the currently trendy term for being politically engaged. Huge numbers of them went to the polls in the election on June 8th, often for the first time, and they voted overwhelmingly for Labour. But although the personal devotion that Mr Corbyn inspires among tented grime fans has given the party a big boost, Labour remains divided on how it might capture power. As several Labour MPs were quick to point out, for all the hoopla around Mr Corbyn’s surge in the polls, he still lost.

For Corbynistas, it is a matter of “one last push” to get into Downing Street, to quote the words of Emily Thornberry, the shadow foreign secretary, at a meeting of the centrist Labour Party group Progress on June 24th. With a weakened Conservative government, many expect another general election soon. The theory goes that Labour

should double down on what has served it so well in the past couple of months, relying on young voters and taking aim at austerity. On June 28th Mr Corbyn tabled an amendment to the Queen’s Speech to lift a cap on public sector pay increases. Labour lost the vote, but panicked the government into making a chaotic double-U-turn in its own position.

Feeling vindicated by the election result, Mr Corbyn and his team remain as sectarian as before, if not more so. They have made no attempt to reach out to the Blairite centre or right of the party; the left feels that with Mr Corbyn’s new coalition of voters it can win on its own. At the Progress meeting Paul Mason, an activist and prominent Corbyn supporter, taunted those Labourites who do not share Mr Corbyn’s left-wing views to leave and “get on” with setting up their own “pro-Remain party, that is in favour of illegal war and in favour of privatisation”. Some frontbenchers, such as Diane Abbot, the shadow home secretary, have refused to rule out the deselection of Corbyn-sceptic MPs.

Mr Corbyn’s opponents in the party acknowledge that Labour ran a skilful election campaign. There will be no leadership challenge against him for the foreseeable future, as had been mooted before. However, many doubt the durability of Mr Corbyn’s new support. They also doubt whether it can provide enough seats to give Labour a majority. Although Labour

might be able to form a government with the support of other parties if it could win just ten or so seats off the Tories, it would need to win 60 to govern alone.

For despite losing young voters, the Tories did better with the old Labour base of working-class and aspirational voters, in particular the C2s. As Marcus Roberts, a pollster at YouGov, argues, “Mr Corbyn traded an old if smaller coalition of very loyal, big turnout voters for a new coalition that is bigger but more fragile, made up of relatively low-turnout voters and decidedly low-loyalty voters.”

Labour also did well among people with higher levels of education. The problem is that most of the seats that Labour needs to win are in the north and the Midlands, with older, more working-class constituents. “What got Labour here won’t get them there,” concludes Mr Roberts. And the Tories may up their game. Theresa May’s campaign was dire; a better candidate, taking Mr Corbyn more seriously, could fare better.

Therefore, argue MPs such as Ruth Cadbury, Mr Corbyn should exploit the breadth of the party’s traditions to win more votes. “The job of leading is more than speaking to crowds of admirers, and it is vitally important that the leadership holds this government to account,” she says. Ms Cadbury increased her majority from 465 to over 12,000 in her west London seat of Brentford and Isleworth. She says some of this may have been attributable to Corbynmania, but it was also due to her stance as a fervent Remainer. Yet that will not help Labour in many of the northern, working-class seats that it still has to win.

Indeed, it is on the subject of Brexit that Mr Corbyn’s coalition may unravel. Labour MPs and activists agree that many of the young who voted for the party on June 8th were motivated by their rejection of ▶▶

► Brexit. It is not so much Mr Corbyn that “woke” them as last year’s referendum. But Mr Corbyn is a Eurosceptic. He rails against globalisation and free trade, of which the EU’s single market is one of the world’s shining examples. EU state-aid rules could thwart his plans to nationalise or subsidise industries. He voted to leave in 1975 and last year damned the EU with the faintest of praise. Labour fudged the issue at the election, and got away with it. But appearing to be pro-European while trying to ignore Brexit, as Mr Corbyn does, is not sus-

tainable in the longer term, warns one centrist Labour MP.

With the scrutiny of the Brexit negotiations set to dominate Parliament over the next years, at some point Mr Corbyn will have to choose. Does he accept Brexit and remain true to what appear to be his long-held beliefs, forfeiting the love of Glastonbury but maybe picking up some seats in the north? Or will he fight Brexit, as his young fans expect? Mrs May, another who voted Remain, has made her choice; the king of woke has yet to make his. ■

ing at Gatwick airport, they were given temporary accommodation nearby in Crawley, where most of them still live.)

Mauritius claims the islands are part of its territory and wants the dispute referred to the International Court of Justice (ICJ). Britain argued that it should be resolved bilaterally. America took its side. But with its State Department understaffed and its president widely distrusted, its lobbying effort failed. Britain’s diplomacy was no better; the name of Boris Johnson, the foreign secretary, “raised an eyebrow or a laugh each time it was mentioned”, according to one person present. In an inauspicious sign for “Empire 2.0”, the nickname British officials use for their plan to forge closer links with the Commonwealth, the vast majority of Britain’s former colonies backed Mauritius or abstained.

The importance of the vote should not be exaggerated. It refers the case to the ICJ, whose opinion will be non-binding. For many countries, the vote was a chance to take a dig at America and to reiterate their support for decolonisation. In future votes on more central issues of national security, Britain may still be able to rely on strong support from the EU.

Still, “It is a little cheep from the canary in the coal mine,” says Richard Whitman, director of the Global Europe Centre at the University of Kent. Other far-flung British territories, such as the Falkland islands, might face new challenges from rival claimants. “If you’re an Argentinian diplomat, you may start recomputing how much international support Britain has,” says Mr Whitman.

The ICJ will probably offer an advisory opinion on the matter, but not before the spring of 2019. By then Britain is due to have left the EU. And Mauritius may even have a more sympathetic negotiating partner. Jeremy Corbyn, Labour’s leader, is—perhaps inevitably—a longtime advocate for the rights of the Chagossians. ■

Britain and Diego Garcia

Tropical storm

An isolated island battles to hang on to its outpost in the Indian Ocean

FOR many Brexiteers, the issue at the heart of the case for leaving the European Union was sovereignty. Membership of the EU was incompatible with self-determination, they argued. Britain is one of the world’s great military and economic powers; it would do just fine on its own. Remainers responded that in a globalised world, sovereignty is pooled. As David Cameron, Britain’s ill-fated prime minister, put it, Brexit held out the “illusion” of sovereignty: Britain would gain independence at the cost of real power.

On June 22nd, in an early test of these arguments, the UN weighed in on a dispute between Britain and Mauritius over the Chagos islands, a tiny but strategically important archipelago in the Indian Ocean (see map). Ninety-four countries sided with Mauritius; just 15 backed Britain. The result, says Jagdish Koonjul, Mauritius’s representative to the UN, was “beyond my expectation”. Only four members of the EU voted with Britain; one, Cyprus, voted with Mauritius and 22 abstained, including usually reliable allies France, Germany, Italy, the Netherlands and Spain. “It was a complete haemorrhaging of support for Britain,” says Philippe Sands, a lawyer representing Mauritius. “This should be a real wake-up call.”

The roots of the dispute go back to 1965, when Britain lopped off the Chagos islands from Mauritius, at the time a British colony. It loaned the largest island, Diego Garcia, to America to use as a military base. Since then the atoll, which is within striking distance of east Africa, the Middle East and South-East Asia, has become indispensable for America’s armed forces, who nickname it “the footprint of freedom”. It gives them control over the Indian Ocean and has served as a base for long-range bombers to pummel Afghanistan



and Iraq. The CIA used it as a “black site” in its rendition programme.

But taking over Diego Garcia for military use meant deporting some 1,500 Chagossians, mostly to Mauritius and the Seychelles. They have never been allowed to return; many moved to Britain. (After land-



Hot water

Bagehot | Decline and fall

Britain has not cut such a pathetic figure on the global stage since Suez



WRITING to his wife in May 1942, Evelyn Waugh recounted a true story of military derring-do. A British commando unit offered to blow up an old tree-stump on Lord Glasgow's estate, promising him that they could dynamite the tree so that it "falls on a sixpence". After a boozy lunch they all went down to witness the explosion. But instead of falling on a sixpence the tree-stump rose 50 feet in the air, taking with it half an acre of soil and a beloved plantation of young trees. A tearful Lord Glasgow fled to his castle only to discover that every pane of glass had been shattered. He then ran to his lavatory to hide his emotions, but when he pulled the plug out of his washbasin "the entire ceiling, loosened by the explosion, fell on his head."

A year on from the Brexit referendum Britain feels like Lord Glasgow's castle. The most visible damage has been done to its domestic politics. With the Conservative Party in turmoil Jeremy Corbyn, Labour's hard-left leader, talks about being prime minister in six months. But just as serious is the blow to Britain's global standing, which is lower than it has been at any time since the Suez crisis in 1956, when America crushed Anthony Eden's attempt to reassert British power in Egypt.

For decades Britain's foreign policy has rested on three pillars: the United States, the European Union and the emerging world. Winston Churchill, the son of a British aristocrat and an American heiress, coined the phrase "special relationship" to describe the ties of blood and language that bind Britain to America. As a former imperial power, Britain had close ties with dozens of African and Asian countries. With one of Europe's largest economies, it had a big say in Europe's future, often acting as a counter-balance to the Franco-German axis.

British diplomats can be starry-eyed about this. The Suez crisis demonstrated that America was happy to dump the "special relationship" whenever it clashed with its national interest. The British have always been second-division players in Europe. Yet the three pillars have not only stood the test of time. They have also reinforced each other. Britain's membership of the EU bolstered its influence in America just as its close relations with America increased its clout in the EU. The EU magnified Britain's global power, bringing with it trade deals with 53 other countries.

Britain's decision to leave will obviously diminish its influ-

ence in Europe. Even if it can negotiate favourable access to the single market it will no longer be part of the EU's decision-making apparatus. Its weakness has already been exposed: David Davis, Britain's chief Brexit negotiator, has so far done little but make concessions. So has its isolation. Theresa May is now routinely asked to leave meetings when EU business is discussed.

Britain is leaving the EU at a time when its relations with the United States are perilous. Donald Trump is a volatile figure whose lodestar is "America first". He is extraordinarily divisive, meaning that the closer Britain gets to Mr Trump the more it alienates anti-Trumpists. A survey of 37 countries by the Pew Research Centre found that just 22% of people thought that Mr Trump would "do the right thing" in international affairs. Barack Obama scored 64% in the final year of his presidency.

What of the third pillar? The Brexiteers' strongest card is that they are globalists. Untethered from Europe's rotting corpse, they argue, Britain will be free to engage with the emerging world. Yet there is no evidence that British companies were held back from this by EU membership. The EU hasn't prevented Germany's *Mittelstand* companies from becoming global powerhouses. The reverse might be the case: emerging countries are interested above all in access to the EU's market of 500m people.

The self-reinforcing logic of the old system will go into reverse over the next few years, whoever sits in Downing Street. Henry Kissinger told a conference in London this week that Brexit provides a chance to renew the transatlantic relationship. But he was forgetting the question he supposedly asked when he ran American foreign policy: "Who do I call if I want to speak to Europe?" America will spend more time on the phone with a convivial power inside the EU than outside (Mr Trump is to visit France on Bastille Day, whereas his proposed trip to Britain is up in the air). Emerging markets will be more interested in dealing with great power blocks than with a small country with idiosyncratic rules and volatile politics. This could happen even faster if Britain elects Jeremy Corbyn, who has made a speciality of criticising the world's leading powers while cuddling up to its basket cases.

From virtuous to vicious circle

Since the 1980s Britain and America have been the world's leading apostles of the ideology of the moment, neoliberalism. British consultants travelled around Europe and the former Soviet Union offering lessons on privatisation. The Swedes introduced internal markets into their welfare state. The Germans tried to adopt "shareholder capitalism". But neoliberalism took a beating with the 2008 financial crisis. Britain and America have since been humbled by a populist tide that produced Brexit on one side of the Atlantic and Mr Trump on the other. Brexiteers argued that a Leave vote would produce a "Brexit spring" as the *ancien régime* tottered and the euro plunged. Instead, the EU is in its best shape in years, with a young reformer installed in the Élysée Palace and the Franco-German axis solid. Across the continent the press talks of Britain as the "sick man of Europe".

In the aftermath of the Suez crisis, Dean Acheson lamented that Britain had lost an empire and failed to find a role. In the subsequent decades, post-imperial Britain in fact found several roles: as a fulcrum between Europe and America; as an old hand at globalisation in a re-globalising world; and as a leading exponent of neoliberalism. Thanks to the combination of the financial crisis and Brexit, it has lost all of these functions in one great rush. The windows have shattered and the ceiling has fallen in. ■



Foreign aid

Fading faith in good works

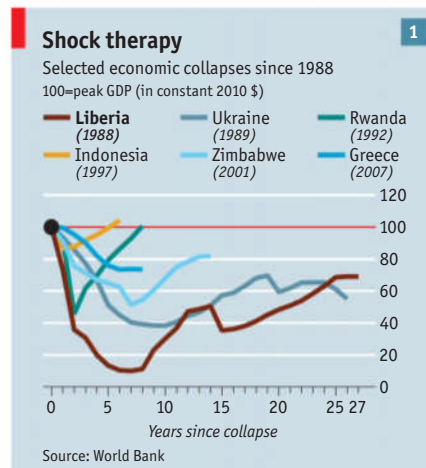
FREETOWN AND MONROVIA

Aid brought Liberia back from the brink. It also weakened its fledgling government

DRIVING through the Liberian countryside, on a rare paved highway, two kinds of roadside sign catch the eye. One advertises local Protestant churches. The other sort advertises the splendid work done by aid agencies. USAID, the European Union, Japan's development agency and others take credit for this youth programme or that forest rehabilitation scheme. An unscientific survey suggests that the Americans are winning the battle of the boards. But USAID does not command Liberia's prime location. The capitol building in Monrovia, which is being enlarged, is plastered with China Aid signs.

It is barely disputable that this small west African country might need financial help. Always poor, Liberia was pulverised by civil wars between 1989 and 2003 that obliterated as much as 90% of the economy—a shock almost without parallel (see chart 1). It remains the world's fourth- or fifth-poorest country, and the poorest one with a solid government. In 2014 half of all households ran short of food. Even in the cities three-quarters of people lack electricity, and most of those with power get it from diesel generators or car batteries.

Liberia is not just profoundly needy. It is also the kind of needy that entices aid agencies and charities. Because it is so



small, with only about 4m inhabitants, donors can make a visible difference. And since 2006 Liberia has been run by Ellen Johnson Sirleaf. Ma Ellen, as the president is known, is Africa's first elected female leader and a potent symbol of good governance. She is also a skilful politician who is fluent in aid jargon, having previously worked for the UN and the World Bank.

Almost as soon as Ms Sirleaf formed a government, foreign aid began to pour in, along with advice from Western experts.

Natty Davis, a former cabinet minister, remembers "an extreme amount of goodwill". As a share of Liberia's puny economy (which is smaller than that of the Isle of Wight, off England's south coast) foreign aid remains enormous. If you count the cost of UN peacekeepers, it has amounted to at least a third of gross national income for each of the past ten years. Only Tuvalu, a tiny Pacific nation with good snorkelling, consistently gets as much.

That makes Liberia an excellent place to seek an answer to one of the most vexing questions in development economics. Whereas politicians and conservative newspapers tend to criticise aid agencies for wasting money on silly projects and falling prey to fraudsters, aid-watchers have a more profound worry. They know that countries without clean, effective governments seldom escape poverty. Might aid actually make it harder to govern a poor country, even when (indeed, especially when) that country is a democracy?

It is quite likely that without foreign assistance, especially the blue-helmeted UN troops, Liberia would have slid back into war. If aid has prevented such a calamity, it would have been worthwhile. But that is unknowable. All that is known is how things have turned out. And what has happened in Liberia is that aid has quietly weakened the state even as it has built roads, schools and other good things.

That has happened in two ways. First, aid has corroded Liberia from the top, by distracting ministers and distorting the government's plans. Second, it has seeped into the crack between government and people, encouraging citizens to wonder what their leaders are for. Running a coun- ▶▶

try that so plainly depends on aid, says Gyude Moore, the public works minister, is like trying to be a good husband and father when your neighbour is feeding you.

Around the time that Liberia's child soldiers were putting down their guns, Western governments and aid agencies were resolving to give more wisely. During the cold war, aid had been a tool of foreign policy. There was scarcely a government too brutal or corrupt to receive it, so long as it was on the right side in the battle against communism. Much aid was "tied", requiring goods to be bought from Western companies. If it turned out to help the inhabitants of the world's poorest countries, that was an incidental benefit.

Promises, promises

At a series of meetings, including one in Paris in 2005, the West resolved to do better. Aid would be untied. Rather than charging into poor countries and flinging money at the causes they deemed worthy, donors would respect plans created by those countries' politicians. Where possible, aid would flow through poor-country bureaucracies, not around them. When donors funnel money to their own programmes, and assess those programmes themselves, a parallel state can emerge to rival the main one. Donors would stick around longer, too: fewer sudden surges of aid followed by abrupt drawdowns, which wreck long-term plans.

Liberia's new government had some ideas of its own about aid. The inflow after the war had been messy and inefficient. Fuel for generators had been provided, but no generators; books had been donated but, because libraries had no shelves, they were heaped on the ground. Ms Sirleaf brought in ministers and advisers with experience of aid, who set out to build a better system. Ambitiously, given Liberia's deep neediness, they resolved that the government would assert control over development and not be tugged off course by donors. "The typical attitude is: we need the donor money; here's what the donors

want to do; we'd better not upset them," explains Steve Radelet, one of those advisers, who is now at Georgetown University.

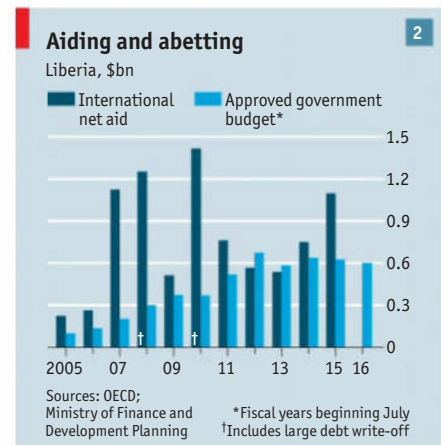
Liberia would be a test. Could the government of a poor country take charge of aid, as both sides claimed they wanted? Might it succeed in using that aid to speed out of poverty? Chile and Indonesia had jump-started growth by allowing American-educated economists, known respectively as the Chicago Boys and the Berkeley Mafia, to steer policy. Liberia also had an impressive diaspora, some members of which were being lured home by Western-level salaries paid by charities. Perhaps they could pull off a similar trick.

The assertive approach was epitomised by the Liberia Reconstruction and Development Committee, or LRDC. This small, focused group met monthly, usually chaired by the president and attended only by the most senior ministers and largest aid agencies. It set the broad direction of development policy and tracked progress. The LRDC did good work: Antoinette Sayeh, the finance minister at the time, says it was especially useful for nailing down a poverty-reduction strategy. It may well have reduced duplication of effort.

Yet it soon became clear that aid agencies would not easily be corralled. Ministers were called into seemingly endless, distracting meetings with them—"everybody who doesn't meet the minister of finance feels upset," says Ms Sayeh. Donors sometimes failed to tell the government how much they were spending, or what they were spending it on. And, despite the promises made in Paris, aid continued to go directly on programmes rather than passing through the state. That still happens. Only 12% of aid to Liberia in the 2015-16 fiscal year was "on-budget".

Aid agencies are often barred from giving money directly to governments, either formally or because politicians back home persuade them not to. And anybody who operates in Liberia has an obvious excuse for bypassing state systems. Among other sad superlatives, Liberia is by one measure the world's most corrupt country: 70% of businesses told surveyors for the World Bank that they had been asked for bribes. One poll suggests that half of Liberians who interact with medical clinicians, and two-thirds of those who encounter cops, pay bribes or do favours for them. (As your correspondent was leaving Liberia, a member of the airport staff suggested that some British banknotes would make "a nice souvenir"; journalists, however, are good at feigning incomprehension.)

Many Liberian civil servants are former fighters who were given jobs to buy their good behaviour. Others do not exist: they are "ghosts" whose pay goes to someone else. Since 2015 the education ministry has removed some 1,900 ghosts from the payroll. Although the civil service is gradually



improving, it cannot draw the most talented Liberians. Starting salaries are too low, especially compared with what the donors can offer. James Cooper, an IT and politics graduate who has worked for a Liberian senator, says aid agencies and charities pay about three times as much.

Gradually, the difficulties of operating in Liberia eroded the idealistic promises about government-led development. Then the government lost interest. In 2010, after much manoeuvring, Ms Sirleaf won a colossal write-down of Liberia's debts under the Heavily Indebted Poor Countries programme (see chart 2). In the afterglow of that victory, the LRDC was wound up. Aid would henceforth be overseen largely by ministers, rather than the president—a big mistake. With the chief less involved, drift set in. Whereas all ministers felt compelled to attend meetings chaired by the president, they felt free to skip meetings called by other ministers. The aid agencies began to do more or less as they pleased.

He who pays the piper

Today relations between donors and ministers are cordial, and the aid agencies still justify their projects by pointing to national plans. But few think Liberia's government is in control. Mr Davis describes the situation as "chaos". Clarence Moniba, a minister who chairs the Philanthropy Secretariat, a steering group, says the state has little sway over the roughly 330 charities working in Liberia. "They come and tell us what they are doing, and we agree."

The cost of this poor co-ordination is impossible to measure precisely, but is probably high. Unless a government is wholly corrupt (and Liberia's is not) it has two big advantages over a donor. First, it is mostly interested in outcomes. Aid agencies and charities often focus on inputs—the number of clinics built, the number of farmers using superior hybrid seeds. Governments care more about mortality rates, food prices and the like. Those are what matter in the end.

Second, governments take a national view. Donors often do not. USAID, the big ▶▶



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▶ best bilateral donor in Liberia, concentrates on six out of 15 counties, in a block north and east of the capital. It points out that these are relatively densely populated; besides, economic growth generated in them is likely to spill over. George Werner, the education minister, thinks that may be confusing cause and effect. “Why are those counties highly populated?” he asks. Partly, he thinks, “because people sense that’s where the aid is”.

The upper layers of the Liberian government are thick with American-educated technocrats who are admired by the aid agencies and able to cope with their complex demands. Brad Parks of AidData, a project based at the College of William and Mary, points out that some of the most successful World Bank projects in Liberia have relied on high-level policymaking. The country has, for example, simplified business rules, required government employees to disclose their assets and enacted a new procurement law.

Gifts with reservation

Dig below the surface, though, and problems abound. Knowing humble bureaucrats to be much less capable, donors have largely bypassed ministries and delivered services around them. That is more evident in some departments than others. Consider health and education.

At the end of the civil war Liberia had about 50 doctors and hardly any equipment or medicines. For a few years health services were provided almost entirely by charities. But the country had an impressive health minister, Walter Gwenigale, who had stuck out the war doing surgery in a rural hospital, where he occasionally had to persuade fighters to leave their guns outside. With the help of sympathetic aid agencies, he created a funding mechanism that split the difference between a charitable programme and a government agency. Donors (notably Irish Aid and DFID, Britain’s aid department) pay into a health pool fund, which distributes money as the government sees fit.

Although the health pool fund distributes little more than \$5m a year, and probably accounts for about a tenth of medical aid to Liberia, it has proved hugely useful. It has been used to pay for medical care in parts of Liberia where foreign aid agencies do not operate. It seems to have made bureaucrats more competent: the health ministry is widely regarded as among Liberia’s most adept. The pool fund helped keep basic health services ticking over—just barely—when Liberia was struck by Ebola in 2014. Disease and premature death are still appallingly common, but they are becoming less so. The mortality rate for children younger than five has come down from 182 per 1,000 in the year 2000 to 70 per 1,000 in 2015. On some measures, Liberia is now a little healthier than better-off African

countries such as Nigeria.

Education, by contrast, is a jumble. Donors almost always fund projects of their own, wielding budgets that can be as large as the state’s. The ministry has an annual budget of \$44m, of which all but about \$7m goes on salaries. By contrast, a single education scheme paid for by USAID and delivered by a Boston-based charity, which aims to reach 48,000 out-of-school children, has a budget of \$34m.

“If the resources were put together, they would be adequate in achieving the results we want,” says Mr Werner. Not only does that not happen; the education ministry and the aid agencies sometimes pull in opposite directions. Shocked by the persistent weakness of Liberia’s schools (only 35% of women who attended secondary school can read a full sentence), the minister has invited charities and education firms to manage 93 public schools. Donors disapprove, and are withholding some aid from those schools.

The result is a mess. Justin Sandefur of the Centre for Global Development, who is assessing Liberia’s education experiment, has described it as “an education system of stand-alone aid projects, a ministry with no budget, and no one running a coherent, overall policy planning process”.

Liberia is extreme. No country in the modern era has suffered such a destructive war and become so dependent on aid. But the Liberian government’s difficulties are hardly unique. Aid analysts have argued for years that aid-dependent countries seldom manage to build resilient governments and wean themselves off charity (two that did are South Korea and Taiwan). In 2004 Deborah Bräutigam and Stephen Knack—the former an academic, the latter a World Bank economist—showed that

high levels of aid went hand-in-hand with weak governance and low tax revenues in African countries. Other researchers have found much the same.

Sierra Leone, to the north, has a different history, different needs, a different constellation of charities and aid agencies—and similar problems. Like Liberia, it came out of a civil war in 2002 determined to control aid, much of which comes from Britain, the former colonial power. And it has done better in one important way: a higher share of aid is “on-budget” than in Liberia. Yet Abou Bakarr Kamara, an economist who works for the International Growth Centre, thinks the impression of government control is misleading. Partners decide what they want to do before consulting the government, he says—and the government tends to agree. “They’d rather be getting money for something that isn’t a priority than not getting money at all.”

Even projects that look like uncomplicated triumphs can conceal problems. The most tangible thing aid has done in Liberia is a smooth 250km Chinese-built road from Monrovia to Ganta, on the border with Guinea (see map on previous page). Paid for from an infrastructure trust fund overseen by the World Bank and the government, and completed last year, the road seems already to have helped those who live close to it. Emmanuel Johnson Nimbuen, who works for the agriculture ministry, reckons that travel times to Monrovia from Gbarnga, 190km away, have been cut by up to two-thirds, depending on the season. More large lorries are making the journey, which means more buyers for cocoa farmers’ crops.

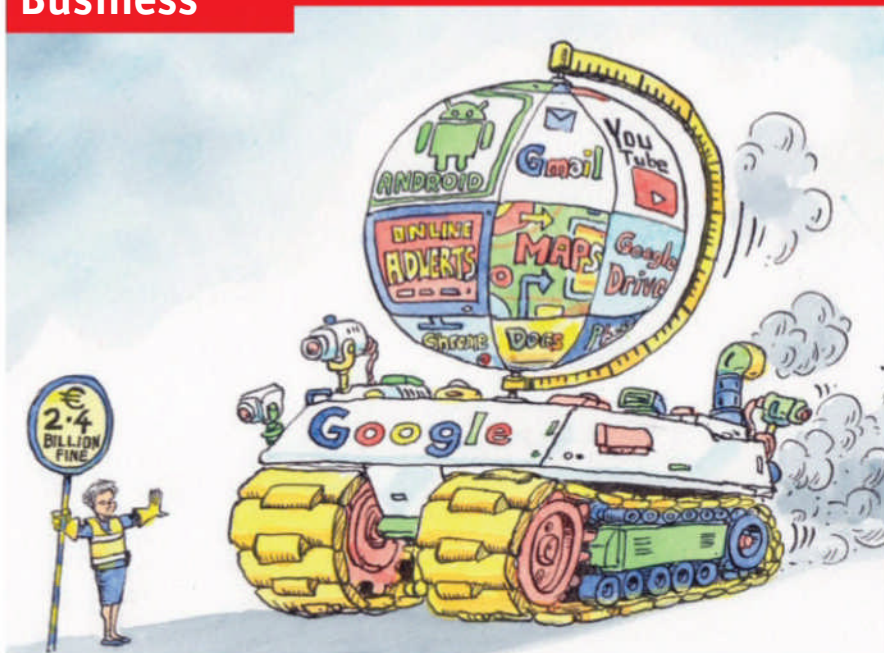
The World Bank is shyer than many aid agencies about erecting signs celebrating its good work, and local people seem unsure whom to hold responsible. Near Gbarnga, a group of traders selling pineapples and bush snails next to the road say that politicians have recently attempted to claim credit. One man, wearing a necklace with a large gold cross, thinks he knows who is responsible: an outfit he calls the “World National Bank”.

What happens to free lunch

The public-works ministry deals unusually well with donors. Mr Moore, the minister, even declares that aid has gone to the right projects (admittedly, agreeing where to build a new road is simpler than deciding how to educate a country’s children). He has made plans for several other highways, which he hopes his successor will stick to. Yet Mr Moore worries about what Liberians think when they look at the country’s infrastructure. “The whole point of having a state is to provide services,” he says. “If everybody assumes that new roads are being built by the World Bank or the African Development Bank, what is the point of having a state?” ■



Highway stars



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Europe v Google

Not so Froogle

The European Commission levies a huge fine on Google for abusing its dominance in online search

SHE was born to Lutheran ministers known to be both tough and principled. As a child, she thought it unfair that pupils were not allowed to sell fruit and milk in school and successfully lobbied for change. In her office in Brussels she keeps a statue of a raised middle finger, a gift from a trade union when she was deputy prime minister of Denmark, as a reminder that there will always be critics.

It shouldn't have come as a surprise that Margrethe Vestager, the European Union's competition commissioner, took a tough line against Google this week. The size of the fine the tech giant will have to pay for abusing its monopoly in online search, €2.4bn (\$2.7bn), sets a record for European antitrust penalties (see chart). Yet more important than the amount is that she provided a rough guide to how the European Commission plans to deal with online firms which not only dominate a market, but essentially are the market.

In the 2000s Microsoft got into trouble because it had expanded its Windows monopoly by bundling it with its web browser. By comparison, Google's infraction seems minor. In 2002 it launched a price-comparison service called Froogle, later renamed Google Shopping. In 2008 it changed how this service works. According to the commission, the new version systematically favoured Google's own comparison-shopping results by giving

them prominent placement at the top of its generic search results and demoting links to rival offerings to pages further down in its results, where users hardly venture.

This would not be a problem if there were several big search engines. But Google's market share in most European countries exceeds 90%. When the firm introduced the changes, traffic to rival websites, such as Britain's Foundem, plunged. This denied other firms the chance to compete and reduced consumer choice, said Ms Vestager. Google has 90 days to find a way to treat its own comparison-shopping service and those of rivals equally.

Predictably, Google wants none of this. It says its search service is far less dominant than it appears: consumers look up pro-

ducts on many other sites, including Amazon and eBay (the commission did not count these as search engines). Google also notes that the changes made in 2008 benefited consumers. "People usually prefer links that take them directly to the products they want," Kent Walker, the firm's general counsel, wrote in a blog post. Here, Google appears to have a point. Why would consumers want to click on a link which leads them to another site if they can see products and prices neatly lined up above Google's search results?

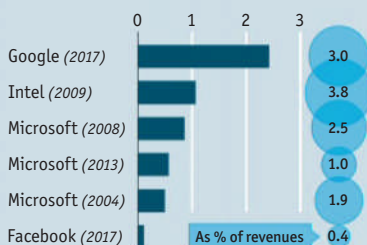
The European Court of Justice, the EU's highest court, will have to weigh the merits of its argument. Google will appeal, and there are weaknesses in the commission's case, such as the difficulty of proving real consumer harm from the treatment of other price-comparison sites. Yet the commission deserves credit for tackling a question, which is increasingly important but which American trustbusting agencies have avoided: what is the responsibility of dominant online firms, including Amazon and Facebook, when direct competitors, large and small, offer products and services on their platforms?

The prevailing wisdom, particularly in America, used to be that "super-platforms", despite their size, do not unfairly use their market power and thrive because of their unceasing innovation. The competition is always just one click away, argues Herbert Hovenkamp of the University of Pennsylvania. If Google were to degrade its search results by demoting links to better services, users would just switch to a rival service, such as Bing or DuckDuckGo.

But as digital platforms have grown ever bigger, that thinking has started to change, even in America. A growing number of antitrust experts now accept the commission's view, that network effects ►►

Search me

European Commission fines imposed on selected US technology firms, €bn



Sources: Bloomberg; press reports

▶ create high barriers to entry in online markets. This means that Google, for instance, can in fact degrade its search results selectively (and disadvantageously to its direct competitors) without having to fear that its users will defect, says Maurice Stucke of the University of Tennessee. “We need these super-platforms to adhere to a principle of neutrality,” he says.

How can such a principle be enforced? In the case at hand Google could just feed all search queries through one algorithm and do away with the second one that produces the Google Shopping results. But what if this one algorithm still ends up putting Google’s links on top? Will the commission then force the firm to reveal its inner workings and even rewrite it? If search algorithms become more personalised, as is expected to be the case with digital assistants such as Amazon’s Alexa, it will be even more difficult to detect bias.

Ms Vestager can put such questions aside for the moment. But this week’s decision sets a precedent. Her team will now examine other offerings from Google, including travel information and reviews of

local businesses. It may well push for scrupulously equal treatment in these fields, too—which would limit how the search giant can combine and link its services, at least in Europe.

Queen Margrethe

Ms Vestager has let it be known, too, that Google is likely to be found guilty in the two other cases she has launched against it. One deals with Android, its mobile operating system, and whether the firm has used it to protect and expand its position in online search. The other examines whether Google has hurt competition in online advertising. Brussels insiders say that decisions (and further hefty fines) may come as soon as July.

Fair competition is essential in an industry that is reshaping society rapidly, Ms Vestager argues. As the cases, and the fines, pile on, there is sure to be resistance from across the Atlantic—and perhaps even sympathy for Google. Even her fans wonder whether Ms Vestager is too zealous. But it may require someone as forceful as the Dane to take on the biggest platforms. ■

and most important market after North America) where sales have been declining, lending weight to fears that Apple is experiencing “peak iPhone”.

Even though Apple has been spending \$10bn a year on research and development, “people aren’t banking on innovation”, says Amit Daryanani of RBC Capital Markets, a bank. That helps to explain why the firm’s shares are valued on a price-to-earnings ratio of around ten times its forecast 2018 earnings (stripping out cash), lower than the 12-14 times that the information-technology industry trades on.

Certainly, Apple’s attempts to diversify away from its hit product have been flawed. One disappointment has been television, worth some \$260bn globally. Its TV offering is a cable box that is little more than a portal to content from other firms, such as Netflix, not the disruptive offering that Apple executives promised.

There is also justified scepticism about another possible avenue for growth: personal transportation, an industry that is worth some \$10trn. In June, for the first time, Tim Cook, Apple’s chief executive, publicly discussed the firm’s ambition to develop an autonomous-car system. Apple could surely design a sleek car, but the big shift is away from ownership toward transportation as a service. Routing cars to specific places, as Uber does, is a leap.

Many people believe that Apple could expand in health care, on which people spend an estimated \$8trn each year globally. Today Apple allows people to store their fitness information on their devices and offers a platform for developers to create health and fitness apps. But it is as yet unclear what Apple’s edge will be. Its stance on consumers’ privacy, which it protects more assiduously than other technology giants, may be an advantage. But dealing with a complex web of companies and reams of red tape, as any foray into health care would require, would again be a big departure from what it is used to. ▶▶

Apple and the iPhone

The new old thing

SAN FRANCISCO

Apple is struggling to find another blockbuster product. The old one might do

APPLE has a new hit device, so popular that it has sold out across most of America and Britain. If you order it online it takes six weeks to arrive. “Best Apple product in a long time,” sings one online review. Useful and (of course) slickly designed, it enjoys the highest consumer satisfaction of any Apple product in history, according to a study by two firms, Creative Strategies and Experian.

Such enthusiasm must be bittersweet for Apple’s bosses. The gadget in question is AirPods, a set of wireless headphones that look a lot like Apple’s traditional ear buds, just without a wire. Priced at \$159, AirPods could become a business worth billions of dollars, like the Apple Watch, a wearable device that Apple started selling in 2015. But headphones are hardly the transformative, vastly profitable innovation that many have been waiting for.

That wait started only a few years after its biggest blockbuster launched. On June 29th 2007 the iPhone first went on sale. Since then Apple has sold some 1.2bn phones and notched up more than \$740bn in sales from the bestselling tech gadget in history (see chart on next page). Two-thirds of Apple’s \$216bn in sales in 2016 came from the iPhone.

Atop a hill there is usually nowhere to go but down. Questions about the future of the iPhone and whether Apple will ever design another product to match it pursue the company. The relentless rise of smartphone ownership is slowing, with around two-fifths of the global population now owning one. Apple is also facing more competition, especially in China (its sec-



In Apple we trust



Part of Apple's difficulty in finding the next big thing may be that it is still steered by a small, insular group of executives who have mostly been at the firm since the 1990s. They include Mr Cook, who took over shortly before the death of Steve Jobs, the firm's adored founder, in 2011. Apple is not good at hiring people from outside who could help bring new skills and ideas. Other companies have a far better record of bringing outsiders into the fold. Amazon's Prime video offering and the work that formed the basis for Echo, its home speaker, drew on newcomers' expertise.

Yet Apple will have every chance to adapt because of the enduring strength of its hit product. The iPhone business will not grow as rapidly as in the past but it will remain more important for far longer than people think, says Ben Thompson of Stratechery, a research firm. The iPhone 8, due to be unveiled in September, is likely to be innovative enough to encourage around 250m-300m iPhone users to upgrade, driving a new "supercycle" of sales.

Katy Huberty of Morgan Stanley, a bank, goes as far as to say that "for Apple the next iPhone will be the iPhone." The inclusion of augmented reality (AR), which superimposes digital information onto real-world images, for example, is likely to drive strong future iPhone sales. Apple is likely to include a 3D camera in the iPhone, and it recently said it would begin operating ARKit, a platform for software developers to design new apps that integrate AR. This step is akin to when Apple launched its app store in 2008. That set off a wave of innovation in mobile apps, which in turn gave consumers more reasons to buy iPhones. One early experiment is by the retailer IKEA, which is working on an iPhone and iPad app that lets users point their phone and see what furniture looks like superimposed in a particular space.

By encouraging app developers to start work on AR now, Apple will have a two- or three-year head start on Google's Android operating system, says Tim Bajarin of Creative Strategies. Google has launched an AR platform, called Tango, but it is only available on two devices, the Lenovo Phab

2 Pro and the Asus Zenfone AR, which have few users. If Apple can keep a lead on integrating AR into its software, that would also give users a reason to keep on preferring the iPhone over cheaper smartphones. This will be particularly helpful in China, where local brands such as Vivo and OPPO have taken share—last summer OPPO's R9 phone, which costs just \$400, overtook the iPhone in the country.

Other revenue streams are tied in part to the iPhone's success. One area of strong growth—if the base of iPhone users continues to expand—will be Apple's services business, which includes revenue from app sales, cloud storage, insurance of Apple devices and more. Services are already Apple's second-largest business, having overtaken personal computers in 2016.

Spec for smart specs

Another promising new business is smart glasses, which Apple has begun referencing in its patent applications. These will overlay digital information onto the real world without the need to look down at a screen. Work that Apple has done in developing AirPods, the Apple Watch and ARKit, such as waterproofing and elongating battery life, are the building blocks for smart glasses, says Benedict Evans of Andreessen Horowitz, a venture-capital firm. Many reckon that glasses may render phones useless, but for a long while, glasses will only work with the help of the computing power of a nearby smartphone.

Yet it may be another question entirely—its use of data—that matters most to Apple's next decade. Apple has made a point of distinguishing itself from firms like Alphabet, Google's parent company, which mine user data to target ads online. It has made a great effort to make ad blockers easy for users to install, for example. But data are increasingly central to designing the smartest software; Apple already risks lagging behind in areas such as voice recognition and predictive software if it remains inflexible about hoovering up consumers' information. Whether to prioritise privacy ahead of innovation may turn out to be Mr Cook's most important decision yet. ■

Nestlé

Tasty morsel

NEW YORK

An activist investor bites into Nestlé

NESTLÉ is not easily rattled, to some investors' chagrin. The world's biggest food company accounts for about half of all sales of instant coffee, not to mention one quarter of grub for babies, dogs and cats. Thirty-four of its brands, including Kit-Kat and Nespresso, earn over \$1bn each. Yet many investors complain that Nestlé is falling behind, and this week Daniel Loeb, an American activist investor who runs Third Point, a hedge fund, gave voice to their concerns. On June 25th, in a letter, he attacked Nestlé's "staid culture and tendency towards incrementalism".

Third Point has acquired a small stake in Nestlé, less than 2% of the company. But it was enough to spark a jump of over 4% in the company's share price on hopes that its bosses would respond. On June 27th Nestlé announced its own menu of changes—all unrelated, the company claimed, to the urging of any individual investor. Third Point will keep pushing for more.

The skirmish points to a basic question facing not just Nestlé but many of its peers: how should a consumer-goods giant operate? Big brands can no longer assert their dominance by securing spots on store shelves and spending millions on television ads. Now they must also succeed online and meet demand for "healthy" and "natural" fare. In rich countries, in particular, large companies are squeezed on one side by trendy upstarts and on the other by cheap private-label goods.

Looming over the industry is 3G, a private-equity firm that has slashed costs at companies such as Anheuser-Busch, a brewer, and Kraft Heinz, a packaged-food business. Investors debate whether these cuts undermine growth in the long term. But 3G has indisputably set a new bar for how profitable ageing consumer companies can be.

Confronted with this, Nestlé has been adapting slightly. Its chief financial officer, François-Xavier Roger, has said that he admires 3G, although Nestlé's approach is different. The firm is cutting costs, yet it has not set a target for its profit margins, preferring to reinvest in long-term growth. For instance, Nestlé has poured money into understanding how food, pharmaceuticals and personal products might converge.

Mr Loeb is among those who want more immediate action. He points out that Nestlé's total shareholder return lags that of its peers (see chart on next page), though the strong Swiss franc makes Nestlé's per- ▶▶



▶ performance look particularly poor. Its 15% operating margin last year was lower than not just Kraft Heinz's lofty 27% but a 16% margin at Unilever, an Anglo-Dutch giant, and 17% at General Mills, an American cereal maker, according to Sanford C. Bernstein, a research firm.

In January Ulf Mark Schneider, a former boss of a German dialysis firm, became Nestlé's chief executive, the first outsider to lead the firm since 1922. He has scrapped Nestlé's 5-6% annual growth target and said it might sell its confectionery unit in America, which has lost share to rivals. On June 27th Nestlé announced up to SFr20bn (\$21bn) in share buy-backs by 2020. It promised to invest in zippy categories such as coffee and pet food.

Mr Loeb, who met Mr Schneider in early June, will ask for more, including a comprehensive review of Nestlé's portfolio (to discard its weaker brands) and the sale of Nestlé's 23% stake in L'Oréal, a French beauty-products firm. Most important, however, is his call for new discipline on spending, including cuts to Nestlé's bureaucracy. That would help reach Mr Loeb's target of 18-20% margins by 2020.

As Mr Schneider considers his next steps, he might consider the case of Unilever. Led by Paul Polman, an executive at Nestlé until 2008, Unilever fended off a takeover by Kraft Heinz in February. Mr Polman satisfied investors by announcing many of the changes recommended by Third Point for Nestlé, including the goal of a 20% margin by 2020. The company's stock is up by 40% since the start of the year. Like Unilever, Nestlé may not need to consign its whole model to the bin. ■

Awards. Adrian Wooldridge, who wrote the Schumpeter column from its inception until the end of last year, won the commentary category at the 2017 Gerald Loeb awards in New York. Anton La Guardia, Edward McBride, Zanny Minton Beddoes, Chris Lockwood, Nick Pelham and Henry Tricks won the breaking-news category for their exclusive on Saudi Arabia's plans to float Aramco.

Essar Group

Indian diet

MUMBAI

The chastening of a family-owned firm is good news for the country

CONGLOMERATES sometimes sell their least promising units, thereby ginning up returns for the remaining empire. But groups saddled with huge debts do not have that luxury; only by disposing of the most profitable parts can they raise enough funds to satisfy creditors. Such is the story of the Essar Group, which is in the final stages of selling its crown jewel, India's second-biggest private oil refinery, to a consortium led by Rosneft, a Russian oil titan. The slimming of what was once the country's third-largest diversified corporate group is a welcome signal that an era of powerful industrialists running rings round their creditors is ending.

The purchase by Rosneft (along with a Russian investment fund and Trafigura, a trading firm) of the giant Vadinar refinery in the state of Gujarat for \$12.9bn will be the largest-ever foreign investment in India. It has been a long time coming. It was first mooted over two years ago and jointly announced with fanfare in October by India's Narendra Modi and Russia's Vladimir Putin. The deal includes an Indian port and a network of coveted petrol stations.

Most analysts approve of Rosneft's initiative as a way of diversifying away from upstream activities in Russia. But what is most telling is why the assets came up for sale in the first place. Essar, whose interests span power plants, steel, infrastructure and shipping, says that it saw a good opportunity to monetise an asset it has nurtured for years. It may have had little choice. An investment splurge starting in 2011 has left various Essar operating entities, along with a holding company based in the Cayman Islands, with a combined debt of around \$20bn. Although the company does not disclose updated financials (it is privately held by the Mumbai-based Ruia family) few firms in its various industries make the sort of money it would need to pay down such a debt.

In the past, bosses at Indian state-run banks (which conduct over two-thirds of all lending) could easily be convinced to overlook trifles such as a debtor's inability to repay loans. It takes over four years for an insolvency process to return a meagre 26 cents on the dollar to creditors, so bankers often preferred to behave as if even the most distressed company might somehow find a way of repaying a loan.

A bad-loan crisis followed. Around one in five loans made by state-owned banks are either set to default or have already

done so. The central bank is pushing bankers to get tough on errant borrowers. In recent weeks it has threatened to push a dozen firms with huge debts into insolvency unless deals to refinance their debts could be reached quickly. One was Essar Steel.

Banks are still allowed to forgive a part of a company's debt. But there is now pressure to show that shareholders pay a price, by having to forfeit large chunks of their equity to the banks. Advisers involved in the talks over Essar Steel say the group will have to give up over half its equity in the steel business to convince lenders to refinance loans. That is new: in past cases, parts of Essar have moved in and out of debt restructurings without the central group having to give up any stakes.

Part of the reason the Rosneft deal was held up for so long, insiders say, is that state-owned banks insisted that the Ruia family clear debts from other bits of the Essar empire first, including from the central holding company. They refused to agree to a sale until that was done (Essar repaid in part by taking out a bridge loan from Vneshtorgbank, a big Russian lender). That shows a savvy few thought state-owned bank executives possessed.

The cash from the sale to Rosneft will take away about half of Essar's \$20bn of debt but will also deprive it of its main source of profits. Essar's pain in having to sell the oil refinery is the corporate system's gain. Resolving festering bad loans, either by forcing asset sales or seizing ownership, is an essential part of restoring the health of Indian banking. Credit to Indian industry is currently shrinking for the first time in two decades. Resolving this mess can only help companies—including what will remain of Essar. ■



Turning on the loan pipe



Takata's bankruptcy

The dangers of inflation

TOKYO

A Japanese firm is brought down by familiar failings

AIRBAGS are meant to make driving safer. But for years, some made by Takata, a Japanese firm, inflated with such vigour that shards of metal and plastic were launched at occupants of vehicles in even minor collisions, causing serious injury and in some cases death. The costs of the biggest-ever recall of vehicles, hauled back to correct the problem, and the associated lawsuits claimed another victim on June 26th. Takata itself filed for bankruptcy in America and Japan, and sold its surviving operations to a competitor, Key Safety Systems (KSS).

It is the latest in a series of self-inflicted wounds by Japanese corporate giants. Takata's travails come on the heels of other disasters, including insolvency at Sharp, a formerly dominant consumer-electronics firm, and massive losses at Toshiba, a nuclear power and consumer-electronics empire. All suggest a recurring pattern of lack of transparency and leadership.

Takata's bankruptcy is due to its airbags' use of chemicals propellants which became unstable after long-term exposure to heat and humidity. But the crisis is also partly due to a lengthy concealment of a problem during which faulty bags caused at least 17 deaths and ten times as many injuries globally. The danger from exploding airbags was clear to Takata long before it came to wider attention, but instead of coming clean managers altered test results to hide it from customers. In a settlement in January of related criminal charges in America the firm agreed to pay \$1bn in fines and compensation to carmakers and

Shipbuilding in China

Cruising for a bruising

China may waste money trying to build its own cruise ships

AT FIRST glance the balcony-lined silhouette of the *Norwegian Joy*, a new cruise ship, looks like any other Western liner moored in Shanghai. But a 333-metre-long Chinese artwork of a phoenix on its topsides signals its distinctive status as the first ship designed especially for China's expanding cruise market. A pop star, Wang Leehom, christened it on June 27th.

Norwegian Joy was built by Meyer Werft in Germany, in response to a booming Chinese market for cruises. Over the past year the number of Chinese holidaying at sea has more than doubled, to 2.1m, according to the Cruise Lines International Association, a trade group. These numbers are likely to encourage other lines to build ships just for China, instead of using cast-offs from America and Europe. The *Norwegian Joy* has a much bigger casino than usual, to cater for the Chinese love of gambling. The shops are also twice as large as on Norwegian Cruise Line's other ships, notes Andy Stuart, its CEO.

But China itself wants a slice of the cruise-ship market, which is dominated by European firms. China State Shipbuilding Corporation, a firm that usually builds bulk carriers, tankers and the like, in February entered a joint venture with Fincantieri, an Italian rival, to construct two cruise vessels for the Chinese operations of Carnival, America's largest cruise line. In March SunStone Ships, a smaller Miami-based cruise outfit, or-

dered four more from China Merchants Heavy Industry, another state-owned yard near Shanghai.

It is a case of when, not if, Chinese yards break into the industry, admits Bernard Meyer, managing partner of Meyer Werft. China's government declared in a five-year plan in 2015 that it aimed to build its own cruise ships as part of its strategy of shifting the economy towards advanced manufacturing.

It will not be easy for Chinese yards to build such ships, however. Europe's dominance came from developing clusters of niche suppliers, notes Martin Stopford of Clarksons, a shipbroker; these will be hard to replicate. When Mitsubishi Heavy Industries, a Japanese conglomerate, recently tried to enter the industry with an order worth \$1.3bn from a German line for two cruise ships, it lost \$2.3bn. Last October, to stop its share price plunging further, it had to promise it would never try to build another.

Nor is it clear whether mastering cruise-ship construction will really help China with other industries. Cruise ships may look like hotels at sea, but the materials and even the plumbing that are required to meet maritime regulations are very different to anything of use on land. Even so, the state is ready to hand Chinese shipbuilders the billions of dollars required. The real beneficiaries may well be Western cruise lines, who can play the newcomers off against incumbent European suppliers.

consumers, and admitted to a cover-up of the airbag failures from the early 2000s. American prosecutors have charged three long-serving managers at the firm with faking data to conceal the defect.

The settlement bill is dwarfed by the scale of Takata's overall liabilities. Once the world's second-largest maker of airbags, the faulty ones have been used by most of the world's big carmakers. According to a court document submitted by TK Holdings, Takata's American arm, this will eventually require the recall of 125m vehicles, around half of them in America. Of the 46m recalls issued in America so far, only a third of the vehicles have been put right. The cost of fixing the remaining cars worldwide and of lawsuits from injured motorists could be up to \$25bn.

The firm is raising \$1.6bn by selling unaffected units to KSS, a Michigan-based rival recently acquired by Ningbo Joyson Electronic, a Chinese auto-parts group. But

carmakers are resigned to paying for most of the recall costs. Toyota and Honda have each set aside around \$5bn. Who will pay compensation and damages from the outstanding lawsuits is unclear, as KSS has not taken on those liabilities.

Angry shareholders, at a final meeting on June 27th, singled out Shigehisa Takada, the firm's chief executive, for blame. Masami Doi, a consultant and a former manager at Toyota, agrees that Takata has been badly led. The mindset of ignoring problems is not shared by all Japanese companies. Toyota reacted rapidly to a huge recall of cars in 2009 because of "unintended accelerations" by going on the offensive. Its openness and transparency included the sight of Akio Toyoda, president of Toyota, testifying before Congress. Mr Takada has been invisible. He swerved a showdown with America's authorities. His press conference to announce the bankruptcy was his first since November 2015. ■

Schumpeter | Time for Plan C

Fresh from visiting the Oval Office, an American CEO sends an e-mail to his top lieutenants



TO OUR management team: When I left the White House yesterday, after another two-hour round-table with the president, I knew in my gut that it was time to put in place “plan C” for this great company. The boxer, Mike Tyson, had a point when he said “everyone has a plan until they get punched in the mouth.” But so did Winston Churchill when he observed that “plans are of little importance, but planning is essential.” We owe it to our investors, customers and 131,000 employees globally, to have a reset.

A year ago we were pursuing plan A. We expected that Hillary Clinton would win the election and that American business would continue as it has since the subprime crisis, meaning slow growth and lots of red tape but open borders and record profits that we could return to shareholders as dividends and buy-backs. Together, our firm and fellow members of the S&P 500 index have been paying out \$1trn a year, far more than we invest.

After November 8th, we switched to plan B. For a few months it seemed a Republican-run Congress and White House might deliver sweeping deregulation and tax reforms to set the economy free, just as in the Reagan era. We dusted off plans to raise investment by a fifth and boost hiring at home. Like most firms we loaded the gun but didn’t pull the trigger. That was a hell of a great call.

It is now clear that dysfunction at the White House and in Congress means plan B is off the table. The markets agree. Sure, equity prices are still up. But after the election, bond yields soared in anticipation of an economic boom, only to give up half of their gains. The “Trump Bump” has faded. Yet life won’t return to normal. Our firm faces many risks. We have to fight back.

That calls for plan C, which has three elements: winning, tackling and the future. I like to use the acronym “WTF”. For a start we have to win profits from our proximity to power. I sit on the president’s CEO advisory board and he has me on speed dial to talk about trade deals and his regulatory appointments. We toasted with Diet Coke on Air Force One after we visited Saudi Arabia in May. Our firm secured a contract worth \$6bn for a desalination plant in Jeddah and a licence to operate a bank in the kingdom. These two wins will lift our profits by 14% a year by 2020.

A bonfire of obsolete laws by Congress is unlikely. But as one of my friends in the White House texted me yesterday, “people are policy”. We can still win in other ways. Business-friendly folk

are newly in charge of the regulatory bodies for telecoms, the environment and the stockmarket. Candidate Trump grumbled about monopolies such as AT&T and Amazon, but now he is in office he has lost interest. I like it when that happens.

But plan C also requires us to recognise new dangers coming at us hard and fast. They need to be tackled—stopped and brought down. One of the Wall Street bankers I know likes to say that the president has three personalities: chairman, showman and con man. It is the last two we need to worry about.

Our PR team is ready to tackle any 4am presidential Twitter tirade about betraying American workers. We will avoid responding directly on Twitter, but will rebut him on Facebook and in e-mails to staff and the media. Our executives must have patriotic sound-bites on the tips of their tongues: for example, 52% of our staff are in America and we invest \$5bn each year here. Repeat it.

We must also confront the risk of getting entangled in the investigations surrounding the White House. Today I am imposing a ban on any commercial interaction between our firm and the president’s business or the entrepreneurial folks in his entourage. This includes lending cash to the Trump Organisation, which has at least five loans and bonds maturing in the next four years.

We must be ready to tackle any consequences of a trade war breaking out with China or Germany, or a collapse of NAFTA, with contingency plans for our global supply chains. We have secured facilities in Pennsylvania (a swing state for the president so he would like this), where some Mexican production can be moved. Any spare capacity would go to growing Asian economies. The one-off cost would be \$500m—high but manageable.

Having POTUS-proofed our company, that leaves the last letter of the WTF acronym: the future of our business in America. Corporate taxes may fall, but not by much. The president is targeting a rate of 15% but most of us on the CEO advisory council think 28% is as low as it will go, based on the fiscal outlook and the president’s weakness in Congress. Since our firm, like the aggregate of the S&P 500, pays a cash tax rate of 23%, this won’t make a difference.

We expect the taxation of foreign profits to be simplified under the administration, so we can repatriate the \$51bn we parked abroad without paying a large levy (by the way we are not alone—the total for S&P 500 firms is over \$1trn). But with a slow economy, politics unpredictable and digital predators such as Amazon breathing down our necks in some product areas, I have zero appetite to spend it on new American factories. We’ll use it for more buy-backs, new software or foreign expansion.

West-winging it

I’ll be frank. Plan C envisions three and a half years of America going nowhere. The odds of recession are one in three. If the economy stalls, it will be hard for President Trump to be re-elected. Which brings me to my final point. America has broken a taboo by electing a business figure to the White House. By 2020, perhaps voters will be hungry for a “competence candidate”. Someone who really has run a big empire. Someone like me.

Mark Zuckerberg and Howard Schultz from Starbucks are already touring the country, running exploratory campaigns. Jamie Dimon at JPMorgan Chase tells me he won’t run, but I don’t believe him. None of them can match my leadership record. By 2020 one of you deserves a chance to run this great company and I will seek the chance to serve America, the greatest turnaround opportunity on Earth. Keep it to yourselves for now—but the C in our new plan stands for candidate. ■



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European banks

Buckets of ducats

MILAN
A taxpayer-funded liquidation of two Italian lenders is ugly but pragmatic

BANKS sicken slowly but die fast. For years Banca Popolare di Vicenza and Veneto Banca, in the prosperous Veneto, in north-east Italy, had been plagued by mismanagement. Even criminal investigations are under way. For months the Italian government had been wrangling with European authorities over the terms of a bail-out. For weeks it had seemed improbable that private investors would put in money alongside the state, as the European Commission insisted.

On June 23rd the European Central Bank (ECB) declared that the banks were “failing or likely to fail”. Two days later, after a frantic weekend, the Italian government pronounced them dead: their good assets were sold to Intesa Sanpaolo, Italy’s second-biggest lender, for a token €1 (\$1.14), and their dud ones put into a “bad bank”. The operation may cost Italian taxpayers €17bn. This is the second call on Italy’s public purse this month. On June 1st the commission approved, in principle, the rescue of long-troubled Monte dei Paschi di Siena, the fourth-biggest bank, which is expected to cost the state €6.6bn.

The Veneto banks’ clients breathed a sigh of relief when branches opened on June 26th. So did the stockmarket: bank shares rose. So did holders of the lenders’ senior bonds, which will be taken on by Intesa. In early June they had traded at below 74 cents on the euro. They jumped to above

par (see chart).

Yet the bail-out has sown confusion—and consternation—about the euro zone’s new, and scarcely tested, system of treating failing banks. After the ECB’s declaration, responsibility passed to the Single Resolution Board (SRB), a separate agency set up by the commission.

Only one other such case has reached the SRB. On June 6th the ECB deemed Banco Popular, Spain’s sixth-biggest bank, to be in its death throes. The SRB put Popular into “resolution”—the European procedure for winding up banks—and overnight it was sold to Santander, Spain’s biggest lender, also for €1. Under rules that came into force in January 2016, equity, bonds

(both senior and junior) and deposits over €100,000 must take losses, to the value of 8% of total liabilities, before public money is injected into a bank. Shareholders and junior bondholders were wiped out, but senior creditors were spared. Taxpayers did not pay a cent; Santander will raise €7bn in equity.

The SRB dealt with the Italian pair differently. It judged that it was “not warranted in the public interest” to put them into resolution. Their demise would not have a “significant adverse impact on financial stability”, because of their limited interconnections with other banks. (At the end of 2016 they were Italy’s 10th- and 11th-biggest by assets.) The SRB instead decided that they should be dealt with under Italian insolvency law. Shareholders and holders of junior debt will suffer losses, though retail investors, who own €200m in junior bonds, will be compensated for “mis-selling”; Italian banks routinely sold such bonds to retail customers. Senior creditors were untouched.

Although the board saw no risk to stability, the government perceived a danger to the Veneto’s economy. Intesa will be paid €3.5bn to offset the effect of the extra assets on its capital ratios. It will also get €1.3bn to cover integration costs, including the closure of around 600 branches. Its market share in the region will rise to 30%. Mediobanca, an investment bank, estimates the acquisitions will yield profits of €250m by 2020. The government is also putting up €12bn in guarantees against potential losses, although it expects to spend only a small fraction of that; and some of the banks’ senior debt was state-guaranteed, so it may have saved money there. The commission’s competition arm approved the aid.

Using national insolvency will also suit ►►



Italy's banks as a whole. Resolution would have cost them €12.5bn under the country's deposit-guarantee scheme, putting an unwelcome dent in their capital ratios. The deal also frees money in Atlante, a fund backed by Italian financial institutions, which had been earmarked for buying the Veneto banks' bad loans. It may now be spent on Monte dei Paschi's.

Critics—most vocally, some German MEPs—lament the splurge of public money: Europe's new rules, after all, are supposed to discourage that. They argue that the bail-out has put paid to Europe's proposed "banking union", in which one set

of rules should apply to all. That is overblown, says Nicolas Véron of Bruegel, a Brussels think-tank, and the Peterson Institute for International Economics in Washington, D.C. Banking union is incomplete: this episode serves as a reminder. "The single resolution mechanism is not really single as long as you have different insolvency regimes for banks," says Mr Véron.

Moreover, given the wretched state of the Veneto banks, their acquirer could demand a dowry; Santander was willing to raise money to absorb an essentially sound Popular. Arguably, Italy should have sorted out its mess sooner, before Europe's

stricter bail-out rules came into force; but it has spent a pittance compared with what other countries shelled out after the financial crisis.

Italy's pile of non-performing loans is at last shrinking. But worries linger—notably about Carige, a Genoese bank. While the economy continues to crawl, many lenders will struggle for profit. Although consolidation is taking place, Italy's bank branches still outnumber its pizzerias; despite recent reform, recovery of bad debts is still slow. Bail-outs are forgivable—if they mean a fresh start. Time for Italy, if it can, to prove the doubters wrong. ■

Buttonwood | Easy money

Borrowers have the whip hand in the credit markets

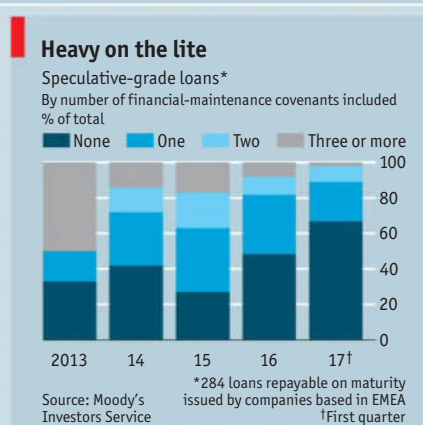
WHEN the financial crisis was at its height in 2008, being a debtor was a dreadful experience. Banks and companies scrambled desperately to get the financing they needed.

But the balance of power in the financial markets can easily shift. In 2005 and 2006, credit had been easy to get on generous terms. Not only were loans cheap and plentiful; they also suffered from fewer restrictions. Until then, corporate loans had many covenants offering safeguards for lenders if the debtor's financial position were to deteriorate. But 2005-06 saw the emergence of "covenant-lite" loans in which such restrictions were virtually non-existent.

The cycle has turned again. Analysis by Moody's, a ratings agency, shows that the proportion of the loan market that is "covenant-lite" has risen from 27% in 2015 to more than two-thirds in the first quarter of this year (see chart). Some loans even contain restrictions on the lender, not just the borrower. Private-equity firms demand a veto over secondary-market buyers of loans they owe; the idea is to avoid the debt being bought by activist investors who might make demands on a company's management.

Investors are willing to accept such terms because they are desperate to earn some kind of yield on their assets. In the past eight years, central banks in developed economies have pushed interest rates close to zero. Government-bond yields have also been at historic lows, and some have even been negative.

When low-risk assets offer a poor return, investors are willing to take more of a chance. At times like this, Wall Street always has a suitable set of initials to flog. This time, it is the collateralised loan obligation (CLO), which bundles loans together into a diversified portfolio. As with



subprime mortgages a decade ago, these portfolios are then divided into different tranches, to offer higher returns (at higher risk). CLO issuance so far this year is double the amount raised in the same period of 2016, according to Wells Fargo, a bank.

Investors' enthusiasm is not just confined to loans. Argentina recently issued a 100-year bond, despite its history of repeated defaults. With a 7.9% yield, investors clearly gambled they could get a decent return on the bond before Argentina hits economic trouble again.

Another reason why investors are more willing to take on risk is their belief that the global economy, and the health of the corporate sector, are both improving. The global default rate on speculative bonds is down to 3.3% over the past 12 months, according to S&P Global, another ratings agency; at the start of the year, the default rate was 4.2%. Many companies have taken advantage of a long period of low interest rates to refinance their debts.

But is the enthusiasm for CLOs and covenant-lite loans a sign of the same speculative excess that frothed in the middle of the previous decade? There are other straws in

the wind. The Bank of England warned this week that consumers' debt in Britain was rising faster than incomes and asked banks to put aside more capital to cover the risk of bad debts. On a scale of one to ten, one banker describes the current level of investor euphoria as "about eight".

The good news is that any shake-out in the market should be more contained than it was in the days of Bear Stearns and Lehman Brothers, whose collapse precipitated the 2008 crisis. The financial system is not as fragile as it was a decade ago; banks have more capital and are probably carrying less of this speculative debt on their own balance-sheets.

Nevertheless, it is hard to escape the feeling that the market is being kept aloft by the actions of central banks. The European Central Bank (ECB) and Bank of Japan are still buying tens of billions of dollars' worth of assets every month. That keeps yields down and prompts investors to seek alternatives. Matt King, a strategist at Citigroup, thinks that global central banks have to keep creating \$1.2trn a year just to keep the markets from selling off.

That creates the potential for a game of chicken between central banks and the markets. The Federal Reserve is now pushing up interest rates and may reduce the size of its balance-sheet. China is also tightening policy; and Mario Draghi of the ECB said this week that "deflationary forces have been replaced by reflationary ones." Central banks will move cautiously because they do not want to trigger a credit crunch. But investors are aware of this concern, and may reckon that policy will be eased again at the first sign of trouble; as a result, they may well keep lending. There is potential for serious miscalculation on both sides.

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American banks

Stress relief

The Federal Reserve blesses a big increase in big banks' payouts

OVER the years, the grumbles have got louder. Since 2011 America's big banks have undergone annual "stress tests" overseen by the Federal Reserve, along with scrutiny of their plans for paying dividends and buying back shares. A product of the post-crisis Dodd-Frank act, the tests are intended to make sure that lenders have enough equity on hand should catastrophe strike again. But banks say they are both opaque and burdensome. And because failure can mean a block on payouts, the tests have bred caution and ire.

The time for caution seems to be over. On June 28th the Fed said it had approved the dividend and buy-back plans of all 34 banks tested this year—plans which propose handing shareholders a pile of cash. All 34 also passed the first stage, results of which were revealed six days earlier and which assume no repurchases and unchanged dividends. Even under a "severely adverse" scenario involving a nasty recession, all would keep key capital ratios above the regulatory minimum.

Payouts are likely to be close to 100% of the industry's expected earnings over the next four quarters. According to analysts at Barclays, that would be the highest ratio since 2007 and (more remarkably) the second-highest in the past 20 years.

Several banks published their plans shortly after the Fed's announcement. JPMorgan Chase intends to repurchase \$19.4bn-worth of shares over the next year, up from \$10.6bn in last year's plan, and plans to increase its quarterly dividend from 50 to 56 cents. Citigroup will double its dividend and return \$18.9bn to shareholders in all, comfortably more than it is likely to earn. Bank of America will buy back \$12bn in shares, having proposed just \$5bn a year ago, and raise its dividend by 60%, to 12 cents. Warren Buffett indicated earlier this year that 11 cents would be enough to entice his investment firm, Berkshire Hathaway, to switch its preferred shares, which yield a fixed sum, into common stock. That would make Berkshire BofA's largest shareholder. It is already the biggest at Wells Fargo, which also declared an increased payout.

Not every bank passed with flying colours. American Express squeezed through only after cutting back its planned payout (which banks may do after the first stage of tests). Capital One, which also made changes, must resubmit its homework within six months, after the Fed found

Kenya's sovereign debt

Callable bond

NAIROBI

Kenya may soon be a nation of bondholders

MOBILE money is ubiquitous in Kenya. Someone tapping on their phone might be paying school fees, sending money home or donating to a church. Soon they might be trading bonds. On June 30th the Kenyan government was due to launch M-Akiba, the world's first sovereign bond to be sold exclusively through mobile platforms.

The bond is marketed at small investors, who will not need a bank account to take part. They can register on their phone in a few minutes and invest as little as 3,000 shillings (\$29), far less than the 50,000 shillings needed to buy other treasury bonds. "Akiba" means savings in Kiswahili. The government is keen to promote thrift and is offering a juicy 10% annual return on the three-year bond, about three percentage points above deposit rates at commercial banks. Coupon payments are made through mobile money.

A pilot offer in March lured over 100,000 people to register. But only 5,692 of them went on to buy, partly because of a technical hitch at one of the phone companies. It seems that affluent folk, with more money to hand, grabbed most of the bonds available. One test in the

long run will be whether poorer Kenyans get involved. Irungu Waggema, head of IT at the Nairobi Securities Exchange, envisages a national marketing campaign with agents promoting the bond in supermarkets and churches.

Some investors may opt to trade in the secondary market. But Evelyn Otula, one of Kenya's leading tennis players, who bought bonds during the pilot, intends to hold hers to maturity. Having dabbled in shares, she says M-Akiba's big attraction is "simplicity". Kenyan banks, squeezed by a cap on lending rates, are pouring cash into government securities anyway; investors may see M-Akiba as a savings account that cuts out the middleman.

For the treasury, the proceeds are small. The bond, which will be sold in several phases, aims to raise 5bn shillings for infrastructure projects—a tiny fraction of the 269bn shillings the government plans to borrow domestically this year. But Mr Waggema sees huge potential for the platform, which could one day be used for trading shares, corporate bonds and even derivatives. Kenyans are already addicted to sports betting on their phones, so playing the financial markets would be no great leap.



Trading floor of the future

flaws in the assessment of risk "in one of its most material businesses". Both banks make most of their money from credit cards, which were hard hit under the Fed's bleakest scenario in the first stage of tests.

Having added \$750bn in equity since 2009, big banks do not just want to pay more to shareholders. They also want to ease the burden of tests that require them to submit thousands of pages; and they complain that the Fed, although it spells out its scenarios, keeps its models under wraps. They can expect relief here too.

This year the Fed exempted 21 of the 34 banks from the "qualitative" part of its tests, which assess internal processes rather than numerical resistance to stress. In a recent report the Treasury pressed it to go further, suggesting among other things that the central bank be more open about its models and excuse more lenders from the qualitative exam. Jerome Powell, the Fed governor in temporary charge of supervision, sounded sympathetic when he spoke to senators on June 22nd. The post-crisis shackles are loosening. ■

Islamic bonds

Appealing to the umpire

A court case shakes the foundations of Islamic finance

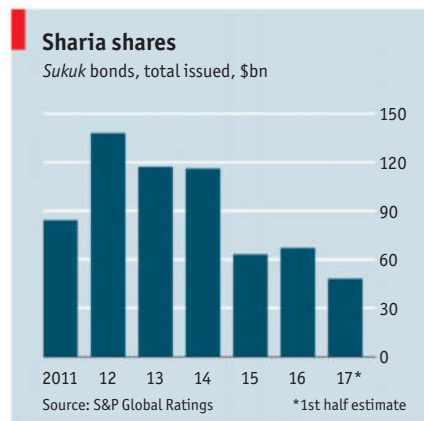
DANA GAS, an exploration business listed in Abu Dhabi, seems in a spot of bother. Ten years after sealing a landmark production deal with Iraqi Kurdistan, it is struggling to recover \$900m it is owed by the autonomous region and the Egyptian government. So it faces a liquidity squeeze. That is not, however, why it says it wants to restructure \$700m-worth of Islamic bonds maturing in October 2017. Rather, it says it has received legal advice that the bonds are no longer compliant with *sharia*—rules based on Islamic scripture.

The bonds were deemed compliant in 2013, but Dana cites evolution in the “interpretation” of Islamic financial instruments. It is seeking to have them declared invalid in a United Arab Emirates court. Its domestic assets are shielded from creditors under UAE law; it has also obtained injunctions in Britain and the British Virgin Islands protecting it from claims until the case is settled. Hearings are not due to start before December, months after the bond’s next payment-due dates.

Islamic law forbids the generation of money from money—interest. *Sukuk*, or Islamic bonds, thus differ from their conventional peers. They are backed by assets and instead of lending the issuer money, the holder owns a nominal share of what the cash was spent on and receives an agreed ratio of the profit generated by the investment. At maturity, the issuer returns the principal by buying the investor’s share in the asset.

There is no global standard or overarching authority for *sharia* compliance. Some countries, like Malaysia, have a central *sharia* board for finance. Others, including the UAE, do not, leaving issuers and investors to rely on the guidance of learned scholars to vet transactions. Inevitably, they sometimes disagree. Mohammed Khnifer of the Islamic Development Bank says some are “now trying to revisit the standards to make them more *sharia*-compliant”. Yet Dana’s request that a previous *sharia* ruling be reversed—and the looming default—are unprecedented.

Creditors are enraged. Dana Gas is proposing to exchange the *sukuk* for a new, *sharia*-compliant security that would confer rights to less than half of current profit rates, so that the company can focus on “cash preservation”. (Though, if *sharia* compliance was its only motive, nothing would prevent it from issuing new *sukuk* with the same economic value.)



Should Dana prevail, the biggest loser might be Islamic finance at large. The award would surely embolden other issuers, raising uncertainty for holders of all types of *sukuk*. Khalid Howladar of Acreditus, a Dubai-based advisory firm, says no particular *sukuk* structure is “immune to a challenge by someone really looking to find a discrepancy with *sharia*”.

The impact of the case will be magnified by the evolving profile of *sukuk* investors. Over the past couple of years, low oil prices and the liquidity pressures they have brought to the Gulf have prompted governments to start raising bonds from foreign investors. Some of the borrowing happened via Islamic bonds, the complex-

ity of which time-poor investors were happy to overlook so long as *sukuk* offered a risk-return profile similar to that of conventional bonds. Should *sharia* pronouncements prove reversible—or creditors be faced with the risk of long legal battles—this appetite would rapidly shrink.

The price, eventually, would be borne by borrowers. In oil-rich countries, a glut of savings in search of *sharia*-compliant investments has so far helped compress yields, making *sukuk* a more affordable option for issuers than comparable conventional bonds, says Stuart Culverhouse of Exotix, a bank.

Should Dana win, the entire industry would probably suffer a “*sharia*-compliance” risk discount. Investors might start asking for two or more *sharia* pronouncements, further raising issuance costs. Moody’s, a rating agency, noted that the case would probably “diminish the liquidity and growth of the *sukuk* market”.

That market has slowed in recent years (see chart). But the global amount of outstanding *sukuk*, which did not properly take off before 2000, has reached \$411bn. Islamic-banking assets currently account for more than 15% of total banking assets in at least 12 countries, according to the Islamic Financial Services Board. Whatever happens in this case, it has highlighted the need to move faster towards agreed and consistent standards. ■

Sovereign-bond ratings

Double standards?

NEW YORK

Some leading emerging markets threaten to rebel against the ratings agencies

EARLIER this year, a crowd of patriotic Indian students bristled when Arvind Subramanian, the government’s chief economic adviser, showed them a slide with two charts. One showed India’s steady economic growth and flat debt-GDP ratio; the other China’s slowing growth and fast-rising debt. Yet India’s credit rating from S&P Global Ratings (formerly Standard and Poor’s), has been stuck at BBB-. China, on the other hand, was upgraded from A+ to AA- in 2010 even as its debt shot up. The slide was pithily titled “Poor Standards”.

Rating government debt is always controversial. And India v China is often a grudge match. But many emerging-market governments agree with Mr Subramanian, who has contrasted the rating agencies’ treatment of India with that of the rich world in the 2008 crisis, when they “closed the stable doors after the horses bolted”.

In frustration, the BRICS grouping—Brazil, Russia, India, China and South Africa—

plans to set up an “independent” ratings agency, expected to be launched at their summit this September in Xiamen in southern China. Even the host country, initially cautious about the idea, may become keener since Moody’s, another ratings agency, downgraded its debt in May. At the time, *China Daily*, a state outlet, attacked Moody’s “subjective analysis”.

Emerging-market governments argue that their debt is downgraded more often than that of rich countries. South Africa’s debt was demoted to “junk” in April, when Jacob Zuma, the president, fired the finance minister, Pravin Gordhan. So was Turkey’s, after a failed coup last year, and Brazil’s as a corruption scandal worsened in 2015. Leah Traub of Lord Abbett, a fund manager, reckons the agencies are quicker than before to react to political events in such economies. According to Bloomberg, in 2016 three agencies took a record 1,971 negative actions on the debt of emerging-market gov- ▶▶



Pakistan and the IMF

Never say never

ISLAMABAD

Old economic vulnerabilities persist; new ones emerge

THE IMF, claims Pakistan's government, is surplus to requirements. Ministers in its business-minded ruling party, the Pakistan Muslim League-Nawaz (PML-N), boast of a record that means the country can pay its own bills. "We will not go back to the IMF programme," declared Ishaq Dar, the finance minister, in May, almost a year after the completion of Pakistan's most recent, \$6.6bn bail-out. In a country that mistrusts Western assistance and where protesters portray the IMF as a bloodthirsty crocodile, such words have a heady appeal. But they ring hollow.

On June 16th the IMF warned of re-emerging "vulnerabilities" in Pakistan's economy. It praised GDP growth of above 5% a year, but noted missed fiscal targets and a ballooning current-account deficit. The fund's own projections a year ago for the fiscal year ending this June underestimated this deficit by about half the final total of \$9bn. And based on trends in early April it overestimated the fiscal-year-end foreign-exchange reserves by \$3bn.

Independent economists point out that, many times before, collapse has come on the heels of an IMF programme's conclusion. Sakib Sherani, a former government economist, says that to avoid "egg on its face" for cheerleading Pakistan's economic recovery just months ago, the IMF is slowly changing its story. By the end of 2018, many predict, Pakistan will come begging again. The fund responds that it is "too early to speculate".

Some of Pakistan's faltering can be blamed on bad luck, such as a fall in remittances from workers in the Middle East. But mostly it was, as usual, bad policy. Like its predecessors, the PML-N has failed to enact the structural reforms needed to break

Pakistan free of its cycle of crises. Barely any goals of the IMF's programme were met. Bloated, underperforming or, in the case of Pakistan Steel Mills, closed-down publicly-owned enterprises drain millions from the government each month. "Circular" debt, caused by delayed payments along the electricity-generation chain, is swamping the energy sector once more.

Annual exports have declined by 20% in dollar terms since 2013, stymied by an overvalued currency. All this means the government is again borrowing hand over fist from local and foreign banks. In some cases the design of the IMF programme itself has added to Pakistan's woes: by pushing for increased tax revenue above all else, it has allowed the government to clobber the poor with indirect taxes, milk the (few) direct taxpayers even further, and, as ever, ignore the wealthy elites.

To make matters worse, instead of snapping its jaws at Pakistan's failure to meet targets, the IMF meekly indulged its partner, argues Khurram Husain, a journalist working on a book about the relationship between Pakistan and the IMF. It kept acting "like an ATM machine", he says, even as Pakistan kicked serious reform into the long grass.

The IMF has long been accused of going soft on Pakistan, mindful of its nuclear weapons, boisterous jihadis and proximity to war-torn Afghanistan. Successive Pakistani governments have exploited the sense that their country is too dangerous to fail. They have taken out 12 IMF loans since 1988. The result, argues Ehtisham Ahmad of the London School of Economics, is that aid money plays the role resource riches do in some other countries, encouraging spendthrift government.

The source of funds is changing even if government recklessness is not. China plans to invest \$62bn in Pakistan for a range of projects, particularly power plants, around the 3,000km (1,875-mile) China Pakistan Economic Corridor (CPEC). That could lift Pakistan to more stable prosperity. But paying for the CPEC will not be easy. Unlike loans from the IMF or World Bank, some two-thirds of those taken out so far, for \$28bn-worth of early projects, are on commercial terms, with interest high at around 7% a year. When these loans come due, argues Farooq Tirmizi, an emerging-markets analyst, Pakistan will need a bigger bail-out than ever before.

The IMF has concerns about the lack of transparency surrounding Pakistan's CPEC debts and how it will repay them. Any future fund lending to the country may include conditions that sow discord between the country and its new patron. And with President Donald Trump in charge of America's foreign policy, there is no guarantee that the old one, America, will prove as generous—in the event of a crisis—as it has in the past. ■

► ernment and related entities.

Some think the agencies have become trigger-happy, and may themselves raise the risk of a crisis. That criticism is not new. In a paper published in 1999 on the "procyclical role of rating agencies", Giovanni Ferri, Liu Ligang and Joseph Stiglitz, three economists, looked at the Asian financial crisis in 1997 (see *Free exchange*). They argued that, in its initial phases, the ratings agencies fostered panic and contagion.

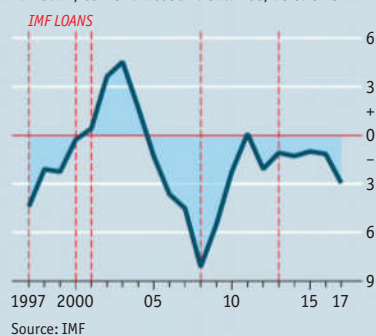
A World Bank study last year, on the ratings of 20 developing countries between 1998 and 2015, found that a downgrade to junk raised the yield on a country's short-term bonds by an average of 1.38 percentage points. A junk rating forces some institutional investors to sell because of internal rules or regulatory requirements. The sovereign bond also usually sets a floor for the cost of borrowing by domestic firms, since their debt is hardly ever rated higher than their governments'.

Rich-country borrowing costs, in contrast, often survive radical shocks. That is especially true of the United States, where sovereign-bond yields actually tend to fall during a crisis, because its stable institutions, deep markets and the dollar's reserve-currency status make it a safe haven. Even when S&P Global, in a rare move, did downgrade the sovereign rating from AAA to AA+ in 2011, Treasury yields actually dipped. In Britain, too, after the Brexit vote last year, government-bond yields initially fell as investors fled riskier assets.

Ratings agencies argue that rich countries have a "100-year track record". Such appeals to history fuel the developing countries' perception that the markets are stacked against them. And that a BRICS ratings agency would probably not be considered credible by many investors will only heighten their sense of unfairness. ■

Old habits

Pakistan, current-account balance, as % of GDP



Trade-adjustment policies

Aid for trade

EVANSVILLE, INDIANA

America's programme to help trade's losers could do with a fix

BRIAN AUNSPACH thought he had a job for life. After six years at a smelter owned by Alcoa, America's largest aluminium company, his work was hard but the benefits decent. Warning signs came with crashing aluminium prices in the summer of 2015 and murmurings about unfair Chinese competition. Then reality hit: in January 2016 Alcoa announced the smelter's closure. Around 600 people lost their jobs.

The events of 2016, from Brexit to Donald Trump's election, were widely seen as a backlash against globalisation. The Warrick smelter in Indiana, which shut amid "challenging market conditions", was perceived to be a victim of free trade. And the likes of Mr Aunspach, an American displaced by trade, are the objects of keen attention from wonks as well as politicians.

His is an old problem, with old solutions. Since 1962 America has earmarked funding to help people adjust to trade-related shocks. Trade-Adjustment Assistance (TAA) offers people money for retraining and income while they do so. Workers over 50 can get their wages topped up by 50% of the difference between their new and old wages. The money should help cushion the financial blow, and tempt them towards on-the-job training.

On paper, TAA should make wonks glow. It protects workers, not jobs, and links qualifications to local demand. Mr Aunspach is a beneficiary, and a big fan. He credits Pam Haskins, his caseworker and

"life coach", with making him see that he was getting "the opportunity of a lifetime". His income from TAA quashed his initial panic about feeding his children and paying his mortgage, and allowed him to take a lengthy welding qualification. Without TAA, state benefits to pay for his course would have lapsed after six months.

Ms Haskins also thinks TAA works, but qualifies that "they have to want it". Some of Alcoa's ex-employees were snapped up by other firms. Others drifted into early retirement. Still others waited, hoping the smelter would reopen, swayed by Mr Trump's promises to help the industry.

In the 12 months to September 2016 just 127,000 workers received TAA. Applying is tricky and can be slow. Ms Haskins knows of one coal supplier who, 18 months after the Warrick smelter closed, is still waiting for approval for the 30 employees he let go. Americans have been turning elsewhere. David Autor, David Dorn and Gordon Hanson, three economists, have estimated that of the extra government payments associated with Chinese import competition between 1990 and 2007, only 6% came through TAA or unemployment insurance. Most came from other sources: 32% from disability or retirement insurance; 26% as federal-government income assistance; and 32% as extra medical spending.

Historically, TAA has had narrow eligibility criteria: for its first seven years no one qualified. Since then, coverage has undu-

lated, expanding in 2009 to include people in service industries, then contracting in 2014 as the provision expired. Now they are covered again, but only until 2021.

The scheme can be confusing and administratively complex. Worse, most Americans have not heard of it; it can also be difficult to avoid the stigma associated with getting state help, reckons Mr Aunspach. Howard Rosen, an architect of the current TAA law and executive director of the Trade Adjustment Assistance Coalition, a lobby group, complains that successive governments have failed to push TAA: "We like to have programmes, but we don't want people to use them."

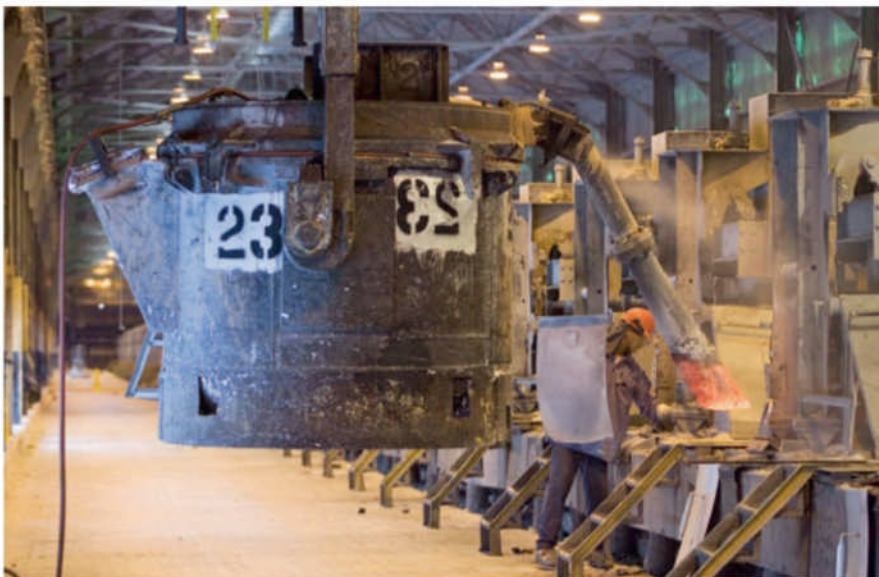
Building support for TAA might be easier if evidence of its benefits were more solid. Headline statistics seem impressive: within three months of leaving the programme, participants boast a 74% employment rate, and 92% of those are still employed three months later. But success relative to the amount spent on it, or relative to other schemes, is hazier.

Not made to measure

The TAA was set up without any proper system to gauge its effectiveness. Its most recent thorough assessment, in 2013, found that recipients had lower incomes than similar people receiving unemployment insurance over its first four years. Overall, they estimated that the programme was a net loss to TAA participants, of almost \$27,000. But four years might not be long enough to measure the gains from retraining. Moreover, the evaluation happened just before America's recession. Since people without TAA joined the workforce sooner, before the worst of the downturn, it is perhaps unsurprising that they fared better during the subsequent period.

Besides lacking a framework for assessing success, the scheme has other flaws. Mr Rosen thinks the government should offer people help to start their own businesses, and expand the wage-insurance component to workers under the age of 50. By law, employers about to engage in mass lay-offs have to tell the government about it with 60 days of notice. Roy Houseman, whose job is to help people apply for TAA, thinks that notice of a mass lay-off should also trigger an automatic TAA application.

A bigger fix may be necessary. TAA offers to protect workers rather than jobs. But an ideal version, says Mr Rosen, would protect people based on need, not cause, so that a trade shock is not the only trigger. Even that may not be enough. Export-oriented manufacturing industry tends to be geographically concentrated, which means that trade shocks can have devastating regional effects. Boosting the amount available for relocation under TAA (currently \$1,250) could help. Or perhaps policymakers should be thinking about how to help places as well as people. ■



Alas, poor Warrick

Free exchange | Hot and sour

Did Asia learn the lessons of its financial crisis?

MUSEUM SIAM in Bangkok is dedicated to exploring all things Thai. Until July 2nd, that includes an exhibition on the Asian financial crisis, which began on that date 20 years ago, when the Thai baht lost its peg with the dollar. The exhibition features two seesaws, showing how many baht were required to balance one dollar, both before the crisis (25) and after (over 50 at one point). Visitors can also read the testimony of some of the victims, including a high-flying stockbroker who was reduced to selling sandwiches, and a businesswoman whose boss told her to “take care of the work for me” before hanging himself. (In Hong Kong, Japan and South Korea, 10,400 people killed themselves as a result of the crisis, according to subsequent research.) In Thailand the financial calamity became known as the *tom yum kung* crisis, after the local hot-and-sour soup, presumably because it was such a bitter and searing experience.

The exhibition’s subtitle, “Lessons (Un)learned”, seems fair. The victims of the crisis (Thailand, South Korea, Malaysia, Indonesia and Hong Kong) took many lessons to heart. With the exception of Hong Kong, they no longer rely on a hard peg to the dollar to anchor inflation, giving their currencies more room to move. (The sandwich vendor’s chosen logo for his new business was a balloon that floats like the baht.) They borrow chiefly in their own currencies, so their liabilities no longer jump when their exchange rates fall. And where necessary, they try to neutralise heavy capital inflows with offsetting flows the other way, including central-bank purchases of foreign-exchange reserves.

The change is evident in Asia’s trade and current-account balances. On the eve of the crisis, Thailand, for example, was importing far more than it exported, borrowing from foreigners to bridge the gap. In 1996, its current-account deficit amounted to about 8% of GDP. Twenty years later, it had a surplus of over 11%.

The harder question is whether learning these lessons is enough to protect an emerging market in Asia or elsewhere from future mishaps. After all, Asia did not see the 1997 crisis coming precisely because it thought it had learned the lessons from earlier crises. Unlike the profligate Latin Americans, for example, the Asian countries had high national saving rates, limited public debt and budget surpluses. In 1996, Thailand’s central-government debt was under 5% of GDP.

So far, the lessons of 1997 have aged well. The victims of that regional crisis suffered relatively little from the global version of 2008 (although, despite South Korea’s dollar reserves, some of its

corporates suffered dollar shortages). Only one of them (Indonesia, which had allowed its current-account deficit to widen) counted among the “fragile five” emerging economies, which in 2013 proved vulnerable to higher American bond yields.

But not everyone is satisfied. Hyun Song Shin of the Bank for International Settlements, emphasises one new threat, against which the lessons of 1997 would not necessarily afford protection. He argues that even countries that maintain floating exchange rates and have little visible foreign-currency debt can suffer financial strain (as in 2013), if their companies’ foreign subsidiaries borrow too much. This offshore money can relax financial conditions back home, Mr Shin argues, even if it is not necessarily repatriated. This is because companies rolling in money offshore will leave more of their onshore money in the bank. Sure enough, IMF research shows that from 2009-13 firms from middle-income countries both raised a lot of offshore debt and expanded their onshore deposits, leaving their home-country banks flush with cash.

From soup to nuts

Unfortunately, when the Federal Reserve tightens, the dollar strengthens and the offshore markets become less accommodating, this process can go into reverse. Multinationals that suddenly cannot raise money abroad make greater demands on domestic banks, withdrawing deposits and requesting loans. This tightens financial conditions, even if the local central bank, proud of its floating exchange rate and independent monetary policy, has not itself raised interest rates.

If the offshore money is never repatriated, it will not register in the official statistics as a capital inflow. Policymakers attuned to the lessons of 1997 may not pay it enough attention. They may be surprised, therefore, how little their floating currency and limited foreign debt insulate them from global financial conditions.

A different argument is that emerging economies have learned the lessons of the 1997 crisis too well. In trying to safeguard financial stability, have they sacrificed too much growth—or perhaps jeopardised stability elsewhere?

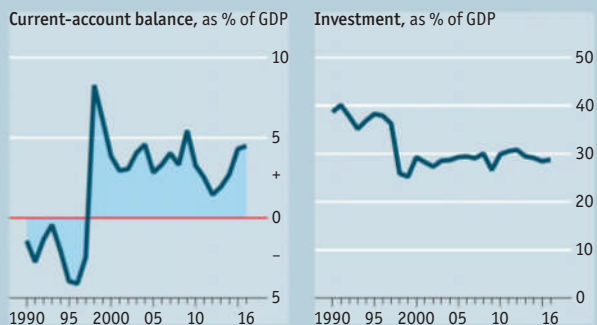
Before the crisis, Asia maintained extraordinary rates of capital expenditure by supplementing its own saving with saving imported from the rest of the world. After the crisis, it curbed that net foreign borrowing, but only by slashing investment (see chart).

Some of that pre-crisis investment was extravagant and wasteful. One example is Sathorn Unique in Bangkok, an eerily abandoned, incomplete block of luxury flats over 40 storeys high. It now hosts an advertising hoarding, much graffiti and the sad memory of a Swedish man who chose that spot to take his own life. But other investment has been sorely missed. Thailand’s infrastructure used to be the envy of the region. Its quality has since fallen behind Mexico’s, according to the World Economic Forum. Moreover, in a world economy that is still short of spending, too much abstemiousness begins to look anti-social. Not all countries can run current-account surpluses (which must be matched by deficits elsewhere). Therefore, not every country can fully abide by the lessons of the Asian financial crisis.

Thailand, the museum exhibition points out, used to imagine itself as the region’s “fifth tiger”. Now it is considered the “sick man of Asia”. *Tom yum kung* can be too spicy for some. But for a sick man, it can also be good for clearing out the sinuses. ■

The cost of surplus

Hong Kong, Indonesia, Malaysia, South Korea, Thailand, GDP-weighted average





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Fake news

Creation stories

It is becoming easier to create convincing audio and video of things that have never happened

EARLIER this year Françoise Hardy, a French musician, appeared in a YouTube video. She is asked, by a presenter off-screen, why President Donald Trump sent his press secretary, Sean Spicer, to lie about the size of the inauguration crowd. First, Ms Hardy argues. Then she says Mr Spicer “gave alternative facts to that”. It’s all a little odd, not least because Françoise Hardy (pictured), who is now 73, looks only 20, and the voice coming out of her mouth belongs to Kellyanne Conway, an adviser to Mr Trump.

The video, called “Alternative Face v1.1”, is the work of Mario Klingemann, a German artist. It plays audio from an NBC interview with Ms Conway through the mouth of Ms Hardy’s digital ghost. The video is wobbly and pixelated; a competent visual-effects shop could do much better. But Mr Klingemann did not fiddle with editing software to make it. Instead, he took only a few days to create the clip on a desktop computer using a generative adversarial network (GAN), a type of machine-learning algorithm. His computer spat it out automatically after being force fed old music videos of Ms Hardy. It is a recording of something that never happened.

Mr Klingemann’s experiment foreshadows a new battlefield between falsehood and veracity. Faith in written information is under attack in some quarters by the spread of what is loosely known as “fake

news”. But images and sound recordings retain for many an inherent trustworthiness. GANS are part of a technological wave that threatens this credibility.

Audio is easier to fake. Normally, computers generate speech by linking lots of short recorded speech fragments to create a sentence. That is how the voice of Siri, Apple’s digital assistant, is generated. But digital voices like this are limited by the range of fragments they have memorised. They only sound truly realistic when speaking a specific batch of phrases.

Generative audio works differently, using neural networks to learn the statistical properties of the audio source in question, then reproducing those properties directly in any context, modelling how speech changes not just second-by-second, but millisecond-by-millisecond. Putting words into the mouth of Mr Trump, say, or of any other public figure, is a matter of feeding recordings of his speeches into the algorithmic hopper and then telling the trained software what you want that person to say. Alphabet’s DeepMind in Britain, Baidu’s Institute of Deep Learning in Silicon Valley and the Montreal Institute for Learning Algorithms (MILA) have all published highly realistic text-to-speech algorithms along these lines in the past year. Currently, these algorithms require levels of computing power only available to large technology companies, but that will change.

Generating images is harder. GANS were introduced in 2014 by Ian Goodfellow, then a student at MILA under Yoshua Bengio, one of the founding fathers of the machine-learning technique known as deep learning. Mr Goodfellow observed that, although deep learning allowed machines to discriminate marvellously well between different sorts of data (a picture of a cat v one of a dog, say), software that tried to generate pictures of dogs or cats was nothing like as good. It was hard for a computer to work through a large number of training images in a database and then create a meaningful picture from them.

Mr Goodfellow turned to a familiar concept: competition. Instead of asking the software to generate something useful in a vacuum, he gave it another piece of software—an adversary—to push against. The adversary would look at the generated images and judge whether they were “real”, meaning similar to those that already existed in the generative software’s training database. By trying to fool the adversary, the generative software would learn to create images that look real, but are not. The adversarial software, knowing what the real world looked like, provides meaning and boundaries for its generative kin.

Today, GANS can produce small, postage-stamp-sized images of birds from a sentence of instruction. Tell the GAN that “this bird is white with some black on its head and wings, and has a long orange beak”, and it will draw that for you. It is not perfect, but at a glance the machine’s imaginings pass as real.

Although images of birds the size of postage stamps are not going to rattle society, things are moving fast. In the past five years, software powered by similar algorithms has reduced error rates in classifying photos from 25% to just a few percent. ▶▶

▶ Image generation is expected to make similar progress. Mike Tyka, a machine-learning artist at Google, has already generated images of imagined faces with a resolution of 768 pixels a side, more than twice as big as anything previously achieved.

Mr Goodfellow now works for Google Brain, the search giant's in-house AI research division (he spoke to *The Economist* while at OpenAI, a non-profit research organisation). When pressed for an estimate, he suggests that the generation of YouTube fakes that are very plausible may be possible within three years. Others think it might take longer. But all agree that it is a question of when, not if. "We think that AI is going to change the kinds of evidence that we can trust," says Mr Goodfellow.

Yet even as technology drives new forms of artifice, it also offers new ways to combat it. One form of verification is to demand that recordings come with their metadata, which show when, where and how they were captured. Knowing such things makes it possible to eliminate a photograph as a fake on the basis, for example, of a mismatch with known local conditions at the time. A rather *recherché* example comes from work done in 2014 by NVIDIA, a chip-making company whose devices power a lot of AI. It used its chips to analyse photos from the Apollo 11 Moon landing. By simulating the way light rays bounce around, NVIDIA showed that the odd-looking lighting of Buzz Aldrin's space suit—taken by some nitwits as evidence of fakery—really is reflected lunar sunlight and not the lights of a Hollywood film rig.

Amnesty International is already grappling with some of these issues. Its Citizen Evidence Lab verifies videos and images of alleged human-rights abuses. It uses Google Earth to examine background landscapes and to test whether a video or image was captured when and where it claims. It uses Wolfram Alpha, a search engine, to cross-reference historical weather conditions against those claimed in the video. Amnesty's work mostly catches old videos that are being labelled as a new atrocity, but it will have to watch out for generated video, too. Cryptography could also help to verify that content has come from a trusted organisation. Media could be signed with a unique key that only the signing organisation—or the originating device—possesses.

Some have always understood the fragility of recorded media as evidence. "Despite the presumption of veracity that gives all photographs authority, interest, seductiveness, the work that photographers do is no generic exception to the usually shady commerce between art and truth," Susan Sontag wrote in "On Photography". Generated media go much further, however. They bypass the tedious business of pointing cameras and microphones at the real world altogether. ■

Pesticides

Buzz kill

Two studies show neonicotinoids can harm some bees

NEONICOTINOIDS are so good at killing things which suck the sap and chew the flesh of crops that they have become the world's most widely used family of insecticides. For decades, though, there has been a fear that they harm non-crop-eating insects, too—in particular, bees.

The evidence for this has been mixed. Swedish research published in 2015—two years after the EU imposed a moratorium on the use of three popular neonicotinoids, clothianidin, imidacloprid and thiamethoxam—found that wild bees in fields sown with neonicotinoid-treated oilseed rape (canola) reproduced poorly. Yet other field studies have found no discernible effects on either wild-bee or honeybee populations. Two studies published in *Science* on June 30th add to the case against.

The first, by Ben Woodcock of the Centre for Ecology and Hydrology in Wallingford, Oxfordshire, and colleagues, was funded in part by Bayer CropScience, maker of clothianidin, and Syngenta, maker of thiamethoxam. The scientists, not the funders, controlled the design and execution of the research.

Neonicotinoids are frequently used to treat seeds rather than sprayed on to growing crops. This means the plants' edible tissues are laced with insecticide from the beginning, but the rest of the environment is less affected. Still, some of the insecticide gets into the plants' pollen and nectar, and

thus into bees. The Wallingford study compared bees that fed on rape plants grown from clothianidin- or thiamethoxam-treated seeds with those that fed on untreated plants.

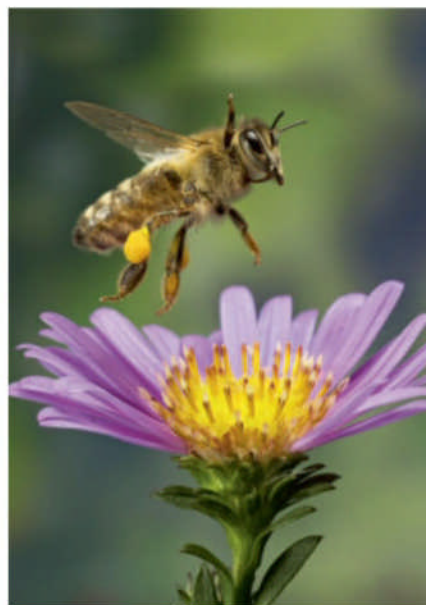
The research was carried out at 33 sites in Britain, Germany and Hungary. The team found that thiamethoxam-treated seeds appeared to have no significant effect on honeybee numbers. Honeybee colonies that fed on rape treated with clothianidin had fewer workers the year after the treatment in Britain and Hungary—but not in Germany. The different results in different countries could help to explain why past studies have reached inconsistent conclusions. The German bees at control sites where there were no insecticide-treated plants were healthier than the bees in the other countries' control groups. Rape pollen also made up less of their diet.

The researchers also measured the neonicotinoids in the nests of wild bees, where they found traces of a third common neonicotinoid, imidacloprid, too. Buff-tailed bumblebees (*Bombus terrestris*) with nests containing high total concentrations of these three pesticides produced fewer queens; red mason bees (*Osmia bicornis*) exposed to them made fewer eggs.

In the second study, Amro Zayed of York University in Toronto and his colleagues measured the insecticide inside 55 honeybee hives. They found bee colonies close to fields of maize grown from treated seeds were exposed to neonicotinoids for nearly 12 weeks of the bees' six-month active period. Much of the exposure, surprisingly, did not come directly from maize pollen but from that of wild flowers and weeds which picked the compounds up through the soil.

The researchers went on to feed ten colonies with an artificial pollen supplement, lacing the supply to half those colonies with clothianidin. After a 12-week regime that mimicked the pattern of exposure in the fields, the bees that had grown up in the hives getting spiked food had 23% shorter lifespans and were poorer foragers. Those hives also displayed a certain slovenliness, with adults less likely to remove pupae infected with disease. The team also found that a commonly used fungicide, boscalid, made neonicotinoids twice as toxic to honeybees.

Neonicotinoids have not been found responsible for big declines in bee populations, or widespread colony collapses. Bayer and Syngenta both argue the new results do not support a ban on the chemicals. But they do show that some neonicotinoids, at least, hurt some bees in some places and under some circumstances. Jeremy Kerr of the University of Ottawa, who reviewed the papers for *Science*, says they show that the insecticides increase the risks for bees of various species, acting as "a kind of reproductive roulette". ■



Or not to bee

Scientific piracy

Warning shots

Websites offering pirated papers are shaking up science

RECORD companies and film studios have had to learn to live with internet piracy. Despite their best attempts to close sites or co-opt them, pirated copies of their wares are easily available. Increasingly, the same is true of scientific papers. On June 21st a court in New York awarded Elsevier, a big scientific publisher, \$15m in damages for copyright infringement by Sci-Hub and the Library of Genesis, two websites that offer tens of millions of scientific papers and books for anyone to download.

Both sites are increasingly popular with scientists, who use them to dodge pricey paywalls and subscriptions. Alexandra Elbakyan, who founded Sci-Hub in 2011, did not turn up for the trial (nor did the people behind LibGen). But she did send a letter outlining her reasons for starting the site. While at university in Kazakhstan she needed access to hundreds of papers for her studies. But the only way to get them, she said, was to pay \$32 per paper, which she described as “just insane”. Having discovered other academics using the internet to trade copies of papers they could not pay for, she set up Sci-Hub to streamline the process.

An analysis of Sci-Hub’s server logs, published in *Science* in 2016, found its biggest users were people in Iran, India and China. Such middle-income countries do not qualify for the subsidies big publishers provide to users in the poorest nations, but their universities nevertheless may not be able to afford subscriptions. Not every downloader was cash-strapped, though. Americans were the fifth-biggest users.

Ms Elbakyan sees the website as a way to make the fruits of science available to researchers whose institutions cannot afford steep fees as well as to anyone else interested. She thinks of it as a radical version of “open access”, the idea that research—which is, after all, mostly funded through taxes—should be published in a way that makes it available to everyone. Unsurprisingly, publishers have little patience for such arguments. Elsevier argues that there is more to publishing than simply shovelling papers online and that work such as editing and arranging for reviews has to be paid for.

Both Sci-Hub and LibGen are based in Russia, beyond the reach of America’s courts. Nonetheless, the American Chemical Society, which publishes several journals, announced on June 28th that it had launched a lawsuit of its own. Provided Ms

Ukrainian cyber attack

Little green malware

A new piece of “ransomware” may not be what it seems

A LITTLE over a month ago a piece of malicious computer software called WannaCry spread around the world, freezing Chinese cash machines, trashing German railway timetables and causing chaos in British hospitals. On June 27th the world was treated to a re-run. As *The Economist* went to press, a different piece of malicious software, tentatively dubbed NotPetya, had infected tens of thousands of PCs.

This outbreak started in Ukraine, hitting the electricity network, shutting down payment terminals and even locking up radiation monitors at Chernobyl. But it soon spread. Those affected included Rosneft, a Russian oil firm, Maersk, a Danish shipping company, and Merck, an American drugmaker.

Analysis by Microsoft suggests NotPetya spread via accounting software, popular in Ukraine, that is made by a firm called M.E. Doc. The malware’s creators seem to have used the process by which M.E. Doc sends out updates to make NotPetya look legitimate. (M.E. Doc has said Microsoft is wrong, that it has not issued any updates since June 22nd, and that its updates are checked carefully.)

NotPetya’s odd name reflects the fact

that, on the surface at least, it appears to be a variant of Petya, a piece of “ransomware” that encrypts files on computers, leaving them unreadable gibberish unless users pay for a key to decrypt them. Like WannaCry, which was also a piece of ransomware, once NotPetya has infected a machine, it can spread to others on the same network using a vulnerability in Microsoft’s Windows operating system which was leaked last year from America’s National Security Agency.

But NotPetya now looks as if it is not ransomware. Its payment methods, in which people wanting to profit from ransoms might be expected to take a keen interest, are rudimentary and slapdash. And despite what it tells its victims, it seems designed to destroy data irrevocably rather than encrypt it reversibly. That has led security researchers to conclude that NotPetya’s real purpose is sabotage and chaos, not profit. The outbreak’s Ukrainian starting point means that Russia, or hackers sympathetic to its cause, look like prime suspects.

Whatever the truth, computer-security experts have for decades been exhorting users to back up their data frequently. That advice looks better than ever.



Heavy NotPety'ing

Elbakyan does not travel to America, that lawsuit seems equally unlikely to succeed.

Ms Elbakyan, though, may soon receive an invitation to visit America that does not come through legal channels: she has been tipped as a possible inaugural winner of the Disobedience Award, run by the Massachusetts Institute of Technology (MIT). The award was founded partly to commemorate Aaron Swartz, a former MIT stu-

dent who also believed that academic papers should be freely available. After downloading millions of them from JSTOR, a paywalled repository, he was charged with hacking. He killed himself in 2013, shortly before his trial. If she does win, Ms Elbakyan would presumably not attend the ceremony, although the magic of the internet might allow her to accept the gong remotely. ■



American society

The happy few

It is the upper middle class, not the 1%, who are the main beneficiaries—and the principal cause—of inequality in America

WHICH of America's social fault lines is most dangerous? Race remains as wide a rift as ever. Supporters of Bernie Sanders seethe at the richest 1%. Donald Trump won office exploiting the cultural chasm between an urban, cosmopolitan America and the rest. But if America's woes are rooted in the inaccessibility of the American dream, the increasingly impenetrable barrier around those who manage to achieve it is the place to probe.

That is where Richard Reeves, a scholar at the Brookings Institution, a think-tank, aims his fire in "Dream Hoarders": at America's richest fifth, its upper middle class. Having grabbed their piece of prosperity, the upper middle class are fighting like hell to keep it. They—which is to say you, in all probability—are the problem.

Mr Reeves, who is British and recently emigrated to America, is perhaps better positioned than most to recognise class barriers for what they are. Whereas worry over inequality commonly focuses on eye-popping growth in incomes among the very rich, he notes that it is this top 20% as a whole which has pulled away. Between 1979 and 2013, average incomes for the bottom 80% of American households rose by 42% (adjusted for price changes). By contrast, those of the next richest 19% rose by 70%, and of the top 1% by 192%. This upper middle class stands apart from the rest of America in a number of ways: in terms of wealth and incomes, in educational attain-

Dream Hoarders: How the American Upper Middle Class Is Leaving Everyone Else in the Dust, Why That Is a Problem, and What to Do about It. By Richard Reeves. *Brookings Institution Press*; 196 pages; \$24

ment—perhaps the most salient of status markers—and broader health.

The irony of America's class system is its foundation in a culture of meritocracy. The upper middle class believe they deserve their good fortune. Its members are well-educated and hard-working, prudent savers and attentive parents. Yet meritocracy ultimately undermines equality of opportunity because the successful are best placed to pass on their high status. They hand on good genes, rear their children in homes rich in human capital, and provide the best of every educational opportunity.

It is hard to fault the well-off for nurturing their children, but efforts to protect their status amount to opportunity hoarding. The upper middle class fight to restrict house building in their well-groomed neighbourhoods, thus making cities unaffordable for most Americans. They lobby for tax benefits for higher education and home ownership, which disproportionately benefit the upper middle class; Mr Reeves cites figures from the Congressional Budget Office, which show that the top 20% of American households receive tax

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benefits worth nearly \$450bn; benefits for the bottom 40% are roughly a third of that. The 20% arm-twist elite universities into accepting their children, and draw on their network of successful friends and colleagues to place their offspring in the desirable internships and jobs that are the first rung on the ladder to success.

The result, Mr Reeves argues, is a chasm between the upper middle class and the bottom 80% of households, which makes a mockery of America's vision of itself as a land of opportunity. More than 40% of the children of the wealthiest 20% of households will themselves end up among the wealthiest 20%. And nearly 50% of those born to fathers who are among the best educated 20% will themselves end up among the best educated 20%. This gets to the brutal heart of Mr Reeves's argument. In his fourth chapter he turns to the camera, so to speak, to address his readers directly, saying: for American society to work as it should, your children, some of them anyway, must be downwardly mobile. Those who consider themselves exemplars of American achievement (and he includes himself among the offenders) are in fact economic villains.

It is a stinging point, and well delivered. "Dream Hoarders" is a slim and engaging book which can be read in an afternoon, but whose message lingers for longer. But it is hardly the final word on American inequality. It is not quite right to lump the top 1% in with the rest of the best-off quintile. The top 1% has done better than the top 20% as a whole (as Mr Reeves acknowledges), the top 0.1% better still, and so on. Since around 2000 the incomes of the upper middle class, excluding the top 1%, have not grown by much, and the income premium earned by those with university degrees has plateaued. Rising inequality resembles the sort described by Thomas ▶▶

▶ Piketty rather than Mr Reeves, in which the concentration of wealth among a small group of plutocrats squeezes the upper middle class: the patrimonial middle class whose prosperity gives them a crucial stake in political stability.

That, in turn, may help explain why the upper middle class is so resistant to rolling back privileges. Many of the mechanisms through which the protected class defends itself are sources of a sense of precarity. The value added by an Ivy League university relative to a high-quality public university may be small, but desperate upper-middle-class families may feel they have to find the resources to pay for the more

expensive option. High house prices in prosperous cities shut out those outside the protected class—and simultaneously add to the pressure on those attempting to stay on the rich side of the great divide.

Yet among Mr Reeves's most striking findings about relative intergenerational mobility is that it seems not to change over time. It is not the case, in other words, that the children of the poor once had a good shot at joining the ranks of the rich, but no longer do. The protections erected by the upper middle class mostly raise the share of income captured by the protected class, at the cost of both a smaller share for others and less growth overall. That does not

mean that Mr Reeves's proposals to ameliorate the problem are unwelcome. Opening up new housing construction, ending regressive tax subsidies for the rich and investing in better teachers for the poor would improve both the size and distribution of economic gains in society. "Dream Hoarders" implies that lower inequality would be valuable whether or not mobility changes. The great divide between rich and poor creates an incentive to work hard, but also to reinforce the "glass floor" keeping the well-off in comfort. Its most controversial conclusion is that dulling those incentives could be just the thing a divided society needs. ■

Fiction

Moving parts

A State of Freedom. By Neel Mukherjee. *Chatto & Windus; 275 pages; £16.99. To be published in America by Norton in January*

MIGRATION is generally understood in terms of geography: relocating from one region to another. But what impels those who move, at least when it is voluntary, is often a desire to migrate between social classes. It is this particular aspect of migration that is at the heart of Neel Mukherjee's "A State of Freedom", his follow-up to "The Lives of Others", which was shortlisted for the Man Booker prize for fiction in 2014.

Mr Mukherjee uses an unconventional structure—five loosely connected stories of varying length, forming a novel—to address his themes of movement and class. In one, a London-settled Indian returns to his parent's home in Mumbai. His story revolves around food: his love for it, a recipe book he is writing, his parents' insistence on overfeeding him. The tension arises from his attempts to strike up a rapport with Renu, the family's cook, which his mother considers unwise—servants must not start thinking of themselves as equals.

In another, Mr Mukherjee relates the biography of Milly, the maid in the same home. A member of the "backward castes", Milly was raised in the Maoist-infested east of India, from where she was dispatched at the age of eight to work in a nearby town. Eventually she ends up in Mumbai, marries a restaurant-worker, and together they earn enough to send their children to private school. That is mobility of a kind, but it is generational rather than generational.

On its own, each story contains ample ironies and insight. The Londoner's Mumbai home is in a neighbourhood

where proximity to the sea adds a hefty premium to house prices. Across the street is the slum in which Milly and Renu live, abutting the water, where the sea is the cause of flooding and disease. Taken together, the narratives cohere to expose the contrasts between lives lived in the same places. Hunger is endemic in one world and unknown in another; violence and tragedy are casually borne by some while simple words cause disagreements among others.

Mr Mukherjee has a spare writing style, and likes to use simple words and straightforward sentences. (An experiment in free-flowing, unpunctuated prose in the final, shortest story does not work.) He is too subtle to note these contrasts explicitly. Rather he does what good novelists should, which is to hold up a mirror to society and remind people that what passes for normal is often barbaric. His quiet observation is effective—and damning.



Changing the currency

Dial M for money

Before Babylon, Beyond Bitcoin: From Money that We Understand to Money that Understands Us. By David Birch. *London Publishing Partnership; 264 pages; £22.50*

PEOPLE use money every day and yet struggle to understand it. The economic experiment known as monetarism—limiting the supply of money in order to control inflation—was abandoned when it became clear it was impossible to establish a precise definition of the money supply. The idea of negative interest rates, introduced by some modern central banks, puzzles those who think that savers should be rewarded for thrift.

"Before Babylon, Beyond Bitcoin" by David Birch, a consultant, offers a broad historical overview on the nature of this essential economic instrument. His underlying thesis is that money has evolved over the ages to suit the needs of society and the economy. Often these changes have occurred because previous forms of money were too inflexible. In the Middle Ages, metal coins were supplemented by bills of exchange to make long-term trade easier. Credit and debit cards have replaced the cumbersome process of clearing cheques.

Money may be about to change again. The author thinks cash will and should dwindle away. The future belongs, not to plastic cards, but to mobile phones. In Kenya, hundreds of businesses, including the leading utilities, accept payments through a mobile-based system known as M-Pesa (*pesa* means "money" in Kiswahili). More than two-thirds of adults use it. "With payment cards, you could pay retailers. With mobile phones, people can pay each other. And that changes everything," he writes.

Furthermore, the future may see "frictionless" shopping. Hire an Uber car and there is no transaction with the driver. The ▶▶

app already has your credit-card details; when you leave the car, you simply shut the door and then get an e-mail with details of the bill. The same may apply in supermarkets in future. A reader will record the details of your purchases as you leave the shop and charge them to your account.

All this is plausible. The question is who will control this electronic money. The author thinks that communities rather than countries will be the natural currency issuers in the future. These communities could be based on cities or on affinity groups such as a shared religion or even enthusiasm for a sports team.

All these competing currencies would have different values. In theory, there would be no problem with this. The software in mobile phones and in the retailer's payments system could instantly work out the correct exchange rate and adjust the bill accordingly. But money has to perform as both a means of exchange and a store of value. Would that be the case if there were a vast number of competing and unofficial electronic currencies?

The temptation for some communities to keep issuing money would certainly be great; those electronic currencies might suffer rapid depreciation. Some currencies might be a lot less liquid (harder to get rid of) than others. There might even be a spread—a gap between the prices at which people will buy and sell. Retailers would be reluctant to accept such currencies. At best, there could be a lot of arguments with customers. Nor will central banks willingly lose control of the money supply, with all the potential adverse effects of economic management. The future may be mobile but it will not be as anarchic as the author thinks. ■

Sex differences

The way we are

Inferior: How Science Got Women Wrong.

By Angela Saini. *Beacon Press*; 280 pages; \$25.95. *Fourth Estate*; £12.99

FOR much of history women were treated as men's intellectual inferiors. Victorians believed that women's reproductive health would be damaged if they strained their brains at university. A century ago few countries allowed women to vote. In 2005 Lawrence Summers, then president of Harvard University, got into trouble for suggesting that one reason for the scarcity of women among scientists at elite universities may be due to "issues of intrinsic aptitude". Some scientists rushed to his defence, citing research that suggested that this was true.



More than a microscopic mind

"Inferior" by Angela Saini, a British journalist and broadcaster (who has written in the past for *The Economist*), is an illuminating account of how science has stoked the views that innate preferences and abilities differ between men and women. Ms Saini unpicks some of the most influential studies that have framed women as gentle, caring and empathetic and men as strong, rational and dominant—differences attributed to biology and evolution. A striking pattern emerges: almost all of the prominent scientists behind these studies are men, whereas much of the growing, more recent research that disputes them is done by women.

Designating women as the weaker sex is biologically unfair. The natural sex ratio at birth is skewed in favour of boys, but they are more likely than girls to be born preterm and die in their first years of life. Women live longer than men and recover faster when they fall ill. Science is yet to find out why.

Men's brains are 8-13% bigger than women's. In the 19th century that was seen as proof that men were the cleverer sex. Since then, reams of research have shown that differences between the sexes in cognitive abilities or motor skills are very small or non-existent. When differences are found, they are not always in favour of the same sex and may shift over time. Girls in some countries are now better at maths than boys, for example. In America the ratio of boys to girls among children who are exceptionally talented at maths has plummeted since the 1970s. The brain, like other organs, is simply proportionate in size to men's bigger bodies.

Yet scientists keep searching for sex differences in the brain, these days with imaging machines that measure brain activity. This line of research relies on human eyes looking for patterns, and also on imperfect

technology (scans of a dead fish have shown dots of "activity" in its brain). Such studies grab headlines when they juxtapose cherry-picked images of male and female brains that look dramatically different from each other. Any links to behaviours or proclivities are purely speculative, yet the media like the fiction.

In fact, no two brains are the same: each is a mosaic of features, some of which are more common in men and others in women. According to one analysis of studies on sex differences in the brain, the proportion of people whose brains had purely masculine or feminine features was between zero and 8%.

"Inferior" rounds up compelling evidence against several other stereotypes that cast women as natural caregivers, sexually coy and dependent for survival on men because that is how evolution supposedly intended it. Observations of primates and isolated tribes suggest that humans' patriarchal order may have evolved by accident rather than out of evolutionary necessity. From there, it is easy to see how social norms have ensured that men and women are groomed into separate, gendered roles. By giving dolls to girls and trucks to boys, notes Ms Saini, "we feed our babies fantasies in pink or blue." Infants have no innate preference for either. But they respond positively to what makes their caregivers happy.

Women have come a long way since the days when they were rarely seen in universities or laboratories. "Inferior" is the story of how science made the journey tougher—until now. ■

The Brooklyn Bridge

American icon

Chief Engineer: Washington Roebling, the Man Who Built the Brooklyn Bridge. By Erica Wagner. *Bloomsbury*; 365 pages; \$28 and £25

BRIDGE, Erica Wagner says in a lovely turn of phrase, "is a place that is no place at all, that is in itself between". People build bridges, physically and metaphorically, to connect places and people. "Chief Engineer" is Ms Wagner's solidly constructed biography of Washington Roebling, the man who joined Brooklyn to Manhattan by the grace of a steel and concrete arc held aloft by a filigree of wire. It is a book about connection, but also about disconnection—the lifelong divide between Roebling and his father, John Roebling, also a celebrated engineer, and the son's struggle to detach himself from the elder man's influence. ▶▶

► Ms Wagner, the former literary editor of the *Times* and an occasional reviewer for this newspaper, has previously written about that tightly connected, then tragically unconnected, couple Ted Hughes and Sylvia Plath. Here she traces the trajectory of a man who, despite an abusive father, service in a traumatic civil war and flagging health, never lost his capacity for hard work, inventiveness (much of the Brooklyn Bridge engineering was on-the-fly problem-solving) and unwavering sense of responsibility. “You can’t slink out of life,” he told a journalist.

Trained in engineering and architecture, John Roebling emigrated from Saxony to western Pennsylvania in 1831. He invented a process for making wire rope, but was most renowned for his suspension bridges, including masterful spans across the Niagara gorge, the Allegheny river at Pittsburgh and the Ohio river at Cincinnati. The brilliant public figure, malignant in private, loomed over a household of gloom, silent meals and explosive abuse. The documentation, pulled by the author from a recently rediscovered memoir by Washington Roebling, is chilling. “To fell my mother with the blow of a fist was nothing uncommon.” A summons to his father’s office presaged a savage beating. Washington called it the “execution room”.

When he attended the Rensselaer Institute, where he was deeply unhappy, his father doled out a miserly allowance, resulting in “three and a half years of starvation”. Even as an adult working with his father on engineering projects, Washington felt crushed. Decisions were absolute. Discussion forbidden.

In 1857, John Roebling proposed a “suspension bridge crossing the East River...at such an elevation as will not impede navigation.” The bridge, a technical tour de force, would unite Brooklyn, then America’s third-largest city, with its sibling, Manhattan, the first. Plans were drawn, but construction on the bridge hadn’t started in 1869 when the elder Roebling’s toes were crushed in a waterfront accident. He died of tetanus soon after, leaving his son to succeed him as chief engineer. The burden of the “most stupendous engineering structure of the age”, was his alone. He was 32.

The bridge took 14 years to build. It cost \$15m (equivalent to \$380m today), at least 20 workmen their lives and Roebling his health. Severe decompression sickness from being in the caissons frequently confined him to a sickroom during construction. His wife, Emily, became his amanuensis, often smoothing the way through the political thickets of dealing with the board. (Though rightly admiring, Ms Wagner suggests rumours of the extraordinary Emily as the brains behind the project may be a bridge too far.)

When opened in 1883, the Brooklyn Bridge was the longest suspension bridge

in the world. Made in America with immigrant intellect and labour, it embodied the energy and inventiveness of a New World nation in ascendancy. Roebling died in 1926 at the age of 89. He chose to be buried in Cold Spring, New York, beside Emily, instead of the Trenton plot where his father lay, because, he explained, “I would be completely overshadowed by his big monument and name.” The shadow was long after all, the divide unbridged. ■

Hanoverian princesses

Pretty precocious

The busy lives of 18th-century royalty

CAROLINE OF ANSBACH, Augusta of Saxe-Gotha, Charlotte of Mecklenburg-Strelitz—who? Charlotte (played by Helen Mirren) may ring a bell as the queen in Nicholas Hytner’s 1994 film, “The Madness of King George”. But the others?

These princesses were imported from Germany to provide heirs for the Hanoverian dynasty which succeeded to the British throne in 1714. Caroline was the wife of George II, Augusta of his son Frederick, and Charlotte (pictured) of the mad king, George III. Their chief selling point was their Protestantism and their fertility, both crucial to the nation’s harmony after the civil and religious conflicts and reproductive failures of the Stuarts before them.

“Enlightened Princesses”, a new exhibition at Kensington Palace in London, shows that their significance reached beyond Protestantism and progeny. Intellectually curious, they threw themselves into

British life as collectors and patrons of the sciences, arts and music, and promoters of trade and manufacturing. In the process they reshaped the monarchy. As the queues form elsewhere in the building for an exhibition about Princess Diana and fashion, “Enlightened Princesses” shows where it all started.

This essentially intimate exhibition reflects how cannily these women walked the line between private and public. Their portraits meet the visitor without ceremony—plenty of silk and lace, even a touch of ermine, but the grandeur, the symbolism and allegory of their more formal portraits (discussed, among other things, in the accompanying book), are absent. The same informality goes for the paintings of the royal children, a little untidy some of them, others busy with their books and instruments, their drawings and bits of handiwork nearby.

These are some of the most charming and eye-catching exhibits. But across the room something different catches the eye—a book open at a coloured illustration of smallpox pustules. It is one of the places where the show shifts from private to public. For although it was Lady Mary Wortley Montagu who first introduced the inoculation procedure to Western medicine, it was Caroline who, in the new spirit of scientific empiricism, arranged experiments, and who, by inoculating her own children, spread the practice more widely. This was part of the approach taken by all of them to the question of public health and welfare—particularly of women and children. It led to patronage of a mass of hospitals, orphanages and children’s charities, among them Thomas Coram’s Foundling Hospital. Some of the foundlings’ tokens—a notched coin, a little padlock, a coral necklace—are touchingly displayed here.

These were solid projects. But the exhibition captures something else too: an enthusiasm, an energy in these women, that seems at times almost outlandish. As the visitor moves among their books and engravings, their landscape designs and botanical drawings, the portraits of the men they knew and admired—including Sir Isaac Newton, George Frideric Handel and William Hunter, whose book on the uterus lies open at a minutely detailed full-term fetus in the womb—there is a sense that there was nothing they were unwilling to try. People laughed at the hermitage and Merlin’s cave that Caroline built in her gardens at Richmond, and at Augusta’s mosque and Alhambra in her gardens at Kew. In fact there are walls here covered with the satires and caricatures they attracted generally.

The princesses may have been a little obsessed, but at least they were intellectually alive—and they deserve to be remembered for more than their link to mad King George. ■



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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 [†]	2017 [†]		latest	latest		2017 [†]	latest 12 months, \$bn			% of GDP 2017 [†]	% of GDP 2017 [†]
United States	+2.0 Q1	+1.2	+2.2	+2.2 May	+1.9 May	+2.2	4.3 May	-449.3 Q1	-2.6	-3.5	2.20	-	-
China	+6.9 Q1	+5.3	+6.7	+6.5 May	+1.5 May	+2.1	4.0 Q1 [§]	+170.1 Q1	+1.6	-4.1	3.49 ^{§§}	6.80	6.65
Japan	+1.3 Q1	+1.0	+1.4	+5.7 Apr	+0.4 Apr	+0.6	2.8 Apr	+188.4 Apr	+3.6	-5.1	0.05	112	103
Britain	+2.0 Q1	+0.7	+1.6	-0.8 Apr	+2.9 May	+2.7	4.6 Mar ^{††}	-115.7 Q4	-3.4	-3.6	1.06	0.77	0.75
Canada	+2.3 Q1	+3.7	+2.2	+5.4 Mar	+1.3 May	+1.9	6.6 May	-48.4 Q1	-2.8	-2.7	1.62	1.31	1.31
Euro area	+1.9 Q1	+2.3	+1.8	+1.4 Apr	+1.4 May	+1.6	9.3 Apr	+384.8 Apr	+3.0	-1.4	0.37	0.88	0.90
Austria	+2.3 Q1	+5.7	+1.8	+3.3 Apr	+1.9 May	+1.9	5.5 Apr	+6.6 Q4	+2.3	-1.1	0.63	0.88	0.90
Belgium	+1.6 Q1	+2.6	+1.5	+2.2 Apr	+1.9 May	+2.2	6.8 Apr	-2.0 Dec	+1.0	-2.3	0.71	0.88	0.90
France	+1.1 Q1	+1.9	+1.4	+0.6 Apr	+0.8 May	+1.3	9.5 Apr	-23.7 Apr	-1.2	-3.1	0.72	0.88	0.90
Germany	+1.7 Q1	+2.4	+1.8	+2.8 Apr	+1.5 May	+1.7	3.9 Apr [†]	+272.5 Apr	+8.1	+0.5	0.37	0.88	0.90
Greece	+0.8 Q1	+1.8	+1.0	+1.1 Apr	+1.2 May	+1.3	22.5 Mar	-0.7 Apr	-1.1	-1.3	5.50	0.88	0.90
Italy	+1.2 Q1	+1.8	+1.0	+1.0 Apr	+1.2 Jun	+1.5	11.1 Apr	+45.5 Apr	+2.2	-2.3	2.02	0.88	0.90
Netherlands	+3.2 Q1	+1.7	+2.2	+2.3 Apr	+1.1 May	+1.3	6.1 May	+68.4 Q1	+8.8	+0.7	0.54	0.88	0.90
Spain	+3.0 Q1	+3.3	+2.8	-10.2 Apr	+1.5 Jun	+2.1	17.8 Apr	+23.4 Mar	+1.6	-3.3	1.45	0.88	0.90
Czech Republic	+3.9 Q1	+5.4	+3.0	-2.5 Apr	+2.4 May	+2.3	3.3 Apr [†]	+1.4 Q1	+0.9	-0.5	0.90	23.1	24.5
Denmark	+3.1 Q1	+2.4	+1.5	-5.6 Apr	+0.8 May	+1.1	4.3 Apr	+25.2 Apr	+7.8	-0.6	0.58	6.54	6.73
Norway	+2.6 Q1	+0.9	+1.8	-5.1 Apr	+2.1 May	+2.4	4.6 Apr ^{††}	+22.4 Q1	+5.5	+4.1	1.55	8.46	8.51
Poland	+4.4 Q1	+4.5	+3.6	+9.1 May	+1.9 May	+2.0	7.4 May [§]	-1.2 Apr	-0.8	-2.8	3.29	3.73	4.02
Russia	+0.5 Q1	na	+1.4	+5.7 May	+4.1 May	+4.2	5.2 May [§]	+34.9 Q1	+2.8	-2.2	8.13	59.4	64.7
Sweden	+2.2 Q1	+1.7	+2.6	+0.8 Apr	+1.7 May	+1.6	7.2 May [§]	+22.0 Q1	+4.8	+0.3	0.49	8.57	8.55
Switzerland	+1.1 Q1	+1.1	+1.4	-1.3 Q1	+0.5 May	+0.5	3.2 May	+73.6 Q1	+9.7	+0.2	-0.07	0.96	0.98
Turkey	+5.0 Q1	na	+2.9	+5.9 Apr	+11.7 May	+10.2	11.7 Mar [§]	-33.2 Apr	-4.5	-2.4	10.52	3.52	2.90
Australia	+1.7 Q1	+1.1	+2.6	-0.8 Q1	+2.1 Q1	+2.2	5.5 May	-25.0 Q1	-1.5	-1.8	2.46	1.31	1.36
Hong Kong	+4.3 Q1	+2.9	+3.0	+0.2 Q1	+2.0 May	+1.6	3.2 May ^{††}	+14.8 Q1	+6.6	+1.5	1.40	7.80	7.76
India	+6.1 Q1	+7.2	+7.2	+3.1 Apr	+2.2 May	+4.6	5.0 2015	-15.2 Q1	-1.2	-3.2	6.50	64.6	67.9
Indonesia	+5.0 Q1	na	+5.2	+6.4 Apr	+4.3 May	+4.2	5.3 Q1 [§]	-14.6 Q1	-1.7	-2.0	6.79	13,328	13,178
Malaysia	+5.6 Q1	na	+5.2	+4.1 Apr	+3.9 May	+4.0	3.4 Apr [§]	+6.6 Q1	+1.4	-3.0	3.90	4.30	4.07
Pakistan	+5.7 2017**	na	+5.7	+9.8 Apr	+5.0 May	+4.8	5.9 2015	-7.2 Q1	-3.1	-4.5	8.93 ^{†††}	105	105
Philippines	+6.4 Q1	+4.5	+6.5	+5.9 Apr	+3.1 May	+3.1	5.7 Q2 [§]	-0.4 Mar	+0.4	-2.8	4.63	50.5	46.9
Singapore	+2.7 Q1	-1.3	+2.9	+5.0 May	+1.4 May	+1.3	2.2 Q1	+59.0 Q1	+19.1	-1.0	2.03	1.38	1.36
South Korea	+3.0 Q1	+4.3	+2.7	+1.7 Apr	+2.0 May	+1.9	3.6 May [§]	+93.0 Apr	+6.0	+0.7	2.18	1,143	1,171
Taiwan	+2.6 Q1	+3.8	+2.4	+0.8 May	+0.6 May	+0.5	3.8 May	+69.1 Q1	+12.8	-0.9	1.06	30.4	32.4
Thailand	+3.3 Q1	+5.2	+3.5	-1.7 Apr	nil May	+0.8	1.3 Apr [§]	+42.3 Q1	+11.8	-2.4	2.35	34.0	35.3
Argentina	+0.3 Q1	+4.3	+2.5	-2.5 Oct	+24.0 May [†]	+24.3	9.2 Q1 [§]	-16.8 Q1	-2.7	-5.9	na	16.3	15.0
Brazil	-0.4 Q1	+4.3	+0.6	-4.5 Apr	+3.6 May	+4.1	13.6 Apr [§]	-18.1 May	-1.3	-7.7	10.01	3.31	3.32
Chile	+0.1 Q1	+0.7	+1.5	-4.2 Apr	+2.6 May	+2.8	6.7 Apr ^{§††}	-5.0 Q1	-1.4	-2.7	4.08	663	674
Colombia	+1.1 Q1	-0.9	+2.0	-6.8 Apr	+4.4 May	+4.1	8.9 Apr [§]	-11.9 Q1	-3.6	-3.2	6.48	3,026	3,013
Mexico	+2.8 Q1	+2.7	+1.9	-4.4 Apr	+6.2 May	+5.5	3.5 May	-22.0 Q1	-2.5	-2.3	6.71	17.9	18.9
Venezuela	-8.8 Q4~	+6.2	-7.0	na	na	+591	7.3 Apr [§]	-17.8 Q3~	-0.6	-19.6	11.02	9.99	9.99
Egypt	+3.8 Q4	na	+3.5	+12.9 Apr	+29.7 May	+22.5	12.0 Q1 [§]	-18.0 Q1	-5.8	-9.3	na	18.1	8.77
Israel	+3.9 Q1	+1.2	+3.7	+4.2 Apr	+0.8 May	+1.0	4.5 May	+11.7 Q1	+3.9	-2.5	2.06	3.51	3.88
Saudi Arabia	+1.7 2016	na	-0.5	na	-0.7 May	+2.2	5.6 2016	-24.9 Q4	+1.3	-7.4	3.68	3.75	3.75
South Africa	+1.0 Q1	-0.7	+1.0	-0.2 Apr	+5.4 May	+5.7	27.7 Q1 [§]	-7.9 Q1	-3.5	-3.2	8.68	13.0	15.2

Source: Haver Analytics. **% change on previous quarter, annual rate. [†]The Economist poll or Economist Intelligence Unit estimate/forecast. [§]Not seasonally adjusted. ^{††}New series. ~2014 **Year ending June. ^{†††}Latest 3 months. ^{††††}3-month moving average. ^{§§§}5-year yield. ^{†††††}Dollar-denominated bonds.

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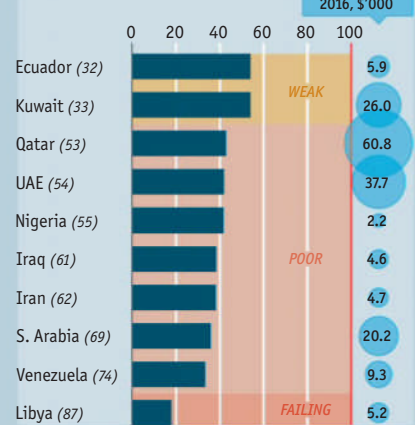
Markets

	Index Jun 28th	% change on one week	% change on Dec 30th 2016	
			in local currency terms	in \$ terms
United States (DJIA)	21,454.6	+0.2	+8.6	+8.6
China (SSEA)	3,323.2	+0.5	+2.3	+4.5
Japan (Nikkei 225)	20,130.4	nil	+5.3	+9.5
Britain (FTSE 100)	7,387.8	-0.8	+3.4	+8.3
Canada (S&PTX)	15,355.6	+1.4	+0.4	+3.1
Euro area (FTSE Euro 100)	1,208.0	-0.6	+8.6	+17.0
Euro area (EURO STOXX 50)	3,535.7	-0.5	+7.5	+15.8
Austria (ATX)	3,095.1	-0.5	+18.2	+27.3
Belgium (Bel 20)	3,839.5	-0.8	+6.5	+14.7
France (CAC 40)	5,252.9	-0.4	+8.0	+16.4
Germany (DAX)*	12,647.3	-1.0	+10.2	+18.7
Greece (Athex Comp)	822.6	-0.1	+27.8	+37.7
Italy (FTSE/MIB)	21,047.8	-0.1	+9.4	+17.9
Netherlands (AEX)	516.4	-0.8	+6.9	+15.1
Spain (Madrid SE)	1,080.6	-0.3	+14.5	+23.4
Czech Republic (PX)	977.2	-1.8	+6.0	+17.3
Denmark (OMXCX)	900.9	-1.8	+12.8	+21.5
Hungary (BUX)	35,456.0	-1.4	+10.8	+19.2
Norway (OSEAX)	767.8	nil	+0.4	+2.2
Poland (WIG)	61,411.7	+0.4	+18.7	+32.8
Russia (RTS, \$ terms)	1,002.8	+3.0	-13.0	-13.0
Sweden (OMXS30)	1,631.0	-0.7	+7.5	+13.9
Switzerland (SMI)	9,076.7	+1.0	+10.4	+16.9
Turkey (BIST)	100,617.7	+1.2	+28.8	+28.8
Australia (All Ord.)	5,796.1	+1.6	+1.3	+7.3
Hong Kong (Hang Seng)	25,683.5	nil	+16.7	+16.0
India (BSE)	30,834.3	-1.4	+15.8	+21.7
Indonesia (JSX)	5,829.7	+0.2	+10.1	+11.3
Malaysia (KLSE)	1,771.2	-0.2	+7.9	+12.6
Pakistan (KSE)	46,332.3	+1.9	-3.1	-3.5
Singapore (STI)	3,215.7	+0.4	+11.6	+16.6
South Korea (KOSPI)	2,382.6	+1.1	+17.6	+24.2
Taiwan (TWI)	10,390.6	+0.4	+12.3	+19.0
Thailand (SET)	1,582.6	+0.4	+2.6	+8.0
Argentina (MERV)	21,394.3	+3.8	+26.5	+22.5
Brazil (BVSP)	62,018.0	+2.1	+3.0	+1.4
Chile (IGPA)	23,784.7	-0.1	+14.7	+15.9
Colombia (IGBC)	10,763.5	+0.9	+6.5	+5.7
Mexico (IPC)	49,340.1	+0.7	+8.1	+24.3
Venezuela (IBC)	122,199.9	+0.6	+285	na
Egypt (EGX 30)	13,395.8	+0.1	+8.5	+8.7
Israel (TA-100)	1,290.1	-0.5	+1.0	+10.9
Saudi Arabia (Tadawul)	7,425.7	+1.2	+2.6	+2.6
South Africa (JSE AS)	51,596.8	+0.4	+1.9	+7.2

Resource-governance index

Wealth does not necessarily mean good management. According to the Natural Resource Governance Institute's index, six of the 13 high-income countries studied failed to achieve good or satisfactory ratings for the quality of their natural-resource governance. Scores are based on a framework of 133 questions, including ones on extraction rights and corruption. The majority of the members of OPEC have poor or failing resource regimes. Saudi Arabia's score is dragged down in part by murkiness surrounding its state oil firm, Saudi Aramco. Sovereign wealth funds are another problem area. The Qatar Investment Authority is ranked as one of the worst-governed of the 33 funds studied.

Selected OPEC members, Mar-Dec 2016
100=best governance, (rank out of 89)



Sources: IMF; Natural Resource Governance Institute

Other markets

	Index Jun 28th	% change on one week	% change on Dec 30th 2016	
			in local currency terms	in \$ terms
United States (S&P 500)	2,440.7	+0.2	+9.0	+9.0
United States (NAScomp)	6,234.4	nil	+15.8	+15.8
China (SSEB, \$ terms)	325.9	+0.6	-4.7	-4.7
Japan (Topix)	1,614.4	+0.2	+6.3	+10.6
Europe (FTSEurofirst 300)	1,518.6	-0.6	+6.3	+14.5
World, dev'd (MSCI)	1,931.7	+0.6	+10.3	+10.3
Emerging markets (MSCI)	1,012.1	+0.6	+17.4	+17.4
World, all (MSCI)	468.5	+0.6	+11.0	+11.0
World bonds (Citigroup)	927.5	+0.3	+4.9	+4.9
EMBI+ (JPMorgan)	824.5	+0.2	+6.8	+6.8
Hedge funds (HFRX)	1,234.7 [§]	nil	+2.6	+2.6
Volatility, US (VIX)	10.0	+10.8	+14.0 (levels)	
CDSs, Eur (iTRAXX) [†]	54.3	-2.1	-24.7	-18.9
CDSs, N Am (CDX) [†]	60.1	-4.4	-11.3	-11.3
Carbon trading (EU ETS) €	4.9	+1.4	-24.9	-19.1

Sources: IHS Markit; Thomson Reuters. [†]Total return index. [‡]Credit-default-swap spreads, basis points. [§]June 27th.

Indicators for more countries and additional series, go to: Economist.com/indicators

The Economist commodity-price index
2005=100

	Jun 20th	Jun 27th*	% change on	
			one month	one year
Dollar Index				
All Items	141.2	140.1	-1.5	+0.4
Food	153.4	149.8	-2.3	-9.8
Industrials				
All	128.6	130.0	-0.5	+16.2
Nfa [†]	129.4	130.7	-2.6	+9.9
Metals	128.2	129.6	+0.5	+19.1
Sterling Index				
All items	203.5	199.4	-0.8	+4.7
Euro Index				
All items	157.8	154.3	-2.4	-1.7
Gold				
\$ per oz	1,242.8	1,247.4	-1.2	-4.9
West Texas Intermediate				
\$ per barrel	43.5	44.2	-10.9	-7.5

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. ^{*}Provisional [†]Non-food agricultural.

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The mirror and the stars

Jerry Nelson, astronomer and telescope designer, died on June 10th, aged 73

WHEN Galileo, in 1609, first raised his 37mm telescope to the Moon, he could not believe what he saw. That supposedly smooth surface was full of “cavities and prominences”, like the face of a smallpox victim. And he had seen them with an instrument he had devised himself, trying out concave and convex lenses and, in the end, grinding his own on a rotary lathe. It was hard, noisy work. But scientists in that age accepted that they needed to be engineers and craftsmen, as well as jugglers of equations.

When Jerry Nelson in 1990 saw the first light-capture by one of the twin ten-metre telescopes at the Keck Observatory, housed in two great domes on the dormant volcano of Mauna Kea in Hawaii, he too could not believe what he saw: a pin-wheel galaxy, NGC 1232, 65m light-years away, sharper than ever before. The telescope was not yet finished, with only a quarter of its light-capturing capacity up and running, yet already the image made him jump up and down with excitement. And he too had seen it with an instrument he had devised himself.

Galileo had defied the limits of the human eye; Mr Nelson defied the limits of those old dinosaurs, monolithic telescopes, with one huge heavy mirror trained on the heavens. He grew up with

the Hale telescope on Mount Palomar in California, with a five-metre mirror that seemed to represent the limit of telescopic power. Discs wider than that distorted under their own weight and the variations of night-time temperature. So this was his challenge when, from 1985 to 2012, he was chief designer of the Keck telescope: how to build a mirror twice as big as Hale’s, so that scientists could see farther into space and, therefore, farther back in time—as far, eventually, perhaps, as the beginning.

He had always loved tinkering with things, subliminally absorbing his machinist father’s fascination with the properties of metals. At Caltech, having switched from maths to physics to study pulsars, he also spent hours in the campus workshop learning to weld and use a lathe, and helped to build a 1.5-metre telescope from first principles. Dreaming was all very well, he would say, and the world was full of dreamers; but if you wanted a car that could fly and surf, you should study the mechanics and make it yourself.

When it came to telescopes, his idea—refined in papers as early as 1977—was to abandon one concave blank of glass for many interlocking mirror tiles, subtly shaped and angled, which would combine to make one surface. These were so much lighter (though still weighing half a tonne

each), that they greatly reduced gravitational distortion. Computers would control them, making sure they stayed in correct relation to one another. He estimated he would need, for Keck, 36 such tiles, 168 sensors on their edges and 108 motorised “actuators” to keep them perfectly aligned. He called these “whiffletrees”, a bit like the harness on teams of horses: his telescope, “my baby”, continually adjusting its whole surface as it scanned the night sky.

Reading the night logs

Some of the problems with the prototype took years for him and his team to solve, as he wrestled with Excel spreadsheets on his Mac to work out his gigantic scheme. The tiles, of six different shapes but generally hexagonal, proved devilish to fit together. They were also almost impossible to polish until he devised a method, based on the theory of elasticity, to pull them temporarily into sections of spheres. Persuading the optical machinists to do this at scale was even harder. But behind the long hair and plumping waistline, the aloha shirts and the bare-feet-on-the-desk, Mr Nelson was both exacting and confident to cockiness. Nothing—not incompetent engineers, nor the cost-cutters, nor the mockers—could stop a good idea. And this one was so simple, a really straightforward algorithm: just high-school mathematics, he would say with a broad smile.

When fully installed, in 1992, the light-gathering capacity of Keck was four times Hale’s. Its resolution was half a second of arc, or, said its ecstatic father, “roughly equivalent to being able to distinguish a car’s headlights as two objects at a distance of 500 miles”. Adaptive optics, in which he also set the pace, made the images still sharper by correcting for the blur of Earth’s atmosphere. Astronomers could now examine the giant black hole within the Milky Way, calculate from sequential images of exploded supernovae how fast the universe was really expanding, make spectral analyses of stars to know their size, age and chemistry, and measure ripples in the cosmic web. Even after a stroke disabled him, Mr Nelson started each day at the University of California, Santa Cruz, where he taught astronomy, with the night logs from Keck, checking for the unexpected.

Nor did he want to stop there. His last years were spent collaborating on the Thirty Metre Telescope, also planned for Mauna Kea to his segmented design. This one needed 492 tiles, but he saw no inherent limit to it. The phases of Venus, first observed through Galileo’s telescope, had proved that Earth was not the centre of the universe. Observations through one of his might prove that Earth was not alone in supporting life. Human beings just had to go on looking, and engineering better ways to do it. It was all loads of fun. ■

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